

**ANNUAL REPORT 2022-2023** 

1 JULY 2022 - 30 JUNE 2023



world for GOOD HEALTH and WELL-BEING
Times Higher Education Impact Rankings 2023

# **RCSI University of Medicine & Health Sciences**

# **Annual Report**

1<sup>st</sup> July 2022 – 30<sup>th</sup> June 2023







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## INTRODUCTION

Dear Colleagues,

I am delighted to introduce the 1<sup>st</sup> July 2022 – 30<sup>th</sup> June 2023 Annual Report of the scholarly activities of RCSI University of Medicine & Health Sciences. This summary highlights only a fraction of the many substantial achievements of the university during this period. The report illustrates the delivery on scholarly ambitions and talent by faculty across all of RCSI, in the interests of human health.

## **Transforming Healthcare Education Project**

After four years in development, RCSI University of Medicine and Health Sciences launched its Transforming Healthcare Education Project (THEP) undergraduate medicine curriculum for the academic year 2022-23.

Developed with international benchmarking, THEP is a ground-breaking programme designed to deliver an unrivalled student experience. Increased student teamwork is scaffolded by sophisticated digital feedback and course management IT, and the course includes a novel Personal and Professional Identity pillar with education on professionalism, resilience and leadership built in from the first semester. June 2023 saw the end of a successful Year 1 of THEP for 564 students in both Dublin and Bahrain. Congratulations to leaders **Professors Arnie Hill and Gerry McElvaney** and to **Dr Gozie Offiah** who led the Implementation Team, for a great start to the new programme rollout.

Student engagement and partnership are key to achieving our mission to transform healthcare education and we have strengthened student representation in all relevant RCSI committees. Deputy Dean for Student Engagement, **Professor Celine Marmion** established the Student Engagement and Partnership (StEP) Programme fostering a university-wide culture empowering staff and students to work with and learn from each other. Recognising the university's student engagement initiatives, the School of Medicine was named joint winner of the 2022 Association for Medical Education in Europe (AMEE) ASPIRE to Excellence Award for Student Engagement.

October 2022 saw us welcome the inaugural class of the new BSc in Advanced Therapeutic Technologies in the School of Pharmacy and Biomolecular Sciences. **Dr Ben Ryan and Professor Judy Harmey** lead out on this first new undergraduate degree for RCSI in over 20 years.

In October 2022, **Dr Karen DeSalvo**, Google Chief Health Officer, launched our new School of Population Health with **Professor Philip Nolan**, Director General of Science Foundation Ireland, in attendance. Lead by **Professor Edward Gregg**, the school builds on the legacy of Sir Charles A. Cameron, a 19<sup>th</sup> Century President of RCSI, who was RCSI Chair of Hygiene and Political Medicine and Chief Medical Officer of the City of Dublin during the Spanish Flu. It incorporates the expertise of five existing units: the Departments of Health Psychology and of Public Health and Epidemiology; the Data Science Centre; the Health Outcomes Research Centre; and the Institute for Global Surgery. Following the launch, the **Emily Winifred Dickson Award** (established in honour of the achievements of this pioneering woman) was presented to Dr DeSalvo in recognition of her outstanding contributions to public health.

This year also saw the presentation of the second **Cameron Award** to **Professor Andrew Morris**, inaugural Director of Health Data Research, UK, in recognition of his career-long commitment to promoting data and informatics in population health.

#### **International Education Forum**

In June, the 12<sup>th</sup> RCSI International Education Forum (IEF) with the theme of 'Looking Back, Looking Forward' was held in-person, for the first time since 2019, including colleagues from Bahrain and Malaysia. The atmosphere had an exceptional post-COVID sense of renewal and over a busy three days we had an opportunity to reflect on the achievements of the RCSI Strategic Plan 2018-2022 and plan for the next five years. We welcomed guest speaker **Professor Phillip Dawson**, Centre for Research in Assessment and Digital Learning (CRADLE), Deakin University, Melbourne, Australia with a very topical presentation: 'Don't fear the robot: future-authentic assessment and generative artificial intelligence'.

#### **Education Innovation Awards**

The annual RCSI Education Innovation Awards, overseen by **Professor Jan Illing** and our Health Professions Education Centre team, were held during the IEF. These awards recognise the importance of innovation in teaching and learning and highlight examples of innovative educational practice. The 2023 winners were - 1st Place: 'Participatory Co-Creation to develop E-learning Programmes for Surgical Workforce in Sub-Saharan Africa' by Ines Perić and Eric O'Flynn, Institute of Global Surgery; 2nd Place: 'A Death Café for medical students, let's talk about Death and Dying' by Eric Clarke, Lecturer in Informatics & Meghan Gipson, 4th Year Medical Student.

**Dr Michael Daly**, Clinical Lecturer in Cardiology at RCSI, won the 'Most Innovative Teacher of the Year Award' in the Times Higher Education (THE) Awards 2022 for 'DON the Vest', a technology and allied simulated cardiology programme he developed when students were prohibited from accessing clinical areas during COVID-19. Dr Daly worked with the RCSI SIM team to develop a novel wearable vest to simulate the clinical signs of patients with valvular heart disease and paired these with scripted histories.

## **Enhancing Reputation**

RCSI University of Medicine & Health Sciences ranked Number 1 in the world for Sustainable Development Goal 3 'Good Health and Wellbeing' in the Times Higher Impact Ranking (2023). Regaining our world-leading position is an incredible achievement and reflects our ongoing commitment to ensuring out education and research is focused on improving the lives of people and communities around the world.

The university has also maintained our worldwide position in the #201–250 category for the seventh consecutive year; ranked joint second of nine ranked institutions in the Republic of Ireland; and ranked 50<sup>th</sup> in the world for '*international outlook*' in the 2023 Times Higher Education (THE) World University Rankings.

Thanks to **Abi Kelly** and her team in the Institutional Planning Office for guidance to enable RCSI to best tailor and reflect our activities in these international assessments.

## **Graduations**

RCSI Dublin graduations comprised 351 Medicine, 32 Physiotherapy and 57 Pharmacy students. A further 451 students graduated from taught or research Masters, MD and PhD programmes. In addition, there were also a further 910 graduates – from PG Certs, Diplomas, Professional Training qualifications, UG certs, diplomas and degrees.

(numbers extracted directly from the final April 2023 HEA report which report the 2022 numbers)

Research Summer School, Student Innovation Challenge, ICHAMS & RCSIsmj
Led by Dr Niall Stevens and team, over 170 undergraduate students from all schools participated in
the RCSI Research Summer School Programme (RSS) in 2023. The RSS provides participating
students with the opportunity to undertake an eight-week supervised project in their chosen area of
interest or a shorter structured taught programme that covers core research skills. Students also get the
opportunity to develop a potentially commercially viable solution to a modern healthcare problem in the

annual Student Innovation Challenge. This is a joint activity coordinated by the RSS and **Dr Aoife Gallagher**, Office of Research and Innovation, and draws on the expertise of RCSI academics to mentor students as they develop their ideas.

The International Conference for Healthcare and Medical Students (ICHAMS) held its 12<sup>th</sup> event in February 2023 with the theme of 'Inspiring the Future of Healthcare'. Led by **Professor Brona Murphy**, over 200 student delegates from over 30 countries attended. The conference was very well received by all attendees who were delighted to be back in person. Conference abstracts are published in BioMed Central (BMC) proceedings.

Our student-led journal, **RCSIsmj** (student medical journal), published the 16<sup>th</sup> edition of the journal and have plans to develop a new website. Thanks to our Library team, the journal has been published on the RCSI Repository for the first time. The Repository will act as an archive and provide article level searching, with all back issues uploaded.

## **RCSI Honorary Doctorates**

Honorary Doctorates (RCSI, DSc) were awarded at RCSI conferring ceremonies to honour the following people who have made an outstanding contribution to society and healthcare:

**Professor Rose Anne Kenny**, Regius Professor of Physic, Professor of Medical Gerontology at Trinity College Dublin, Director of the Falls and Syncope Unit at St James's Hospital, Director of the Mercer's Institute for Successful Ageing at St James's Hospital and founding principal investigator of the Irish Longitudinal Study on Ageing (TILDA).

**Dr David Donoghue,** former senior Irish diplomat, Irish Ambassador to Russia, Austria and Germany. Also Permanent Representative of Ireland to the United Nations, New York, who played a key role in the development of the United Nations Sustainable Development Goals (UN-SDGs).

**Professor Dame Clare Gerada,** Co-Chair of the National Health Service Assembly, and President of the Royal College of General Practitioners, UK.

## **Fulbright Scholars**

The Fulbright U.S. Scholar Program offers awards in more than 130 countries for U.S. citizens to teach, conduct research and carry out professional projects around the world. We were delighted to welcome three Fulbright Scholars to RCSI during this academic year.

**Dr Ashley Duggan**, Professor of Health Communication at Boston College and holds a professional appointment in Family Medicine research at Tufts University School of Medicine.

**Dr Kristine Himmerick,** Director of Assessment and Accreditation, School of Health Sciences, University of the Pacific.

**Dr James Marcin**, Director of the University of California, Davis Centre for Health and Technology, Vice Chair for Pediatric Clinical Research and Professor of Paediatrics.

#### **Research Day**

RCSI's excellence in research and innovation was showcased at our annual Research Day on 8<sup>th</sup> March 2023, hosted by **Professor Fergal O'Brien**, Deputy Vice Chancellor for Research and Innovation and his team. The Research Day Awards were presented to the best posters and oral presentations in their respective categories: **Joana Beyer**, Department of Physiology and Medical Physics (Undergraduate Poster Prize); **Aine Harris**, School of Population Health & Health Services (Undergraduate Oral and Harry J O'Flanagan Medal); **Isabela Drozdz**, Department of Surgery (Postgraduate Year 1 Poster); **Lyndsey Flanagan**, Department of Physiology and Medical Physics (Postgraduate Year 2+ Poster); **Cian O'Connor**, Department of Anatomy and Regenerative Medicine (Postgraduate Oral presentation); **Dr Debananda Gogoi**, Department of Medicine (Early Career Investigator poster); **Dr Aisling Smith**, Department of Neonatology, The Rotunda Hospital (Early Career Investigator oral presentation); **Cian O'Connor**, Department of Anatomy and Regenerative Medicine (Research Day Cover Image competition)

Awards for excellent Public Patient Involvement (PPI) in Research were awarded to **Eunice Philip** (Engaged Research Award), **Dr Joan Ni Gabhann-Dromgoole** (Academic Staff), **Dr Jennifer Fortune** (Early Career Researcher), **Padraig Carroll** (PhD Student) and **Oluwatofunmi Oluwajuyigbe** (Undergraduate Student).

Also presented on the day were the Research Impact and Citation Awards to: **Professor Celine Marmion**, Department of Chemistry (Most Cited RCSI Senior Authored Paper 2017-2021); **Dr Laura Durcan**, Department of Medicine (Most Cited RCSI Senior Authored Paper with International Collaboration 2017-2021); **Dr Niamh Connolly**, Physiology & Medical Physics (Most Cited RCSI Senior Authored Paper with Industry Collaboration 2017-2021); **Dr Susan Byrne**, Department of Paediatrics (RCSI Senior Author Article with Highest Altmetric Score 2022)

The Vice Chancellor Innovation Awards in recognition of the outstanding innovations of our clinicians and scientists were presented to: **Professor Karen Boland**, Consultant Gastroenterologist at Beaumont Hospital and Associate Professor of Medicine at RCSI (Clinician Innovation Award for her work on a collaboration with medical nutrition company Nualtra Ltd); **Professor Leonie Young** and **Professor Arnold Hill**, RCSI Department of Surgery and Beaumont RCSI Cancer Centre, and **Dr Damir Vareslija**, School of Pharmacy and Biomolecular Sciences (Commercialisation Innovation Award for commercialisation of their research through RCSI spin-out company PrOBMet, which is developing targeted treatments for breast cancer brain metastatic patients); RCSI Skin Wounds and Trauma (SWaT) Research Centre, led by **Professor Zena Moore**, Director; and **Professor Declan Patton**, Deputy Director (Industry Engagement Innovation Award for their collaboration with Spectral MD, investigating the clinical potential of Spectral MD's DeepView technology in the assessment of chronic wounds).

#### **RCSI Bahrain**

RCSI Bahrain President **Professor Sameer Otoom** and colleagues have had a very successful scholarly year in RCSI Bahrain. Details of the academic programmes in medicine and nursing, and research achievements, are fully summarised in RCSI Bahrain's annual report (rcsi.com/Bahrain).

## RCSI and UCD Malaysia Campus (RUMC)

We were delighted to announce that **Professor Karen Morgan**, former PU-RCSI Programme Director will take up her new role as President of RUMC in Summer 2023. The Undergraduate Medicine Conferring this year was of particular significance as it was **Professor Premnath Nagalingam**'s last conferring as Dean before his retirement from a 20-year career at RUMC.

## Perdana University-RCSI (PU-RCSI)

PU-RCSI is in its 'teach-out' phase with the last Senior Cycle 1 class completed in academic year 2022-2023. The programme will end in Summer 2024 in broad alignment with the original plans for a decade-long recruitment cycle, with Perdana to support its establishment as a new public-private partnership university in Malaysia. **Professor Raghu Varadarajan** takes up the Programme Director role locally, in association with **Professor Arnie Hill** to complete the programme. Graduates from the earlier cohorts (from 2016 onwards) are already emerging in early career leadership roles in the Malaysian healthcare system and will always be valued as RCSI alumni.

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In finishing, the end of this academic year was marked by a series of uplifting graduation dinners and conferrings and our International Education Forum. This brief outline has given a flavour of the many and varied academic and research activities ongoing at RCSI - the report ahead gives further details by Department and Schools.

Thanks to many people for completion of this report, in particular the Editor, **Professor Catherine Greene**, Department of Clinical Microbiology and **Margaret McCarthy**, DVCAA's Office, who collated and typeset the report.

Thank you all for your scholarly activities highlighted here. We hope you enjoyed seeing some of the achievements of your colleagues – and maybe even identifying unforeseen opportunities for future dialogue and collaboration. We all confidently look forward to an equally successful year in 2023/24!

**Professor Hannah McGee** 

Hannel

**Deputy Vice Chancellor for Academic Affairs** 

## **Medicine & Health Sciences Board**

Governing authority on degree-awarding activities within RCSI

Chair: RCSI President, Professor Laura Viani

Convenor: Deputy Vice Chancellor for Academic Affairs, Professor Hannah McGee

Vice President, Professor Deborah McNamara (Ex-officio)

Council Member and Chair of Academic Council, Professor Simon Cross

Council Member, Professor Kevin Conlon

Council Member, Professor Camilla Carroll

Council Member, Mr Paddy Kenny

Council Member, Professor David Healy

President, RCSI Bahrain, Professor Sameer Otoom

Vice President for Academic Affairs, RCSI Bahrain, Professor Alf Nicholson

Senior Management Representative, Professor Cathal Kelly

Senior Management Representative, Ms Jennifer Cullinane

Senior Management Representative, Mr Barry Holmes

Staff Member appointed by the CEO, Professor Declan Keane

Staff Member appointed by the CEO, Professor Suzanne McDonagh (to Sept 22); Professor Fidelma Fitzpatrick (from Sept 2022)

Staff Member appointed by the CEO, Professor Tracy Robson

Elected Staff Representative, Professor Judy Harmey (to June 2023), Dr Gozie Offiah (from June 2023)

Elected Staff Representative, Dr Helen French (to June 2023), Dr Muirne Spooner (from June 2023)

Elected Staff Representative, Ms Catherine Behan (to Sept 22); Ms Cara McVeigh (from Sept 2022)

Undergraduate Students' Union Presidents, Mr Amit Kalra

Postgraduate Students' Union Presidents, Mr Joshua Barrett

Representative from Health, Service and Educational Partners, Mr Tom Boland

Representative from Health, Service and Educational Partners, Ms Caroline Spillane

Representative from Health, Service and Educational Partners, Professor Yvonne Barnett

## **Dean of Medical Programmes**

Professor Arnold Hill

## **Heads of Schools**

Professor Edward Gregg, Head of the School of Population Health

Professor Noel G. McElvaney, Head of the School of Medicine

Professor Suzanne McDonough, Head of the School of Physiotherapy

Ms Sara McDonnell, Executive Director & Professor Robert McMurray, Academic Director, Graduate School of Healthcare Management (to April 2023)

Professor Zena Moore, Head of the School of Nursing & Midwifery

Professor Darran O'Connor, Head of the School of Postgraduate Studies

Professor Tracy Robson, Head of the School of Pharmacy & Biomolecular Sciences

## **Deputy Deans**

Professor Anne Hickey, Deputy Dean for Positive Education

Professor Celine Marmion, Deputy Dean for Student Engagement

Professor Sam McConkey, Deputy Dean for International Curriculum Development

Professor Jochen Prehn, Deputy Dean for International Scholarly Engagement

## **Academic Council**

Senior academic and administrative forum for deliberation on all academic matters

Chair & Council Member: Professor Simon Cross

Convenor: Deputy Vice Chancellor for Academic Affairs, Professor Hannah McGee

President, Professor Laura Viani (Ex-officio)

Vice President, Professor Deborah McNamara (Ex-officio)

Council Member, Professor Camilla Carroll

Council Member, Mr John Caird

Chief Executive Officer, Professor Cathal Kelly

President, RCSI Bahrain, Professor Sameer Otoom

Vice President for Academic Affairs, RCSI Bahrain, Professor Alf Nicholson

Deputy Vice Chancellor for Research & Innovation, Professor Fergal O'Brien

Dean of Medical Programmes and Head of the Department of Surgery, Professor Arnold Hill

Head, School of Medicine, Professor Noel G. McElvaney

Head, School of Nursing and Midwifery, Professor Zena Moore

Head, School of Pharmacy & Biomolecular Sciences, Professor Tracy Robson

Head, School of Physiotherapy, Professor Suzanne McDonough

Head, School of Postgraduate Studies, Professor Darran O'Connor

Head, School of Population Health, Professor Edward Gregg

Executive Director, Graduate School of Healthcare Management, Ms Sara McDonnell

Academic Director, Graduate School of Healthcare Management, Professor Robert McMurray (to April 2023)

Head, School of Postgraduate Studies & Research, RCSI Bahrain, Professor Stephen Atkin

Deputy Dean for Student Engagement, Professor Celine Marmion

Deputy Dean for Positive Education and Head, Department of Psychology, Professor Anne Hickey

Deputy Dean for International Curriculum Development and Head, Department of International Health &

Tropical Medicine, Professor Sam McConkey

Deputy Dean for International Scholarly Engagement and Head, Department of Physiology & Medical Physics, Professor Jochen Prehn

O'Brien Chair of Global Surgery, Professor Ruairi Brugha (interim chair to March 2023) / Professor Juan Carlos Puyana (from April 2023)

Chair of Medical Professionalism, Professor Denis Harkin

Head, Department of Anaesthesia & Critical Care, Professor Gerard Curley

Head, Department of Anatomy and Regenerative Medicine, Professor T. Clive Lee

Head, Department of Chemistry, Professor Donal O'Shea

Head, Department of Clinical Microbiology, Professor Fidelma Fitzpatrick

Head, Department of Clinical Neurological Science, Professor Ciaran Bolger

Head, Department of Public Health & Epidemiology, Professor Debbi Stanistreet

Head, Department of Family Medicine & General Practice, Professor Tom Fahey

Director of Library Services, Ms Kate Kelly

Head, Department of Obstetrics & Gynaecology, Professor Fergal Malone

Head, Department of Ophthalmology, Professor Conor Murphy

Head, Department of Orthopaedics, Professor John M. O'Byrne

Head, Department of Otolaryngology and Head & Neck Surgery, Professor James Paul O'Neill

Head, Department of Paediatrics, Professor Jonathan Hourihane

Head, Department of Pathology, Professor Siobhan Glavey

Head, Department of Psychiatry, Professor Kieran C. Murphy

Head of Simulation Education & Research, Professor Walter Eppich

Head of Quality Enhancement Office, Ms Aisling Reast

Head, Quality Enhancement, RCSI Bahrain, Dr Kathryn Strachan

Director of Corporate Strategy, Mr Michael McGrail

Director of Finance, Ms Jennifer Cullinane - nominee Mr Padraig Barry

Director of Human Resources, Mr Barry Holmes

Director of Human Resources nominee, Ms Cathy Buffini

Chief Technology Officer, Mr Justin Ralph

Director of International Engagement & External Relations, Ms Abi Kelly

Director of Development - Alumni Relations, Fellows & Members, Ms Aíne Gibbons

Director of Health Professions Education Centre, Professor Jan Illing

Director, Graduate Entry Medicine, Professor Seamus Sreenan

Director, Centre for Positive Health Sciences, Professor Ciaran O'Boyle

Academic Director of Admissions, Dr Kenny Winser

Academic Director of Community & Public Engagement, Professor Kevin McGuigan

Director, Medical Commencement Programme, Dr Darren Griffith

Director, Foundation Year Programme, Dr Olga Piskareva

Year 1 Lead, School of Medicine, Professor Maria Morgan

Year 2 Co-Lead, School of Medicine, Dr Niall Stevens

Year 3 Co-Lead, School of Medicine, Professor Brona Murphy

Geriatric Medicine, Department of Medicine and Senior Cycle 1 Director, Professor David Williams

Deputy Head (Education) School of Pharmacy & Biomolecular Sciences, Professor Judith Strawbridge

Deputy Head (Research) School of Pharmacy & Biomolecular Sciences, Professor Steve Kerrigan

Deputy Dean, Soochow University-RCSI Joint Education Initiative (JEI), International College of

Pharmaceutical Innovation, Professor Brian Kirby

Director BSc Advanced Therapeutic Technologies Programme, Dr Ben Ryan

Deputy Director, Graduate Entry Medicine (Year 1), Professor Marian Brennan

Deputy Director, Graduate Entry Medicine (Year 2), Professor Eoghan O'Neill

Deputy Head, School of Medicine, RCSI Bahrain, Professor Naji Alamuddin

Deputy Head, School of Physiotherapy, Professor Frances Horgan

Deputy Head, School of Nursing & Midwifery, Professor Tom O'Connor

Director of Simulation Education, Dr Claire Condron

Director of the Clinical Research Centre, Professor Mark Sherlock

Director of the Centre for Vascular Biology, Professor James O'Donnell

Director of Physician Associate Programme, Professor Lisa Alexander

Head of Equality, Diversity & Inclusion, Ms Liz Hughes

Head of Data Science Centre, Professor Kathleen Bennett

Head of Online Education, Ms Dara Cassidy

Deputy Director, Health Professions Education Centre, Dr Martina Crehan (to April 2023)

Student Representative, Student Union President, Mr Amit Kalra

Student Representative, Student Union Education Officer, Ms Lina Adil

Elected Representative, Professor Naoimi McCallion (to Feb 2023) / Professor Judy Harmey (from March 2023)

Elected Representative, Dr Deirdre Fitzgerald-Hughes (to Feb 2023) / Dr Frank Moriarty (from March 2023)

Associate Director for Academic Affairs, Ms Judith Gilroy

Associate Director for Admissions, Mr Philip Curtis

Associate Director for Communications, Ms Louise Loughran

Director, Estate & Support Services, Mr Ronan Baxter

Associate Director, Chief Executive's Office, Mr Adrian Devitt

Associate Director, Surgical Affairs Operations & Planning, Mr Padraig Kelly

Head of Digital Innovation, Information Technology, Ms Shahla Sabetnia

Executive Director, Institute of Pharmacy, Dr Catriona Bradley (Invited Partner)

## UNIVERSITY-WIDE ACADEMIC SUPPORT CENTRES

## **Centre for Positive Health Sciences**

#### Overview

The name of the Centre was changed this year from the Centre for Positive Psychology and Health to the Centre for Positive Health Sciences. This was done to reflect the emerging delineation of the "positive health" construct and to recognise the contribution of a range of scientific disciplines and medical specialities to understanding and optimising positive health. This also reflected the team's contribution to the positive health field through the publication of a significant new text: "Positive Health: 100+ Research-based Positive Psychology and Lifestyle Medicine Tools to Enhance Your Wellbeing".

The Centre added to its suite of academic programmes by launching a new Masters in Positive Health Coaching, the pillars of which are lifestyle medicine, positive and health psychology and positive coaching. The Centre also established a Professional Doctorate in Positive Health Science and four scholars were registered on the programme. These, combined with the four PhD scholars, bring to eight the total number of postgraduate research scholars in the Centre. The Centre's international footprint grew this year with the signing of a memorandum of understanding with the University of Melbourne Centre for Wellbeing Science and with the hosting of a Fulbright scholar, Professor Ashley Duggan, Professor of Health Communication at Boston College. The current year saw a significant increase in the Centre's research activity with research projects being launched in coaching and positive health, well-being in front-line healthcare staff, positive education and childhood well-being, and positive psychology interventions for chronic disease conditions.

# Summary of Key Achievements / Academic Activities Key staff appointments

Dr Elaine Byrne, Senior Lecturer Dr Mary Collins, Lead Coach Supervisor Ms Miriam Holden, Communications and Student Recruitment Co-ordinator

## National/international accreditation awards

EMCC programme accreditation of the MSc in Positive Health Coaching

## **Fulbright Scholars**

Dr Ashley Duggan, Professor of Health Communication at Boston College, Senior Level Fulbright Fellowship in Medicine, January-May 2023

Mr Justin Laiti, Star Fulbright Postgraduate Programme, joined in September 2022.

### Mary Collins

 EMCC Global organisational accreditation assessor and co-chair of the Coaching Psychology Society of Ireland

## Dr Padraic Dunne

• Diplomate of the International Board of Lifestyle Medicine (IBLM)

## Dr Jolanta Burke.

- External examiner for the MEd in Educational Leadership and Management, University of Limerick.
- External expert for the School of Applied Psychology, University College Cork.

## Dr Trudy Meehan

- Member of the pan-European Thematic Network DisQo network (impact of structural and institutional racism and discrimination on physical and mental health inequities).
- Member of the Psychological Society of Ireland Working Group for Best Practice for Assessment and Intervention with ADHD.
- External examiner for the University of the Witwatersrand, Johannesburg

#### Dr Elaine Byrne

- Chair and reviewer for the 2022 DHIS2 Annual Conference, Oslo, Norway
- Chair and reviewer for the 2022 Working-Group 9.4 of the International Federation for Information Processing (IFIP 9.4), Lima, Peru
- Member of the Irish Global Health Network
- Journal reviewer for BMC Global Health and Management Information Systems Quarterly (MIS quarterly).
- Member of the Board of Directors for the Irish Charity Beyond Stigma.
- Member of the National Research Foundation of South Africa Researcher Rating Committee
- Member of PPI Ignite Quality Improvement and Impact Working Group

## **Exceptional Events**

'Yoga: The Psychophysiological Science and Relevance for Stress, Resilience and Burnout' Dr Sat Bir Singh Khalsa, Associate Professor of Medicine at Harvard Medical School, May 2023

"Connecting Close Relationships with Positive Health Sciences" by Dr Ashley Duggan, Professor of Health Communication at Boston College, Visiting Fulbright Professor, May 2023

#### **Staff List**

Professor & Head of Centre
Ciaran O'Boyle PhD, BSc, DipOL(Oxon.), DipTheol.

Professor of Coaching & Positive Psychology Christian van Nieuwerburgh PhD, MSc, MA, BA

Senior Lecturers
Padraic Dunne PhD, MSc, BSc
Jolanta Burke PhD, MSc, PG Dip, PG Cert, BA
Elaine Byrne PhD, M Litt, MA, PG Dip, PG Cert, BA

Chartered Psychologist
Mary Collins CPsychol, EdD, MSc, BA

Senior Clinical Psychologist and Lecturer Trudy Meehan PhD, DClinPsych, BA

Adjunct Faculty
Beth Frates MD, FACLM, DipABLM
Robert Kelly MD, MBA
Armita Sen Mukherjee MSc (Dist), MBBS, DRCOG, MRCGP, DOccMed, MAcadMEd, GMBPsS, BSc
Mark Rowe FRCPI, MBBS, MICGP
Liana Lianov MD, MPH

Operations Staff Suzanne Sullivan MBS, BA Miriam Holden MSc, BA Marina Iglesias Cans PhD, MSc, H Dip, BSc

Research Staff
Postdoctoral Fellow, Roisin O 'Donovan PhD, MSc, BSc
Four PhD scholars

Four Professional Doctoral scholars

Three summer students

## **Higher Degrees**

Iglesias Cans, Marina, All children and young people eat well. Implementation evaluation of a section of "A Healthier Future - Scotland's healthy weight delivery plan" by the Scotlish Government. MSc in Clinical Nutrition, University of Aberdeen, 2022

Loughanne, Croia, Prof Dip in Digital Business Analysis, University College Dublin, 2023

Holden, Miriam, The Use and Optimisation of Customer Relationship Management (CRM) Systems within Higher Education Institutions (HEIs). MSc in Digital Marketing, University of Salford, 2023

#### **Publications**

Bradbury, A., & Van Nieuwerburgh, C. (2023). Exploring positive experiences of engagement amongst black, asian and minority ethnic (bame) university students: An interpretative phenomenological analysis. *Journal of Happiness and Health*, *3*(1), 49-65. doi:https://doi.org/10.47602/johah.v3i1.30

Burke, J. (2022). Positive relationships. In A. Giraldez-Hayes & J. Burke (eds.) *Applied Positive School Psychology* (pp.23-28). Routledge. <a href="https://doi.org/10.4324/9781003228158">https://doi.org/10.4324/9781003228158</a>

Burke, J. (2022). How to flourish in third level education: Just surviving is not enough. *Education Matters, Yearbook 2022* (Higher education). Retrieved from: <a href="https://irelandseducationyearbook.ie/irelandseducationyearbook.ie/irelandseducation-yearbook-2022/">https://irelandseducationyearbook.ie/irelandseducation-yearbook-2022/</a>

Burke, J. (2022). ALIGHT your team with Positive Leadership. *Education Matters, Yearbook 2022* (Higher education). Retrieved from: <a href="https://irelandseducationyearbook.ie/irelandseducation-yearbook-2022/">https://irelandseducationyearbook.ie/irelandseducation-yearbook-2022/</a>

Burke, J., & Dunne, P. J. (2022). Lifestyle medicine pillars as predictors of psychological flourishing. *Frontiers in Psychology*, 4572. doi:https://doi.org/10.3389/fpsyg.2022.963806

Burke, J., Dunne, P. J., Meehan, T., O'Boyle, C. A., & van Nieuwerburgh, C. (2022). *Positive health: 100+ research-based positive psychology and lifestyle medicine tools to enhance your wellbeing*: Taylor & Francis. https://doi.org/10.4324/9781003279594

Burke, J. & Dempsey, M. (2022). Doing a cryptic crossword without clues: Exploring the factors that protected the wellbeing of school leaders during the Covid-19 pandemic uncertainty. In H. Aker & M. Aiken (Eds.) *Cyberchondria, health literacy and the role of media on society's perception of medical information*. Washington: IGI Global. <a href="https://10.4018/978-1-7998-8630-3">https://10.4018/978-1-7998-8630-3</a>

Burke, J. & Dempsey, M. (2022). Capstone projects and final-Year projects in Psychology. Routledge.

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Elmusharaf, K., Byrne, E. and O'Donovan, D. (2022) Ch11: Governance in Conflict-affected Fragile States: System Thinking for Collaborative Decision-Making in Reproductive Health. In Frédérique Vallières, Hasheem Mannan, Naonori Kodate, and Fiona Larkan (eds) Systems Thinking for Global Health: How Can Systems-Thinking Contribute to Solving Key Challenges in Global Health. Oxford University Press

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Sanders, C., Burke, J., & Muzyk, A. (2022). Contributing to a Healthier World: Exploring the Impact of Wellbeing on Nursing Burnout. *Journal of Happiness and Health*, *2*(2), 70–86. <a href="https://doi.org/10.47602/johah.v2i2.14">https://doi.org/10.47602/johah.v2i2.14</a>

#### **Active Grants and Grants Awarded**

Jolanta Burke / Jimmy O'Keeffe, VNiC-Health - Valuing Natural Capital in Communities for Health. - 22/NCF/HE/11316, SFI Healthy Environment for All Challenge of the National Challenge Fund, 25/04/2023, €248,606 (RCSI €125,568, DCU €123,037).

Jolanta Burke / Joan Finlay, An investigation of a pro-social 'character strength' intervention-based programme as a response to cyber aggression in a post primary context. Grant code - RSF6RBS039, Teaching Council for the Research Bursary Scheme, 31/05/2023, €4,000 (RCSI €2,000 Midlands National School €2,000).

Jolanta Burke, Bee Well, Irish Research, 14/11/2022, €19,542.

Padraic Dunne, AthyConnect, Slaintecare Healthy Communities Kildare, 25/04/2023, €15,000.

Padraic Dunne, Horizon Coordinator Support - Travel Grant, FP20230978, 31/05/2023, €1,301.

Justin Laiti, Positive Coaching Augmented by Digital Technology in Schools Digital Health Group. Star Fulbright Postgraduate Programme. Grant code 22255A04, 03/10/2022, €170,000.

Trudy Meehan, "When Astronauts Lose Hope", Irish Hospice Foundation and Creative Ireland Seed funding, 08/12/2022, €2,019.

Ciara Scott, Positive dental health: Developing a positive health framework and coaching interventions for dental health education in adolescents Grant code SPHeRE/2022/, €115,750.

## Centre for Professionalism in Medicine and Health Sciences

#### Overview

The Centre for Professionalism in Medicine and Health Sciences (CPMHS) at RCSI, provides undergraduate and postgraduate education, and contributes to national and international developments in medical education, research and practice. Our Mission is "To advance Medical Professionalism in research, education and practice". Our Vision is to provide "Global Leadership in Medical Professionalism to achieve excellence in patient care and experience, caring for those who care and promoting a healthier society, through innovation in research, education and practice".

Our 2020-2025 Strategy has included: Building a Team and Centre at RCSI; Enhancing visibility through collaboration with RCSI Educate, International Conference and the International Medical Professionalism Network; Establishing evidence-based excellence in Medical Professionalism Teaching and Education in undergraduate, postgraduate and continuing professional education; Development of a programme of Research and Publication with tangible impact and dissemination through Presentations, Webinars, Invited Lectures, Contribution to Policy and Guidelines, and Publications.

## Summary of Key Achievements / Academic Activities RCSI Centre for Professionalism in Medicine and Health Sciences

The advent of the RCSI Centre for Professionalism in Medicine and Health Sciences was approved by the Senior Management Team and Academic Council, May and July 2023.

## Key staff appointments

- Dr Rahul Sambaraju, Postdoctoral Fellow, RCSI, April 2022 September 2022
- Ms Laura Power, Postdoctoral Fellow, RCSI, November 2022 January 2023
- Dr Samuel Cumber, Postdoctoral Fellow, PROPER Study, RCSI, November 2023
- Dr Aine Ryan, Lecturer in Professionalism, RCSI, January 2023
- Dr Abdelsalam Ben Saaud, Postdoctoral Researcher, RCSI, June 2023

## **RCSI Medical Professionalism Conference**

The third annual RCSI Medical Professionalism Conference took place on 28th April 2023. This year's conference was hybrid, with both in-person and online attendees via zoom. The theme was "Professionalism: The Cost of Caring." The event was opened by Professor Denis Harkin, Chair of Medical Professionalism in RCSI, followed by a welcome address by Professor Laura Vianni. The conference boasted a stellar line-up of outstanding keynote speakers and panelist presenters, including such luminaries as Professor Johanna Westbrook (Australian Institute of Health Innovation, Macquarie University), Dr Suzanne Crowe (President of the Irish Medical Council), Professor Patrick Dolan (UNESCO Child and Family Research Centre, University of Galway), Professor Colin West (Mayo Clinic), Professor Tony Holohan (former CMO), Dr Henry Marsh (Neurosurgeon and Author). Other speakers came from the Irish Medical Organisation, Irish Hospice Foundation, HSE, University of Edinburgh, Medical Protection Society, RCSI Dublin and RCSI Bahrain and Oxford University. We had over 850 registered attendees and delegates, in-person at the Albert Lecture Theatre at RCSI in Dublin, and online from over 45 countries and across the world. Throughout and after the event, the conversation continued on Twitter with our official hashtag #MedProf23. The feedback we received on the day and in the follow-up survey was excellent overall.

## Novel academic teaching/assessment strategies

"Good Help in Professionalism & Healthcare Ethics' Webinar Series (2022)" jointly Bon Secours Health System and RCSI: Ethical Challenges and their origins today; insights from both an Irish and USA perspective (29 September 2022); Ethical approaches to common dilemmas in Ireland and the USA - A Case Study discussion (6 October 2022).

"Good Help in Professionalism & Healthcare Ethics' Webinar Series (2023)" jointly with Bon Secours Health System and RCSI: Assisted Decision-Making (Capacity) Act 2015 Amended 2023 (21 March 2023); Artificial Intelligence – Ethical Considerations (11 May 2023); Ethical considerations in a rapidly advancing area (19 May 2023); Burnout within a healthcare context (26 May 2023); Medical Error (2 June 2023); Confidentiality – a healthcare context (16 June 2023).

RCSI THEP 2 Curriculum: Professionalism Leads to Personal and Professional Identity (PPId) Vertical Integration group (VIG) developed plans for the THEP 2 Curriculum which launched in September 2022. The professionalism team co-designed New DEM Year 1 PPID: lectures and Workshops; Reflective Assignments; PPID input to Case-Based learning across all modules.

RCSI THEP 1 Curriculum: DEM Year 3 Delivery of module "Tomorrow's Health Professionals" THEP Phase 1 Year 3 (5 Credit Module) for 2022/20223; DEM New Year 4, My Professionalism Series for Modules in Surgery, Medicine, Paediatrics and Child Health, and Obstetrics and Gynaecology. GEM Years 1 and 2 Medical Professionalism.

#### **RCSI Education Innovation Award 2023**

Our Centre submitted two education innovation applications:

- Using express-Team-Based Learning to harness core medical professionalism values and behaviours
- A Death Café for medical students, let's talk about Death and Dying

Both applications were shortlisted and Dr Áine Ryan and Mr Eric Clarke presented their projects on behalf of the team on 21/06/2023. Mr Eric Clarke was awarded the runner up prize for his project which was developed in collaboration with Valerie Smith from the Irish Hospice Foundation and Meghan Gipson, 4<sup>th</sup> year medical student.

## **RCSI Bahrain StEP Programme**

Panel Discussion:

This project aimed to introduce the idea of digital or e-professionalism to students from an expert in the field and fellow students by presenting them with diverse viewpoints that are relatable, realistic, and not daunting. This panel discussion presented an accessible and engaging way for students, staff, and people alike to understand digital professionalism and its importance in the working world. Professionalism; is a contested concept and with the new addition of e-professionalism, a new dimension to professionalism is emerging. A generational perspective plays a crucial role here, and can be harnessed using Student Engagement and Partnership (StEP) programmes.

## Prof Sim Workshop:

We aimed to understand the boundary transgressions happening in the digital world between personal and professional selves, especially in the clinical learning environment, and their impact on the societal contract. This unique student-led project combined the powerful tool of simulation to enact the critical incidents which were either witnessed or experienced by them. This strategy can provide a heads-up approach to our future healthcare professionals in strategizing their responses when faced with unprofessional dilemmas in their educational/clinical practice.

#### **Awards**

Professor Denis Harkin, Appointed Elected Council and Chair-Elect of Audit and QI Committee, Vascular Council Great Britain and Ireland, November 2022 - November 2026

Professor Denis Harkin, Awarded Host-Organiser of 37<sup>th</sup> European Society for Vascular Surgery Annual Meeting, Belfast 2023.

## **Invited Speaker**

Dr Áine Ryan invited to be a Panelist on the RCSI MyHealth Series - Positive Ageing: learning to live well as we age. Jan 2022

Professor Denis Harkin, Guest Speaker and Workshop Facilitator, Medical Council of Ireland, Ethical Guide Review - Targeted Consultation, Dublin, 8 June 2022

#### **Conference Presentations**

Clarke E, Crehan M, Offiah G (RCSI), Keegan Ó, Lavelle A (Irish Hospice Foundation). Preparing students for dying, death and bereavement in the undergraduate medical curriculum, time to rethink. Irish network of healthcare educators (INHED) Belfast 2023

Ryan A. Association for Medical Education Europe (AMEE) Annual Conference - PILLAR Methodology & Early Results. Oral presentation Aug 2022

## **Staff List**

Chair & Head of Department

Denis Harkin MB, BCh, MD, PGCHET, FRCSI, FRCSEd, FRCS(Gen.Surg), FEBVS

Lecturer (RCSI Bahrain)

Shaista Salman Guraya FRCR 2A (UK), MMedEd (Maastricht), Dip & Cert MEDEd (Dundee)

Lecturer (RCSI Dublin)

Áine Ryan BSc (Physio), MSc, PhD, PGDip HPE, MISCP

Postdoctoral Fellow (November 2022 – March 2023)

Laura Power

Postdoctoral Researcher (from June 2023)

Abdelsalam Ben Saaud

Digital Media Specialist/ Research Assistant

Sinead Hand BBA

MD Fellows

Aoife Kiernan MBBS

Patrick Wood MBBS

Conor Dooley MBBS

Lecturer in Health Informatics and Medical Professionalism

Eric Clarke

Administrator

Mary Smyth

#### **Publications**

Benn S, Moore Z, Patton D, O'Connor T, Nugent L, **Harkin D**, Avsar P. What is the prevalence of chronic venous disease among health care workers? A scoping review. International Wound Journal. May 2023

Blair R, Johnston D, **Harkin D**, Lim A. Open Surgery for Abdominal Aortic Aneurysm: 980 Consecutive Patient Outcomes from a High-Volume Centre in the United Kingdom. Vascular and Endovascular Surgery 57(8): 15385744221149585. January 2023

Blair R, Lim A, McFetridge L, Mitchell H, **Harkin D**, Johnston D. Open Surgery for Abdominal Aortic Aneurysm: 994 Consecutive Patient Outcomes. European journal of vascular and endovascular surgery: the official journal of the European Society for Vascular Surgery 64(2-3):e19-e20. August 2022 **Clarke E.** Why medical students need to talk about dying. The Irish Times, 20/06/2023

Cunningham M, Hickey A, Collins ME, Hill ADK, Murphy PJ, **Harkin D**, Crehan M. The assessment of personal and professional identity development in an undergraduate medical curriculum: A scoping review protocol. HRB Open Research. September 2022.

David LR, Murphy F, **Salman Guraya S**, Abuzaid MM. Community and policy factors influencing the decision to undergo screening mammography amongst Indian women in the United Arab Emirates. Asian Pac J Cancer Prev. 2023;24(1):307-312.

Hannon E, Hoban A, Condron C, Creegan D, Gogarty H, **Clarke E**, Lavelle A, Offiah G, McElvaney G, Hill ADK. RCSI Handbook of Clinical Skills. ISBN 978-1-9996983-4-8 September 2022

**Harkin D**, Alzayyat S, **Kiernan A**, **Ryan Á**, Boland F, Renton S, Wales L, Imray C; Vascular Society Workforce Committee. Vascular Surgeon Burnout and Resilience in the United Kingdom: A Report from the Vascular Society Workforce Committee. Ann Vasc Surg. 2022 Aug;84:169-178. doi: 10.1016/j.avsg.2022.01.032.

**Harkin DW**. Repairing the vascular surgery workforce: attract, recruit and retain. EDITORIAL. J.Vasc.Soc.G.B.Irel. 2023; Online ahead of publication http://doi.org/10.54522/jvsgbi.2023.083.

Healy C, Ryan A, Moran C, **Harkin D,** Doyle F, Hickey A. Medical students, mental health and the role of resilience - A cross-sectional study. Medical Teacher 45(6):1-9. October 2022

Kiernan A, Boland F, Moneley D, Doyle F, **Harkin DW**. Varicose Vein Education and Informed coNsent (VVEIN) study: a randomised controlled pilot feasibility study. Pilot Feasibility Stud. 2023 Jun 22;9(1):104. doi: 10.1186/s40814-023-01336-9. PMID: 37349825; PMCID: PMC10286428.

Kiernan A, Salman S, Boland F, Moneley D, Doyle F, **Harkin DW**. Digital technology in informed consent for surgery: systematic review. BSJ Open. January 2023

Kiernan A, Moneley D, Doyle F, **Harkin DW**. A modified Delphi process to form an expert consensus in Ireland on the essential information to be included in shared decision making for varicose vein surgery. Phlebology 38(4):2683555231158284 March 2023

Kiernan A, **Harkin D, Ryan A,** Wales A, Boland F, Alzayyat S, Renton S, Imray C. Vascular Surgery Workforce: Evaluation and Estimation of Future Demand in the United Kingdom. Annals of Vascular Surgery 89(2). September 2022

Kiernan A, **Ryan A, Harkin D**, Alzayyat S, Boland F. Evaluation of Vascular Surgery Workforce and Estimating Future Workforce Demand in the United Kingdom: A Report from the Vascular Society Workforce Committee. European journal of vascular and endovascular surgery: the official journal of the European Society for Vascular Surgery 64(2-3):e20. August 2022

Patton D, Sayeh A, Budri A, O'Connor T, Walsh S, Nugent L, **Harkin D,** Cayce J, Avsar P, O'Brien N. A meta-review of the impact of compression therapy on venous leg ulcer healing. International Wound Journal 20(3):1-18. July 2022

**Ryan A,** Cummins V, Murphy C, Galvin R, Smith S. Development and feasibility of an inter-agency physical activity and education programme for adults with multimorbidity in primary care: Activ8. Journal of Multimorbidity & Comorbidity Volume 12: 1-13. December 2022

**Ryan A,** Hickey A, Doyle F, **Harkin DW**, et al. Professional Identity Formation, ProfessionaLism, Leadership And Resilience (PILLAR) in Medical Students: methodology and early results. Journal of Medical Education and Curricular Development. July 2023; Online ahead of publication

**Salman Guraya S**, Menezes P, Lawrence IN, Guraya SY, Rashid-Doubell F. Evaluating the impact of COVID-19 pandemic on the physicians' psychological health: A systematic scoping review. Frontiers in Medicine 10:1071537. March 2023

**Salman Guraya S,** Yusoff MSB, Mat Nor MZ, Fredericks S, Rashid-Doubell F, **Harkin D**, Guraya SY. Validating the Medical Education e-Professionalism Framework Using the Content Validity Index. Education in Medicine Journal 14(3):25-47. September 2022

**VERN COVER study collaborative**; Benson RA. Documenting the Recovery of Vascular Services in European Centres Following the Initial COVID-19 Pandemic Peak: Results from a Multicentre Collaborative Study. EJVES Vasc Forum. 2022;57:28-34. doi: 10.1016/j.ejvsvf.2022.10.002. Epub 2022 Oct 20. PMID: 36281225; PMCID: PMC9581639.

## **Active Grants and Grants Awarded**

Denis Harkin. HEA North South Research Programme. PROfessionalism in Partnership for Education Research (PROPER) Study: a novel online express team-based learning approach to knowledge acquisition and skills development in medical professionalism for medical students. All-Ireland Approach to Medical Professionalism Teaching in Medical School. Funder name: HEA North South Research Programme 2021. Awarded March 2022. Amount: €186,000.00.

Denis Harkin. Bon Secours Health System Ireland. Gift Grant 2018-2023. Amount: Undisclosed.

Denis Harkin. RIMS Institutional Grants. RCSI StAR MD Research Fellowship Programme (2021-2023). Title: Varicose Vein Education for Informed coNsent (VVEIN) Study: a pilot randomised controlled trial. Amount: €20,000.00 plus Salary (undisclosed)

Denis Harkin. RIMS Institutional Grants. RCSI StAR MD Research Fellowship Programme (2022-2024). Title: Surgeons Coping And Resilience Study (SCARS). Amount: €20,000.00 plus Salary (undisclosed)

Denis Harkin. RIMS Institutional Grants. RCSI StAR MD Research Fellowship Programme (2023-2025). Title: The Anatomical Prediction of Endovascular Rupture (APPEAR) Study. Amount: €20,000.00 plus Salary (undisclosed)

Denis Harkin. Irish Medical Council/ INHED Research in Medical Education (RIME) Awards for undergraduate medical education under the theme of "Supporting Well-being in Students and the Workforce". PI: Dr Frank Doyle; Co-PI Professor Denis Harkin. Amount: €5,000.

Denis Harkin. Bon Secours Health System Ireland Sponsorship to RCSI Medical Professionalism Annual Conference Lead Sponsor 28 April 2023. Amount: €10,000.

Denis Harkin. Medical Protection Society (MPS) Ireland Sponsorship to RCSI Medical Professionalism Annual Conference 28 April 2023. Amount: €3,500.

## **Health Professions Education Centre**

#### Overview

In 2022/23 the Health Professions Education Centre (HPEC) implemented the second year of their five-year strategy. The overall aim being to drive up excellence in education, improve educational rankings and become an international leader in this field.

The Strategy set out ten goals to develop educational expertise across the organisation. The strategy offers a range of new systems, networks and research initiatives.

## **Summary of Key Achievements/Academic Activities**

This year we further developed of our **website**, managed the **RCSI\_Educate** Twitter account (followers doubled this year) and represented RCSI at a range of national and international conferences, and via publications which have risen to 430 within the last five years.

Our new services have developed further with over 300 requests for our **consultancy service.** The HPEC staff survey informed the **Educational Hub** (expanded to weekly sessions). This year we liaised with ethics to discuss the **Research Management Group**, informed by a **StEP project** to provide advice prior to ethical review, drive up research quality and protect students from being overwhelmed by research requests. We continue to develop the **PG Diploma** in Health Professions Education and revised the online programme using universal design for learning (UDL) principles. We offered staff places to Penang staff for the second year and for the first time provided **external fee-paying places.** HPEC also continues to support staff with **Peer Observation of Teaching** (reaching over 250 staff). We also hosted the **Education Innovation Award** in person this year. We received a wide range of submissions, and the feedback was that they were all very high quality.

We supported the start of THEP II and provided training and support for Case Based Learning (CBL). Three members of HPEC staff trained with **UPenn to support resilience** teaching with students, which commenced this year.

Other activities include support for **RCSI Online**, including the development of **micro-credentials**, the development of **virtual patients**, and participation in the European Digital Education Hub's **AI in Education working group**. In the **research and evaluation** domain, we have set up a **PGR support network**, initiated **evaluation of CBL**, supported more PhDs in Health Professions Education and

submitted grant applications with other RCSI departments and universities and gained an **ERASMUS grant.** We visited our campuses in Bahrain and Penang to set up collaborations and research on preparation for global practice.

## **Staff Appointments**

HPEC Visiting Professors from 2022 to 2025. Dr John Burkhardt Michigan University, USA Professor David Sklar Arizona University, USA Dr Hamde Nazar, Newcastle University, UK

## **Educational Hub: External Invited Speakers**

Dr Niamh Coakley, University College Cork

Dr Amelia Kehoe, York University

Dr Charlotte Rothwell, Newcastle University

Dr Kirstie Pickles, University of Nottingham

Dr Hailah Almoghirah, Newcastle University

Dr Hamde Nazar, Newcastle University

Dr Sophie Holmes, Bristol UK

Professor David Sklar, Arizona University, USA

## **External Examinerships**

Illing J. External Examiner Queen Mary University, London (2019- 2022)

Illing J. External Examiner for NUI Galway (2022-2025)

Moffett J. External Examiner for University of London (2019-2023)

## **International Appointments**

Arnett R. Psychometric Adviser to the Intercollegiate Committee for Basic Surgical Exams (ICBSE)

Bruen C. BMC Medical Education - Reviewer

Bruen C. MEDEA 2023 Teaching & learning Award - Reviewer

Bruen C. AMEE 2023 Conference - Reviewer

Cassidy D. Reviewer for Standards for Continuing Professional Development for healthcare workforce for Department of Health (Abu Dhabi)

Delany C. Member of the International Committee, ASPE (Association of SP Educators)

Edwards G. Lead reviewers for the BEME International Collaborative Centre (BICC)

Illing J. Member of the international Editorial Board for Medical Education (2016-26)

Illing J. Lead reviewer for the BEME International Collaborative Centre (BICC)

Illing J. National Institute Health Research, UK, grant and report reviewer 2023

Illing J. Medical Education, Medical Teacher, BMC Medical Education -reviewer

Kelly H. Member, EACH (International Association for Communication in Healthcare)

Kelly H. Member, IRAAL (Irish Association of Applied Linguists)

Moffett J. Reviewer for Advances in Health Sciences Education, BMC Medical Education, Journal of Veterinary Medical Education, The Clinical Teacher, Medical Teacher

#### **External National Appointments**

Bruen, C. Interview Panel, South East Technological University (SETU)

Bruen, C. REFOCUS Board, College of Psychiatrists of Ireland

Crehan M. National Associate, National Forum for the Enhancement of Teaching & Learning in Higher Education

Illing J. National Associate, National Forum for the Enhancement of Teaching & Learning in Higher Education

Regan, G. Director, Clontarf Hospital Board

Regan, G. Review of the Directorate Nurse Management Structure, Cork University Hospital for the SSW Hospital Group

## **Invited Lectures**

Illing J. Closing the educational loop: the development of a model to ensure transfer of learning to clinical practice and patient benefit. York University (Dec.2022)

Illing J. Professional Nurse Advocate Programme: Literature Review on the evidence. National Professional Nurse Advocate Conference, Coventry UK (June 2023)

- Illing J. Qualitative approaches to research. Akita University, Japan (June 2023)
- Illing J. Understanding and making sense of qualitative research findings. Akita University, Japan (June 2023)
- Illing J and Rothwell C. Barriers and Enablers to Effective Clinical Supervision. Connect Health, Physiotherapy, Newcastle, UK (June 2023)
- Kelly H. Intercultural competence and curricular integration; its relevance for international undergraduate students. MA in TESOL, Applied Languages Centre, University College Dublin (June 2022)
- Moffett J. Applications of simulation-based learning the human touch. InVeST conference, Grenada, West Indies (Jan 2023)
- Moffett J. The Power of Play. Oculus Summit, Amsterdam, The Netherlands (May 2023)
- Moffett J. Escape Rooms: Under the Bonnet. Heriot-Watt University, UK (June 2023)

#### **Conference Presentations**

- Bruen C, O'Brien M P, O'Malley G & Delany C. Virtual Immersive Challenges for Communication in Obesity. INHED Conference (March 2023)
- Bruen C, O'Brien M P, O'Malley G & Delany C. Virtual Immersive Challenges for Communication in Obesity. EdTech Winter Conference (January 2023)
- Bruen C, Johnston K, Wade V, Pawlikowska T. How are Virtual Patients being used for supporting Undergraduate Medical Students' communication skills? A Scoping Review, EdTech Winter Conference (January 2023)
- Bruen C, Johnston K, Wade V, Pawlikowska T. How are Virtual Patients being used for supporting Undergraduate Medical Students' communication skills? A Scoping Review, INHED Conference (Mar 2023)
- Bruen C, Johnston K, Wade V, Pawlikowska T. Virtual Patients Improve Students' Confidence of Knowledge of Communication Skills. INHED Conference (March 2023)
- Cassidy D. Exploring the experience of breakout rooms for faculty and learners: a UDL perspective. INHED Conference (March 2023)
- Cassidy D. "I'm not supposed to have to do this" Exploring the experience of hyflex teaching for faculty and students at a healthcare-focused university. Oral, AMEE Conference (August 2022)
- Doyle M. "Yes you Can-va; distributed video production for teams". Edtech Annual Conference, The Law Society of Ireland (June 2023)
- Edwards G. Healthcare Professionals Views on Future Access to Continuing Professional Development (CPD) Following the Covid-19 Pandemic. Oral, AMEE conference (Aug 2022)
- Illing J & Nazar H. Developing a pedagogically-informed, authentic interprofessional educational intervention and robust assessment approach. Workshop, Ottawa conference (August 2022)
- Illing J & Edwards G. An introduction to realist synthesis and evaluation: a research methods workshop. AMEE conference (August 2022)
- Illing J. Patient outcomes in a medical education Longitudinal Integrated Clerkship: a systematic literature review. Dodesworth, Alberti, Paes & Oral, AMEE conference (August 2022)
- Illing J, Edwards G & Regan G. An introduction to realist synthesis and evaluation: a research methods workshop. INHED Conference (March 2023)

Illing J. Professional Nurse Advocate Programme (PNA), Review of the evidence. National PNA Conference, Coventry UK (June 2023)

Kelly H. An Evaluation of an Integrated Curricular Approach, for International Medical Students. Oral, AMEE Conference (August 2022)

Moffett J. Digital educational escape rooms: Viewing learning through the Community of Inquiry framework. VetEd Conference, University of Nottingham (July 2022)

Moffett J, Doyle M. Digital educational escape rooms – what, why and how? AMEE Conference (August 2022)

Moffett J. Messy medicine using simulation to support learning around uncertainty. InVeST Conference, Grenada, West Indies (January 2023)

Moffett J. Little R, Cassidy D, Illing J. The novel use of a digital educational escape room to develop learners' capacity to manage uncertainty during medical school transitions. INHED Conference (March 2023)

#### Staff list

Professor & Director of HPEC
Jan Illing BSc (hons), MPhil, PhD, CQSW

Deputy Director Health Professions Education Centre (to April 2023)
Martina Crehan BA, H.Dip.Ed, MA, EdD

Head of Online Education
Dara Cassidy B SocSc, MA, EdD

Educationalist/Faculty Developer
Jenny Moffett BVetMed MSc DipMC PGCE SFHEA MRCVS

Technology Enhanced Learning Manager Catherine Bruen BA, MSc

Intercultural Education / Communications
Helen Kelly MPhil (Lecturer in Communications / Comms Programs Advisor)

Research Officers
Erica Smyth PhD
Gareth Edwards BA, PGCE, PGDip, MA

Director of Psychometrics Richard Arnett PhD

Learning Technologist
Michelle Doyle BA (hons), PgDip, MA

Faculty Developer/Educationalist
Geraldine Regan PhD MA, BA, PGCHE, RGN, RCN, PhD

Clinical Lead, Health Professions Education
Caroline Delany LRCP & SI MB BCh NUI MICGP

Administrator Mary Smyth

## **Higher Degrees**

Geraldine Regan, PhD in Education, University of Huddersfield West Yorkshire.

#### **Publications**

Ajjawi, Crampton, Ginsburg, Gonzaga, Hauer, **Illing**, Mattick, Monrouxe, Nadarajah, Vu, Wilkinson, Wolvaardt & Cleland. (2022). Promoting inclusivity in Health Professions Education publishing. Med Educ 56(3):252-256.

Baldauf B, Avsar P, **Illing J**, Watson L & Watson C. (2022) Professional Nurse Advocate Programme: Literature Review final report for NHS England.

**Cassidy D,** Le Borgne Y, Bellas F, Vuorikari R, Rondin E, Sharma M, Niewint-Gori J, Gröpler J, Gilleran A and Kralj J. Use Scenarios & Practical Examples of Al Use in Education: Briefing report No. 3 by the European Digital Education Hub's squad on artificial intelligence in education.

**Cassidy D, Edwards G, Bruen C, Kelly H, Arnett R and Illing J** (2023) Are We Ever Going Back? Exploring the Views of Health Professionals on Postpandemic Continuing Professional Development Modalities Journal of Continuing Education in the Health Professions.

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Dodsworth A, Alberti H, Paes Hirsh D and **Illing J** (2023) Patient outcomes in a Longitudinal Integrated Clerkship: a systematic literature review. Medical Education.

Dodsworth A, Hirsh D, Alberti H, Paes P, **Illing J**. (2023) A Remedy for Discontinuity? Advocating for Patient Advocacy in Undergraduate Medical Education.

Kelly S, Smyth E, **Murphy P, Pawlikowska T.** (2022) A scoping review: virtual patients for communication skills in medical undergraduates. BMC Med Educ 22:1 (429)

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**Moffett J, Cassidy D.** (2023) Building a DEER using an online design-thinking process. Online Learning Journal

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Pornsakulpaisal R, Ahmed Z, Bok H, de Carvalho Filho MA, Goka, S. Li L., ... & **Moffett**, **J**. (2023). Building digital escape rooms for learning: From theory to practice. The Clinical Teacher, e13559.

Sturesdotter Åkesson K, Sundén A, Stigmar K, Fagerström C, **Pawlikowska T**, Eva Ekvall Hansson E. (2022) Enablement and empowerment among patients participating in a supported osteoarthritis self-management programme – a prospective observational study. *BMC* Musculoskeletal Disorders 23:555

Timmerman A, Oerlemans M, der Vleuten C, **Pawlikowska T,** Ram P, Muris J. (2022) Exploring typologies of consultation performance using authentic clinical experiences to support learning and assessment in postgraduate medical training. Patient Education and Counseling 105:7 (2276-2284)

#### **Active Grants and Grants Awarded**

Illing J, Delany C, Cassidy D, Regan G. Erasmus Plus EU grant: an inTerprofessional EuropeAn curriculuM for health and social Care staff: developing a speciAlist in personalized useR-centered carE in the community TEAMCARE. Pl. 1 104 868 (€220,000 to RCSI)

## **Innovation and Commercialisation Activities**

**Regan G.** Review of the roles, responsibilities, skills set and pay grade of the senior nurse management within a directorate model in Cork University Hospital. Review carried out for South West Hospital Group.

# Other RCSI Health Professions Education Publications 2023

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Moffett J, Cassidy D, Collins N, Illing J, de Carvalho Filho MA, Bok H. Exploring Medical Students' Learning Around Uncertainty Management Using a Digital Educational Escape Room: A Design-based Research Approach. *Perspect Med Educ* 2023 12:1 (86-98)

Morris M, Mulhall C, Murphy PJ, Eppich WJ. Interdisciplinary collaborative working on surgical ward rounds: reality or rhetoric? A systematic review. *J Interprof Care*. 2023 Jul-Aug;37(4):674-688

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Dodsworth A, Munro K, Alberti H, Hirsh DA, Paes P, Illing J. Patient outcomes in a Longitudinal Integrated Clerkship: a systematic literature review. *Med Educ*. 2022 Dec 26. [Online ahead of print]

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Feeley AA, Feeley IH, Merghani K, Sheehan E. Surgical Priming Improves Operative Performance in Surgical Trainees: A Crossover Randomized Control Trial. *J. Surg. Educ.* 2022 Nov 2;S1931-7204(22)00261-6: [Online ahead of print]

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Liew SC, Fadil Azim DH. In someone else's shoes, are all wearers the same? Empathy in multi-ethnic Asian medical students. J. Taibah. *Univ. Med. Sci.* 2022 17:3 (498-505)

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Timmerman A, Oerlemans M, der Vleuten C, Pawlikowska T, Ram P, Muris J. Exploring typologies of consultation performance using authentic clinical experiences to support learning and assessment in postgraduate medical training. *Patient Education and Counseling* 105:7 (2276-2284)

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## RCSI SIM Centre for Simulation Education & Research

#### Overview

RCSI SIM Centre for Simulation Education and Research enables RCSI's mission by delivering transformative learning experiences and leading impactful research. Through collaboration, learner-centeredness, and patient focus, we strive to enable excellent, outcomes-based translational education and research. These translational outcomes mean that we value learning that not only occurs in simulation, but that also transfers to clinical workplaces and impacts patients.

The breadth and reach of our educational efforts spans undergraduate, postgraduate and continual professional development across the Schools of Medicine including the Physician Associate program, Pharmacy, Physiotherapy, Postgraduate Surgical Training, Post Graduate Medical Training including OBGYN and Emergency Medicine, Post Graduate Nursing and the Paramedic programme. Our team supported over 35,000 hours of simulation in 2022. Our team presented at two international simulation meetings - Society in Europe for Simulation in Lisbon, Spain and the Association Medical Educators in Europe - to disseminate research findings and present a conference workshop on a breadth of topics related to simulation education and research.

## **Summary of Key Achievements / Academic Activities**

## **Professor Walter Eppich**

Invited speaker

- Team Communication: An Educational Perspective
  - o Aarhus University School of Medicine, Denmark
  - o Transform MedEd, Imperial College London, UK
  - o East of England Deanery, Cambridge, UK
  - University of Edinburgh, Edinburgh, Scotland
  - o InterSim Conference, Queen's University Belfast, Belfast, Northern Ireland
- Methodological Choices in Health Education Research, SHE Academy, Maastricht University, Netherlands

Senior Editor, Advances in Simulation

**Professional Society Activity** 

- Member, AMEE Simulation Committee
- Member, Simulation Research Network (SiReN) Steering Committee, Society in Europe for Simulation (SESAM)
- Co-lead: Society for Simulation in Healthcare (SSH) Faculty Development Working Group, Guideline Development

#### **Dr Claire Condron**

Member: Society for Simulation in Healthcare (SSH) Faculty Development Working Group

## Caoimhin O'Conghaile

- RCSI Vice Chancellor's Innovation Award 2022
- MMUH The Pillar Centre for Transformative Healthcare Innovator Award 2022

#### Michelle O'Toole

 Appointed member to new national Examinations subcommittee of Education and Training Committee, Pre-hospital Emergency Care Council (PHECC)

## **Dr Michael Daly**

- Most Innovative Teacher of the Year at the Times Higher Education Awards (2022)
- Editorial Board Member of the International Journal of Clinical Skills
- Fulbright Scholarship (Tech-Impact Award) to Stanford University Medical School (2023)
- Fellowship of the American College of Cardiology (2023)
- Fellowship of the Royal College of Physicians London (2023)

#### Dr Jessica Ryan

Best Presentation, Sylvester O'Halloran Perioperative Symposium 2023

#### **Staff List**

Professor & Chair Walter Eppich MD, MEd, PhD, FSSH

Director of Simulation Education Claire Condron BSc, PhD, MBA

Research Programme Manager (through May 2023) Claire Mulhall BA, DMS, PhD

Lecturer in Simulation (from May 2023) Claire Mulhall BA, DMS, PhD

Operations Manager Dermot Daly BSc, MSc

Postdoctoral Researchers/Researchers
Andrea Doyle BSc, PGDip MedPhys, PhD
Angeline Traynor BA, MSc, PhD
Michelle L O'Toole BSc, GDip EMS, MA, CCISM

Research Assistants Brian Doyle PGDip, MSc Anna Tjin BSc, MSc Anastasija Simiceva MSc, BSocSc

Senior Clinical Skills & Simulation Technician Rebecca Kirrane BSc, MSc, R.SciTech Adam F Roche BA, MSc, RSciTech Tim Lawler BEng, BSc, RSciTech Caoimhin O'Conghaile BSc, RSciTech Miroslav Voborsky HDip Nur RSciTech

Clinical Skills & Simulation Technician Simon Horne BA Niamh Murphy BEng, MPhil Operations Coordinator Carla Alasia

Honorary Lecturer in Simulation
Michael Daly MA, MD, PhD, FRCP, FACC

MD Candidate
Jessica M Ryan MB, BCh, BAO, BA, HDip, MRCS

## **Higher Degrees**

Daly MJ. Assessing the utility of hybrid simulation with wearable technology and repeated peer assessment on medical student learning and performance in cardiology long case examinations – the ASSIMILATE EXCELLENCE study. MD RCSI & NUI 2022

Murphy N. Spinal degeneration following fusion surgery: change in strain fields and disc pressures, M.Phil, TU Dublin 2022

#### **Publications**

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#### **Active Grants and Grants Awarded**

O'Toole M, Eppich W: HUGS@Home, Movember Veterans and First Responder Grant Fund, 2022-2023, €267,202.

Doyle A, Condron C, Cantwell C, W Eppich: Irish Research Council Government of Ireland Postdoctoral Fellowship: Development of a simulation-based training curriculum for ultrasound guided interventional radiology procedures using the Four Component Instructional Design (4C/ID) framework, 2022-2024, €106,365.

Ryan J, Eppich W: Medical Protection Society Foundation, Understanding the scope and scape of clinical handover issues in emergency surgery in Ireland, 2023-2024: €118,000.

O'Conghaile C: Health Services Executive SparkSeed funding for prototype development of physical simulation models: €2000.

## **Academic Industry Partnerships**

CAE Centre of Excellence, €500,000 over 5 years (2021 – 2026)

## Innovation/Commercialisation

Dr Doyle Intial commercialisation activities with Mirion in collaboration with TU Dublin technology transfer office and the Office of Research and Innovation at RCSI. We have signed non-disclosure agreement and are preparing a material transfer agreement to progress licensing activities.

## ANAESTHESIA & CRITICAL CARE

#### Overview

The Department of Anaesthesia and Critical Care Medicine is dedicated to advancing the field through education, research, and clinical excellence. We strive to improve patient outcomes, enhance safety, and provide the highest standard of care to peri-operative and critically ill patients.

Research is at the heart of our department, as we continuously seek to advance scientific knowledge and improve patient care. Our faculty members are actively engaged in leading and participating in clinical trials in critical and peri-operative care, exploring innovative techniques, and investigating new approaches to airway management, critical care interventions, and patient safety. We foster a collaborative environment that encourages interdisciplinary research and collaboration with other departments, institutions, and healthcare organisations.

In particular, we aim to improve the outcomes for patients who are critically ill and our research team is currently conducting research in the areas of acute respiratory distress syndrome (ARDS), sepsis, neurocritical care, acute kidney injury (AKI), and post-cardiac arrest care in conjunction with many other research centres on a global scale.

We are passionate about our mission to educate. We offer comprehensive educational programs that cater to medical students, NCHDs, fellows, and consultants including simulation training for common acute medical presentations, advanced airway management, Emergency Neurologic Life Support and transthoracic echocardiography. Through our rigorous curriculum, hands-on training, and exposure to the latest advancements in the field, we aim to produce competent and compassionate healthcare professionals who can confidently handle complex anaesthetic procedures and critical care management.

We welcome students, researchers, clinicians and collaborators who share our vision and commitment to improving the lives of patients through excellence in critical care and anaesthesia. Together, we strive to make significant contributions to the field, foster advancements, and shape the future of anaesthesia and critical care medicine.

## **Summary of Key Achievements / Academic Activities**

## **Professor Ger Curley**

- Clinical Director for Critical Care and Anaesthesia, Beaumont Hospital
- Deputy Director for Research, RCSI
- Intern Coordinator, RCSI Intern Network
- Education Lead and Board Member, Joint Faculty of Intensive Care Medicine of Ireland
- Chair of Intensive Care Medicine Grand Rounds
- · Chairperson, Critical Care Trials Group, Intensive Care Medicine Society of Ireland
- Editorial Board Member, Intensive Care Medicine Experimental
- 6<sup>th</sup> International ARDS Conference 19<sup>th</sup> -21<sup>st</sup> June 2023 (Host)

## Dr Natalie L McEvoy

- PhD, April 2022, Completed
- Appointed to StAR Lecturer position in May 2022.
- Fulbright Scholarship 2023-2024
- Research lead for the Irish Association of Critical Care Nurses
- Chair of the All-Ireland Critical Care Nursing Research Group
- Member of the scientific committee responsible for organising the first joint British and Irish Associations of critical care nurses conference
- Associate Editor of Trails Journal
- Associate Editor of Nursing in Critical Care Journal & Social Media Editor Associations of Critical Care Nurses Conference
- Appointed to RCSI Research Ethics Committee
- Awarded French Research Residency Young Researcher Award
- HRB Funding Award PI Summer Student Scholarship

#### **Dr Grace Hogan**

- RCSI HPEC Diploma
- Poster Presentation Beaumont Research Day
- Poster Presentation 6<sup>TH</sup> International ARDS Conference
- INSPIRES 5. Oral Presentation

#### Sasha Kheil

- ICH Good Clinical Practice E6 (R2) Certificate
- LAST Ireland Certificate
- Clinical Trials Operations Specialization Certificate

## Dr Aidan O'Dowd

- Diploma in Healthcare Simulation
- Simulation Faculty Development Programme
- Poster Presentation Beaumont Quality and Safety Meeting

#### **Staff List**

Professor & Head of Department Gerard F Curley MB, BCh, BAO, MSc, PhD, FCARCSI, FJFICMI

Senior Lecturer Criona Walshe

Honorary Clinical Associate Professor

Irene Leonard

Michael Moore

Mike Staunton

Rory Dwyer

Honorary Clinical Senior Lecturers

Andrew Tierney

Anne Doherty

Caitriona Cody

Caroline Larkin

Ciana McCarthy

Ciara Murphy

David Moore

Ehtesham Khan

Eilis Condon

Eszter Feher

James O'Rourke

John McHugh

Joseph Keaveney

**Jubil Thomas** 

Muhammad Farooq

Niall Kavanagh

Niamh Hayes

Rosemary Kearsley

Ruth o'Leary

Shane Mc Geary

Sinead McCarthy

**Thomas Drew** 

Zulfigar Memon

Honorary Clinical Lecturer Craig Lyons

StAR Lecturer in Critical Care Natalie McEvoy PhD, MSc, RGN, Pg Diploma Clinical Tutor Aidan O'Dowd MBBS

Postdocs Grace Hogan BSc, MSc, PhD Ritu Dwivedi MREs, BE, PhD

Clinical Research Nurse Michelle Symth RGN, B.Sc, Pg. DIP

Research Assistant Sasha Khiel BSc, MSc

Administrators Susanne Lalor BA (Hons) Paula Carty

Visiting Student
Sophie van Baar Utrecht University (September 2022- April 2023)

RCSI Research Student (June 2023) Mohammadi Maahtabb

# **Higher Degrees**

Aoife Doolan, Exploring the association between immunothrombotic dysregulation and disease severity in sepsis - can mesenchymal stromal cells modulate this effect? MD, RCSI & NUI 2022.

Natalie McEvoy, The relationship between Sub-Epidermal Moisture measurements and inflammatory markers in the early identification of Pressure Ulcers. PhD, RCSI & NUI 2022.

## **Publications**

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# **Active Grants and Grants Awarded**

G Curley, A randomised double blind, placebo-controlled trial of erythropoietin alfa versus placebo in mechanically ventilated critically ill patients following traumatic injury - EPO-Trauma. 15/09/2021 €7,450.

G Curley, Alpha-1-antitrypsin augmentation therapy for Acute Lung Injury, PR192234, US Defence Dept., 15/02/2020, US\$199,728.

G Curley, Charter Trial - Can Nebulised HepArin Reduce acuTE lung injury in Patients with SARS-CoV-2 Requiring Mechanical Ventilation in Ireland, Science Foundation Ireland, 10/08/2021, €23,500.

G Curley, Clinical Trial Feasibility Award, RCSI, 21004, HRB, 01/01/2022, €381,065.

- G Curley, Expanding the lung donor pool: interventions to improve donor management, expand ex vivo lung perfusion and repair injured donor lungs, ECSA-2020-009, HRB, 01/09/2020, €998,134.
- G Curley, Emergency Neurological Life Support Course (ENLS), 22290, HSE NDTP, 27/05/2022, €22,000.
- G Curley, IMPACT (IMproved Phagocytosis with Advanced Cell Therapy) for Sepsis, 4402-2701, Cynata Therapeutics Ltd & RCSI Seed Award,01/09/2018, €100,000.
- G Curley, Targeted therapeutic mild hypercapnia after resuscitated cardiac arrest (TAME): A phase III multi-centre randomized controlled trial, Beaumont Hospital, 28/11/2019, €73,429.
- G Curley, Randomized, Embedded, Multifactorial, Adaptive Platform trial for Community-Acquired Pneumonia (REMAP-CAP), 20488, EU & HRB 15/07/2020, €62,579.
- G Curley, 1. Standard Issue Transfusion Versus Fresher Red Blood Cell Use In Intensive Care (TRANSFUSE) A Randomised Controlled Trial. 2. Permissive Hypercapnia and Alveolar Recruitment with Limited Airway, 4359-2637, HRB DIFA 29/05/2018, €56,038.
- G Curley, SPRINT-SARI Short Period Incidence Study of Severe Acute Respiratory Infection, HRB, 30/6/2020,€3,500.
- G Curley, Targeted therapeutic mild hypercapnia after resuscitated cardiac arrest (TAME): A phase III multi-centre randomized controlled trial, Beaumont Hospital, 28/11/2019, €73,429.
- G Hogan, A comparison of the therapeutic efficacy and mechanism of action of intravenous versus inhaled Alpha-1 Antitrypsin in Acute Respiratory Distress Syndrome. GOIPD/2022/760, IRC Post-doctoral Award, 10/5/2022 €106,365.

## **Innovation and Commercialisation Activities**

SepTec collaboration resulting in European Innovation Council Award and Disruptive Technologies Innovation Fund Award

# ANATOMY AND REGENERATIVE MEDICINE

## Overview

In the Department of Anatomy and Regenerative Medicine, we teach biology to Foundation Year students and anatomy to undergraduates in medicine, physiotherapy and pharmacy, to the Graduate Entry Medicine students, Physician Associates, and to trainee surgeons and radiologists. We have developed a textbook, bespoke workbooks, and online teaching programmes for histology, dissection and surface anatomy.

The Tissue Engineering Research Group (TERG) is a multidisciplinary, multi-PI research group, headed by Professor Fergal J. O'Brien. The main streams of focus are in biomaterials, tissue engineering and regenerative medicine, to develop biomaterial-based strategies for regeneration and repair of cardiovascular, neural, ocular and respiratory tissue, as well as skin, bone, and cartilage. TERG applies specific expertise in cell biology, gene therapy and advanced 3D printing/manufacturing to design and manufacture innovative implantable platforms for the regeneration/reconstruction of damaged tissue. It comprises over 20 PIs, in addition to postdoctoral researchers and postgraduate students from a variety of bioengineering, pharmaceutical, scientific and clinical backgrounds.

We facilitate postgraduate training courses for surgeons, anaesthetists, physiotherapists, artists and biomedical engineers, and our staff examine in the MRCS OSCE examinations. Our *Anatomy Room Gallery* displays visual art related to our teaching and research activities: <a href="https://www.rcsi.com/dublin/about/faculty-of-medicine-and-health-sciences/academic-departments/anatomy-and-regenerative-medicine">https://www.rcsi.com/dublin/about/faculty-of-medicine-and-health-sciences/academic-departments/anatomy-and-regenerative-medicine</a>

# **Summary of Key Achievements / Academic Activities**

## Departmental/School:

- Mr Alec Blayney retired after 12 years as a Surgeon Prosector
- Mr Tom McCormack joined us as a Surgeon Prosector
- Dr Caroline Curtin was promoted to Senior Lecturer
- Dr Claire Conway was appointed to a permanent Lectureship in Anatomy
- Dr Olga Piskareva was appointed to a permanent Lectureship in Biology
- Dr Adrian Dervan and Dr Alan Hibbitts served as locum Lecturers
- The Department holds an Athena SWAN bronze award
- Following an inspection by the Medical Council in February 2023, our licence to practice Anatomical Examination was renewed
- Dr James Ankrum, from the University of Iowa, joined us as a Visiting Fulbright Scholar

#### Individual:

Adrian Dervan, Claudio Intini, Giulio Brunetti, Francisco Almeida, Austyn Matheson, Joanna Sadowska, Ian Woods, Matthew McGrath, Juan-Carlos Palomeque-Chavez, Jack Maughan, Tara McGuire, Liam Leahy and Donagh O'Shea were involved in training PhD researchers, postdoctoral researchers, administrative staff and assistant professors from Necmettin Erbakan University, Konya (Turkiye), in several methods of manufacturing of collagen scaffolds, as well as educating them on the use of biomaterial platforms for wound healing, bone and cartilage repair, spinal cord injury, and peripheral nerve repair, as well as 3D printing techniques and loading of these biomaterial platforms with gene therapeutics to further promote tissue regeneration. This was as part of the REGENEU Twinning project funded by EU Horizon 2020, June 2023

#### Francisco Almeida

 Third Prize in the Mature Research Category of Biomaterial Research at Bioengineering in Ireland Annual Meeting, January 2023

#### Shane Browne

- External examiner, PhD thesis, University of Verona
- Member of the organising committee, Bioengineering in Ireland (BinI), Johnstowne estate, January 2023
- Invited speaker: Anatomische Gesellschaft (German Anatomical Society) Annual meeting, Berlin, September 2022
- Invited speaker: University of Verona, Department of Anatomy and Neuroscience, February 2023
- Invited speaker: Massachusetts General Hospital/Harvard Medical School ,Centre for Engineering in Medicine and Surgery, April 2023
- Invited speaker: University of Glasgow, Centre for the Cellular Microenvironment, May 2023

## Giulio Brunetti

- Best Bench Lab Research Poster Award at National Pressure Injury Advisory Panel Conference, March 2023
- Claudio Intini, Giulio Brunetti & Ian Woods took part in RCSI Postdoc panel during RCSI Research Week, March 2023

# Padraig Carroll

• PPI in Research award, RCSI Research Day, March 2023

#### Claire Conway

- Adjunct Assistant Professor of Biomedical Engineering, TCD
- External examiner for the 'Medical Technology' Level 8 course in Technical University of Shannon (formally LIT), 2021- 2025
- Vice-Chair, BioEngineering in Ireland, Dublin January 2023
- Successfully completed the 2023 Advance HE 'Aurora' Leadership in Higher Education programme
- Invited speaker: "Models for Cardiovascular Implant Assessment", SIUT, Pakistan, Online, Nov 2022

#### Caroline Curtin

- · Elected President of Matrix Biology Ireland
- Elected Frontiers Associate Editor in Bioengineering and Biotechnology (FBB) Preclinical Cell and Gene Therapy
- Elected to the Editorial Board in Applied Biosciences
- Guest editor 2023 eCM Special Issue 'Gene therapy for musculoskeletal applications'
- Symington Bequest Fund Award from the Anatomical Society for travel to TERMIS-AM Conference, April 11th-14th, 2023
- Organising Committee Bioengineering in Ireland Conference 2023
- External PhD examiner, Maastricht University & Mayo Clinic, June 21st 2023
- External Assessor for UCD School of Nursing, Midwifery and Health Systems, Teaching Fellow in Anatomy, Sept 2022
- Invited speaker: Matrix Biology Ireland Conference, Dec 2022
- Invited speaker: Tissue Engineering and Regenerative Medicine International Society (TERMIS) European Chapter Meeting 2023, Manchester, UK
- Invited speaker: Tissue Engineering and Regenerative Medicine International Society (TERMIS)
   Americas Chapter Meeting 2023, Boston, USA

# Aamir Hameed

- GEM Anatomy Lead.
- Research work covered by the Irish Independent (July 26, 2022) and Irish Times (April 6, 2023).
- RCSI spinout in pipeline, Pumpinheart Ltd. won the TERMIS Business Plan Competition, July 2022 and The National Startup Silver award in MedTech category, December 1, 2022.
- Appointed to the academic council of the Bioinnovate Fellowship Programme, University of Galway needs led innovation approach based on Stanford BioDesign framework.
- External Examiner Bioinnovate Fellowship programme (MSc), University of Galway 2022.
- Core organising committee member Bioengineering in Ireland (Binl) 2023 hosted by RCSI.

## Tom Hodgkinson

- External PhD Examiner- University of Glasgow June, 2023
- Organiser of 'Research Interest Group' 'Multi-organ system cross talk in knee joint health, disease and repair' ORS Annual Conference, Dallas, February 2023
- Appointed Orthopaedic Research Society Ambassador to Ireland

#### Sina Javadpour

• Poster Prize at TCD TCBE Research Day, December 2022

## Oran Kennedy

- Appointed External Reviewer of new joint MSc Program in in Biomedical Engineering between Munster Technical University (MTU) and University College Cork (UCC)
- Lead delegation of Ireland as 'Guest Nation' at the annual international meeting of the Orthopaedic Research Society in Dallas, TX, USA (February, 2023)
- Chairperson of the Bioengineering in Ireland (BinI) Annual Meeting (January 2023)
- Co-editor of Perspectives on the Mechanics of Fracture of Biological Materials Essays in Honour of David Taylor

#### Clive Lee

- Elected a Member of Apothecaries' Hall
- External Examiner in Anatomy: University of Cambridge & University of Edinburgh
- Professor of Anatomy, Royal Hibernian Academy of Arts
- Visiting Professor of Biomechanics, Trinity College Dublin
- Invited Speaker: Centenary Celebrations of the Department of Physiology, TCD, September 2022
- Invited Speaker: 'David Taylor facts and reflections', Festschrift in honour of David Taylor, Trinity College Dublin, September 2022

# Matthew McGrath

• First Prize in the Mature Researcher Category of the Emerging Area track, Bioengineering in Ireland Annual Meeting, January 2023

# Austyn Matheson

- Travel Fellowship, International Cartilage Regeneration and Joint Preservation Society (Canada); Orthoregenration Network Kickstarter foundation grant, May 2023
- Austyn Matheson, Arlyng Gonzalez-Gazquez, Donagh O'Shea and Claudio Intini featured on RTE Hospital Live, 2022

#### Jack Maughan

• Best Image Prize, AMBER conference, Limerick, April 2023

## Ciara Murphy

- Elected for a second term to Tissue Engineering and Regenerative Medicine International Society (TERMIS) EU Council
- Organised TERMIS EU Research Spotlight Webinar Series an ongoing international webinar series that commenced in March 2023
- Organising Committee Member and Programme Chair for 28th Annual Conference of the Section of Bioengineering of the Royal Academy of Medicine in Ireland
- MRCS examiner for surgical trainees as a member of the Court of Examiners at RCSI
- Appointed an external reviewer for the Fulbright Programme

## Fergal O'Brien

- Included on Stanford's 'World's Top 2% Scientists' in December 2022
- Received the Marshall R Urist, MD Award from the Orthopaedic Research Society for his career contribution to research in tissue regeneration in the musculoskeletal system in February 2023
- Elected a Fellow to the Irish Academy of Engineering in April 2023
- Sat on ERC and MSCA expert panel to answer questions from early career researchers on career path and competitiveness, Dublin, April 2023
- Appointed by invitation to editorial board of eCells and Materials, July 2022
- Took part in ICRS focus meeting on "Allografts & Synthetics on the Frontstage" as a faculty member, Nice, April 2023
- Edited special issue of eCells and Materials on gene therapy for musculoskeletal applications with Caroline Curtin, Cathal Kearney, 2023
- Gave an interview to MDPI Bioengineering to discuss his career and TERG research, March 2023
- Interviewed for Irish Times article 'On bolstering blue-sky research now to solve future problems' highlighting the importance of ERC funding, December 2022.
- Chaired event on sustainability and green labs initiative, highlighting the importance of sustainability in research, October 2022
- Interviewed by Drug Discovery News on research done with gene—activated scaffolds for osteoarthritis in TERG labs, July 2022

## Invited presentations

- 'Biomaterial scaffold based delivery of nanomedicines for enhanced tissue repair' Soochow, China University RCSI Research Symposium, May 2023
- 'Scaffold-based delivery of gene therapeutics', TERMIS EU Chapter Meeting, Manchester, March 2023
- 'Biomimetic biomaterials for enhanced cartilage and articular joint repair', ICRS, Nice, April 2023
- 'Collagen biomaterials for enhanced bone repair', ICRS, Nice, April 2023
- Marshall R Urist, MD Award Lecture, Orthopaedic Research Society Annual Meeting, Dallas, February 2023
- 'Skeletal Mechanobiology From Fundamentals to Therapeutic Opportunities', Orthopaedic Research Society Annual Meeting, Dallas, February 2023
- 'Advanced biomaterials for controlled delivery of therapeutics for enhanced wound healing', Kick off meeting for REGENEU project in association with Necmettin Erbakan University, University Hospital Wuerzburg, Fraunhofer ISC, and AMBER, Konya, Turkey, December 2022
- 'Scaffolds for the delivery of gene therapeutics for enhanced tissue repair', TERMIS EU Chapter Meeting, Krakow, June 2022
- 'Advanced biomaterials for enhanced repair of bone, cartilage, skin, nerve and other tissues' keynote speech at Radbound Research Round +, Nijmegen, Netherlands, 6th October 2022. Virtual.
- 'Anatomy and Regenerative Medicine Past, Present, Future.' presentation at Culture Night, Friday 23rd September 2022, York Street Campus, RCSI

- 'Advanced biomaterials for enhanced repair of bone, cartilage, nerve and other tissues' Keynote speaker, workshop on "Biohybrid implants" within the potential Cluster of Excellence "TransMedMat", 9th September 2022, Aachen
- 'Biomechanics of Bone Microdamage', Festschrift in honour of David Taylor, Trinity College Dublin, September 2022

# Chairman/Event Organisation

- 2023, Chair, Speaker, Guest Nation Workshop: Skeletal Mechanobiology-From Fundamentals to Therapeutic Opportunities, Orthopaedic Research Society Annual Meeting, Dallas, February 2023
- 2022, Organiser, Chair, Special Symposium 'Development and clinical translation of functional tissue engineering applications', World Congress of Biomechanics, Taipei, Taiwan, July 2022
- 2022, Organiser, Chair, Special Symposium 'Antimicrobial Materials for bone regeneration', TERMIS 2022, Krakow, Poland, July 2022
- 2022, Co-Chair, Special symposium on Gene-activated scaffolds for joint repair (Co-chair: Arlyng Gonzalez-Vazquez), European Society for Biomaterials Conference, Bordeaux, September 2022
- 2023, Organiser, Chair, guest seminar delivered by Prof. Daniel Sciubba, 'Innovations in Spinal Oncology', RCSI, March 2023
- 2023, Organiser, Chair, guest seminar delivered by Prof. Madeleine Lowery, 'Closed-loop control of deep brain stimulation and the active electrode-tissue interface', RCSI, May 2023
- 2023, Organiser, Chair, guest seminar delivered by Prof. Dimitrios Zeugolis, 'Multifactorial tendon engineering based on macromolecular crowding', RCSI, March 2023
- 2022, Organiser, guest seminar delivered by Dr. Miroslava Rysova, 'Nanofibrous structures for regenerative medicine and drug delivery', October 2022
- 2022, Organiser, guest seminar delivered by Dr. Cristina Canal, 'The application of atmospheric pressure plasma for tissue engineering and regenerative medicine approaches', RCSI, June 2022
- 2022, Organiser, Chair, guest seminar delivered by Prof. Javier Llorca, 'Multimaterial bioresorbable scaffolds manufactured by 3D printing for biomedical applications', RCSI, June 2022
- 2022, Co-organiser, in collaboration with AMBER Centre, hosted Irish Rugby Football Union Charitable
  Trust PPI event which included speakers such as Tommy Bowe, Fergus McFadden, Ciaran McCarthy,
  Cliff Beirne. This event served to highlight the importance of collaboration and research into treatments
  for spinal cord injury, as well as the benefits of the involvement of a public and patient involvement panel
  in research. October 2022
- 2022, Organiser, Co-Chair, international symposium '2D materials for biomedical applications' in association with TCD, University of Manchester, Catalan Institute of Nanoscience and Nanotechnology, October 2022
- 2022, Co-Chair, Gene Therapeutic session at the European Society for Biomaterials Annual Meeting, Bordeaux, September 2022
- 2022, Chair, onsite visit from Science Foundation Ireland to showcase the research done within RCSI Research labs, co-hosted by AMBER, FutureNeuro and RCSI TERG labs, September 2022

# Cian O'Connor

- Poster Prize at TCD TCBE Research Day, December 2022
- IDA Ireland, featured TERG research on nerve regeneration with Integra/AMBER in an online article, 'We Can Rebuild You', August 2022
- Dr Sophie Miller Memorial Prize Lecture entitled 'Development of a biomimetic scaffold system to investigate and promote spinal cord repair', Anatomical Society Summer Meeting, 2022
- Winner of Matrix Biology Ireland Inaugural Image Competition, July 2022
- Best Postgrad Oral Presentation for 'Development of an induced pluripotent stem cell loaded biomimetic scaffold for spinal cord repair' at RCSI Research Day, March 2023
- Best Mature Researcher presentation at Bioengineering in Ireland Annual Meeting, January 2023
- Javier Gutierrez-Gonzalez, Cian O'Connor, and Jack Maughan took part in a panel on central nervous system repair at TCD TCBE Research Day, December 2022
- Cian O'Connor and Austyn Matheson took part in SFI Junior Researcher programme, 2022. Visits of several schools organised to TERG as part of Junior Researcher Programme, 2022

## Donagh O'Shea

• 'Articulation inspired by nature: a review of biomimetic and biologically active 3D printed scaffolds for cartilage tissue engineering' featured in an online themed collection by *BioMaterials Science* highlighting their most popular articles of 2022

## Olga Piskareva

- · Head of Foundation Year
  - Member of Life and Medical Sciences Committee, the Royal Irish Academy 2022 present.
- Internal PhD examiner for RCSI, 2022
- Co-organiser of the 2st Student EFEM Symposia May 2023
- Co-organiser of EJP RD funded Therapies for Neuroblastoma Meeting 2023

#### Fabio Quondamatteo

- Elected President of the European Federation for Experimental Morphology (EFEM), June 2023
- Co-Editor of a Journal of Anatomy Special Issue on Cardiovascular Anatomy published Jan 2023
- External Examiner for a Master by research at the University of Galway, June 2023
- External Examiner for the Cunningham Medal at Trinity College Dublin, May 2023
- Lead Organiser of the Annual Student Symposium on Anatomical Research, in RCSI, on behalf of the EFEM, May 2023

## Eamon Sheehy

SFI Industry Fellowship (RD&I Fellowship Programme), funding allocated €116,576, March 2023

#### Joanna Sadowska

- 2023 L'Oréal-UNESCO For Women In Science Rising Talents Shortlist, April 2023
- New Investigator Recognition Award, Orthopaedic Research Society Annual Meeting, February 2023
- Orthopaedic Network Education Award to attend the Orthopaedic Research Society Annual Meeting, January 2023

## Elizabeth Sainsbury

- Runner Up in the Classical Research Talk section at the EFEM Europe Student Symposium on Anatomical Research 2023 (May 2023)
- Winner of Image Competition by the Anatomical Society, July 2022
- Second Runner-up in Matrix Biology Ireland Inaugural Image Competition, July 2022
- Best Presentation Matrix Biology Ireland Annual Meeting, December 2022

# Martyna Stasiewicz

- Article on 'Destabilising barriers to regeneration-using gene therapy to reduce scarring after spinal cord injury' selected for inclusion under Why My Research Matters collated by the international, Australiabased, Spinal Research Institute, December 2022
- First Runner-up in Matrix Biology Ireland Inaugural Image Competition, July 2022

# **Staff List**

# Professor of Anatomy & Head of Department

T Clive Lee BA (Mod), MB, BCh, BAO, MA, MPhil, MSc, PhD, MD, ScD, PgDipStats (Dubl), PgDipBiomech (Strath), FRCSI, FRCSEd, CEng, FIEI, HRHA, Hon FTCD, Hon FAS

# Professor of Bioengineering & Regenerative Medicine

Fergal J O'Brien BA, BAI, PhD (Dubl), FAS, CEng, FIEI, FEAMBES, FIAE, MRIA

## Associate Professor of Anatomy

Fabio Quondamatteo Dott Med Chir (Bari), Dr Med, Habilitation (Göttingen), FAS, FRSB, Hon FRCSGlas

# Senior Lecturers in Anatomy

Caroline M Curtin BSc, PhD (NUIG) PgDipEd (RCSI), FAS

Jane C Holland MB, BCh, BAO, MA, MSc, MD (Dubl), PhD, PgDipEd (RCSI), MRCSI, FAS

Oran D Kennedy BA, BAI, PhD (Dubl), PgDipEd (RCSI), FAS

## Senior Lecturer in Biological Sciences

Jacqueline S Daly, Dip App Biol, BSc (Hons) (DIT), PhD (Dubl), GIBIOL

## Lecturers in Anatomy

Shane Browne BE, PhD (NUIG) PgDipEd (RCSI)

Claire Conway BE, PhD (NUIG)

Aamir Hameed MB, BS (Karachi), MD, PgDipEd (RCSI)

Ciara M Murphy BSc (NUIM), PhD (RCSI), PCUTL (UCD)

#### Lecturer in Biology

Olga Piskareva BSc (Hon) (KSU), MSc (PSU), MSc Sci Comm (DCU), PhD (RAS), P DipEd (RCSI) Tom Hodgkinson BSc (Dunelm), MSc (Leeds), PhD (Manc)

#### Clinical Lecturer in Anatomy

Cara Connolly MB, BCh, BAO, MCh (NUI) LRCP&SI, AFRCSI, FRCSI, FRCS (Plast Sur), PgDipEd (RCSI)

#### Locum Lecturers

Adrian Dervan BA, PhD (Dubl)

Alan Hibbitts BSc (NUIM), MSc (NUIG), PhD (RCSI)

#### Professor of Art

Una Sealy BA (NUI), MSc (RCSI), H Dip Arts Admin (NUI), RHA

## Honorary Professors

Garry P Duffy BSc, PhD (NUIG)

Daniel J Kelly BA, BAI, MSc, PhD (Dubl), FTCD

Anil Kokaram BA, PhD (Cantab), CEng FIEI, FTCD

Mark Spence MB BCh BAO (Hons) MD (Belf) FRCP

# Honorary Associate Professors

Conor T Buckley BA, BAI, PhD (Dubl), MIEI, FTCD

Tríona Lally BEng, MEng (Limerick), PhD, PG Dip Stats (Dubl), FTCD

Odhran Shelley MB, BCh, BAO, LRCP&SI, FRCSI, FRCSI (Plast Sur), FEBPRAS

Ciaran K Simms BA, BAI, PhD (Dubl), FTCD

## Visiting Associate Professor

Eric Farrell BA (Mod), PhD (Dubl)

## Honorary Senior Lecturers

Glenn Dickson MSc, PhD (Belf) CBiol, FRSB, FAS

Cathal J Kearney BA, BAI (Dubl), SM, PhD (MIT)

M Alice McGarvey BNS, MSc, PhD (NUI), RGN, RNT

# Honorary Lecturers

John Gleeson BA, BAI (Dubl), MSc (RCSI), PhD (Dubl)

Arlyng Gonzalez Vasquez BSc (UCV, Venezuela), PhD (IBEC, Spain)

## Honorary Research Lecturer

Tanya Levingstone BEng, PhD (DCU)

## Surgeon Prosectors

Alexander W Blayney MB, BCh, BAO, MCh (NUI) DCH, FRCSI, FRCS (Eng)

Patricia Eadie MB, BCh, BAO (NUI), FRCSI, FRCSI (Plast Sur)

Michael Earley MCh, MD (Hon) (NUI), FRCSI, FRCS (Plast Sur)

Paul J Farrell BSc, MB, MCh (NUI), FRCSI, FRCSEd

Thomas Farrell MB, BCh, BAO, PhD (Dubl), FAS

Ray J Fitzgerald MA, MB (Dubl), FRCS, FRCSI, FRACS, FRCPI (Hon)

Thomas Gorey MCh (NUI), FRCSI, FACS

Jim F Griffin MB, BCh, BAO (NUI), FFRRCSI

Parnell Keeling LRCP&SI, FRCSI

Brian E Lane FRCSI, FRCSEd, FRCSEng, FACS

Tom McCormack MB, BCh, BAO, MCh (NUI) DCH, FRCSI, FRCSEd, FRCSEng

Catherine Riordan MB, BCh, BAO (NUI), FRCSEng Frank M Thompson MB, BCh, BAO, MCh (Orth) (NUI), FRCSI Alfred EWood MB, BCh, BAO (NUI), FRCSI, DCH

Senior Demonstrators in Biology Ellen King BA (Mod) (Dubl)

Demonstrators in Biology
Noor Bakour BA (Mod), MSc (Dubl)
Karen Conboy BSc (NUIG) MSc (Dubl)
Ciara Gallagher BSc (Hon) (DIT)
Katelyn J Genoud BASc (Ottawa) MSc (Dubl) MSc (RUG)
Catherine Murphy BSc (Hon) (DIT)
Juan Carlos Palomeque Chávez BSc (Manc), MSc (Imp)
Ananya S Pushpa, MSc, MSc
Elizabeth Sainsbury BSc (Hon), Cert HE (TUD)
Alysia Scott BA (Denver), MS (Tulane)
Sujithra Srinivas BE (CEI), MSc (RCSI)

Anatomy Room Manager Bob Dalchan BSc (UoG), MSc (UU)

Laboratory Manager
Vincent McDonagh BSc (Wolv), MSc (NUI)

Senior Technician
Andrew Lynch BSc (UCD), BSc Physio (Nottm)

Technician
Patrick Conlon BSc (TUD), MRSPH

Secretary
Laraine O'Brien

TERG Administrator Becky Hackett BSc, MSc (NUI)

Postdoctoral Researchers: 13 MD students: 3 PhD students: 32 Research Assistants: 2

MSc Students: 7

Undergraduate Students: 11

## **Higher Degrees**

Badiger Vishal, Mechanical characterization of anchoring structures in mechanical circulatory support device. MSc, Dubl. 2022

Boland Erin, The cardiac basement membrane: an important determinant in cardiac function and disease. PhD, Glasgow, 2023

Farahbakhsh Zahra. Optimisation of PEDOT: PSS properties via solvent treatment for neural tissue engineering. MSc, Dubl. 2023

Jonsdottir Holmfriour, 3D printing spinal cord organoids for high throughput characterization of electrical stimulation therapies. MSc, Dubl. 2023

Frawley Thomas, Small extracellular vesicle communication and cisplatin resistance in the neuroblastoma microenvironment. PhD, RCSI & NUI, 2022

Genoud Katelyn, Development of antibiotic-free 3D printed composite scaffolds for the treatment of infected bone defects. PhD, RCSI & NUI 2023

Hinton Paige, Development of in vitro models of bone-cartilage crosstalk. PhD, RCSI & NUI 2022.

Kelly Domhnall, Development of a siRNA-activated scaffold enabling targeting knockdown of proinflammatory signalling pathways for enhanced cartilage tissue regeneration. PhD, RCSI & NUI 2022

Khalid Tehreem, The development of an Implantable bioengineered tracheal scaffold for respiratory tissue regeneration. PhD, RCSI & NUI 2022

MacCraith Eoin. Development and investigation of a biodegradable mesh for the treatment of stress urinary incontinence. MD, RCSI & NUI 2023

O'Connor, Cian, Development of an iPSC progenitor loaded biomimetic scaffold for spinal cord applications. PhD, RCSI & NUI 2023

Power Rachael. Scaffold-based delivery of gene therapeutics for the repair of large volume defects in both healthy and osteoporotic bone. PhD, RCSI & NUI 2023

Sandra Sunil. Development of extracellular matrix incorporated tunable hyaluronic acid hydrogels for spinal cord repair. MSc, Dubl. 2022

Thomsen Charlotte. Biomimetic design of matrix-functionalized angiogenic injectable hydrogel scaffold for spinal cord repair. MSc, Dubl. 2023

## **Publications**

Abdelsayed, G., Ali, D., Malone, A., Saidi, J., Myneni, M., Rajagopal, K....Hameed, A. (2022). 2D and 3D in-vitro models for mimicking cardiac physiology. doi:10.1016/j.apples.2022.100115.

Antony, I., Abraha, H. M., Hameed, A., Conway, C. (2022). A European update on transcatheter aortic valve implantation (TAVI) in the COVID era. doi:10.1111/joa.13740

Carroll, P., Dervan, A., Maher, A., McCarthy, C., Woods, I., Kavanagh, R., . . . Flood, M. (2022). Applying patient and public involvement in preclinical research: a co-created scoping review. Health Expectations. Doi:10.1111/hex.13615

Eseonu O, Mactier M, Ferguson E, Quondamatteo F, Blyth M, Jones B.(2022). Soft-tissue landmarks for tibial baseplate rotational alignment in total knee arthroplasty: A cadaveric study. Clin Anat. 35(8):1107-1113. doi: 10.1002/ca.23921. Epub 2022 Jun 21. PMID: 35668648

Ferguson E, Bailey EL, Quondamatteo F. (2023). The cutting edge of cardiovascular anatomy. J Anat. 242(1):1-2. doi: 10.1111/joa.13786. Epub 2022 Nov 28. PMID: 36441980

Fernandes, M. G., da Silva, L. P., Cerqueira, M. T., Ibanez, R., Murphy, C., Reis, R. L., . . . Marques, A. P. (2022). Mechanomodulatory biomaterials prospects in scar prevention and treatment. Acta Biomaterialia. Doi:10.1016/j.actbio.2022.07.042

Flynn, S., Lemoine, M., Boland, F., O'Brien, F.J., O'Byrne, J.M. (2023). Stability of 3D-printed polyecaprilactone scaffolds in a porcine cadaveric model: a pilot study. Doi: Orthopaedic Proceedings.. doi: 10.1302/1358-992X.2023.3.085

Hinton, P., Genoud, K., Early, J., O'Brien, F.J., Kennedy, O. (2022). Impact of fluid flow shear stress on osteoblast differentiation and cross-talk with articular chondrocytes. International Journal of Molecular Sciences. Doi:10.3390/ijms23169505

Hodgkinson, T., Amado, I. M., O'Brien, F., Kennedy, O. (2022). The role of mechanobiology in bone and cartilage model systems in characterizing initiation and progression of osteoarthritis. doi:10.1063/5.0068277

- Intini, C., Ferreras, L. B., Casey, S., Dixon, J. E., Gleeson, J. P., O'Brien, F.J. (2023). An innovative miRactivated scaffold for the delivery of a miR-221 inhibitor to enhance cartilage defect repair. Advanced Therapeutics. Doi:10.1002/adtp.202200329
- Kennedy, O. (2022). Bone microdamage: shifting our sights to osteocytes. In: Hoey D, Kennedy O (eds) Perspectives on the Mechanics of Fracture and Biological Materials, 77-86, Dublin: DMMBE (ISBN 978-1-4716-1942-7).
- King, E., Nolan, J., Piskareva, O. (2023). Assessment of Basic Biological Functions Exerted by miRNAs. Methods Mol Biol. 2nd edition, 2595, 115-122. doi:10.1007/978-1-0716-2823-2\_8
- King E, Bayeva N, Stallings, R, Piskareva, O. (2023) Neuroblastoma. In: Epigenetic Cancer Therapy edited by Gray S., Elsevier, 2nd edition
- Lackington, W. A., Gehweiler, D., Zhao, E., Zderic, I., Nehrbass, D., Zeiter, S., . . . Thompson, K. (2022). Interleukin-1 receptor antagonist enhances the therapeutic efficacy of a low dose of rhBMP-2 in a weight-bearing rat femoral defect model. Acta Biomaterialia. Doi: 10.1016/j.actbio.2022.07.012
- Lee, C. (2022). David Taylor facts and reflections. In: Hoey D, Kennedy O (eds) Perspectives on the Mechanics of Fracture and Biological Materials, 1-18, Dublin: DMMBE (ISBN 978-1-4716-1942-7)
- Levingstone, T. J., Sheehy, E., Moran, C., Cunniffe, G. M., Payno, P. J. D., Brady, R. T., . . . O'Brien, F.J. (2022). Upper urinary tract pressures in endourology: a systematic review of range, variables and implications. British Journal of Urology International. Doi:10.1016/j.bbiosy.2022.100066
- Liu, J., Garcia, J., Leahy, L., Song, R., Mullarkey, D., Fei, B., . . . Nicolosi, V. (2023). 3D printing of multifunctional conductive polymer composite hydrogels. Advanced Functional Materials. Doi:10.1002/adfm.202214196
- Liu, Y., Puthia, M., Sheehy, E., Ambite, I., Petrlova, J., Prithviraj, S., . . . Raina, D. B. (2023). Sustained delivery of a heterodimer bone morphogenetic protein-2/7 via a collagen hydroxyapatite scaffold accelerates and improves critical femoral defect healing. Acta Biomaterialia. Doi:10.1016/j.actbio.2023.03.028
- Malone, A., Gallagher, S., Saidi, J., Rizq, G., O'Dowd, E., Vallence, D., Hameed, A. (2022). In vitro benchtop mock circulatory loop for heart failure with preserved ejection fraction emulation. doi:10.3389/fcvm.2022.910120.
- Maughan, J., Gouveia, P. J., Gonzalez, J. G., Leahy, L., Woods, I., O'Connor, C., . . . O'Brien, F. (2022). Collagen/pristine graphene as an electroconductive interface material for neuronal medical device applications. doi:10.1016/j.apmt.2022.101629
- McGrath, M., Zimkowska, K., Genoud, K.J., Maughan, J. Gonzalez, J.G., Browne, S., O'Brien, F.J. (2023) A biomimetic, bilayered antimicrobial collagen-based scaffold for enhanced healing of complex wounds. ACS Applied Materials and Interfaces <a href="https://doi.org/10.1021/acsami.2c18837">https://doi.org/10.1021/acsami.2c18837</a>
- Murphy, C., Gallagher, C., Piskareva, O. (2023). Evaluation of miRNA expression in 3D in vitro scaffold-based cancer models. Methods Mol Biol. 2nd edition, 2595, 211-224. doi:10.1007/978-1-0716-2823-2\_15
- Nair, L., Mukherjee, S., Kaur, K., Murphy, C. M., Ravichandiran, V., Roy, S., Singh, M. (2023). Multi compartmental 3D breast cancer disease model–recapitulating tumor complexity in in-vitro. Biochimica et Biophysica Acta General Subjects, 1867(6). doi:10.1016/j.bbagen.2023.130361
- O'Brien, F. (2022). Biomechanics of bone microdamage. In: Hoey D, Kennedy O (eds) Perspectives on the Mechanics of Fracture and Biological Materials, 67-76, Dublin: DMMBE (ISBN 978-1-4716-1942-7)
- O'Connor, C., Woods, I., Hibbitts, A., Dervan, A., O'Brien, F.J. (2023). The manufacture and characterization of biomimetic, biomaterial-based scaffolds for studying physicochemical interactions of neural cells in 3D environments. Current Protocols. Doi:10.1002/cpz1.688

Pitacco, P., Sadowska, J., O'Brien, F.J., Kelly, D. (2022). 3D bioprinting of cartilaginous templates for large bone defect healing. Acta Biomaterialia. Doi:10.1016/j.actbio.2022.07.037

Sainsbury, E., Costard, L., O'Brien, F. J., Curtin, C. M. (2023). Assessment of Cell Cytotoxicity in 3D Biomaterial Scaffolds Following miRNA Transfection. Methods in Molecular Biology. Doi: 10.1007/978-1-0716-2823-2 14

Santarella, F., Do Amaral, R. J. F. C., Lemoine, M., Kelly, D., Cavanagh, B., Marinkovic, M., . . . Kearney, C. (2022). Personalized scaffolds for diabetic foot ulcer healing using extracellular matrix from induced pluripotent stem-reprogrammed patient cells. Advanced NanoBiomed Research. Doi:10.1002/anbr.202200052

Simpson, C., Cavanagh, B., Kelly, H., Murphy, C. (2023). Simple technique for microscopic evaluation of active cellular invasion into 3D hydrogel constructs. doi:10.1021/acsbiomaterials.2c01015

Wozniak S, Quondamatteo F, Paulsen F. Flexures and bends of the large intestine: Current terminology and a suggestion to simplify it. J Anat. 2023 Apr;242(4):695-700. doi: 10.1111/joa.13800. Epub 2022 Nov 30. PMID: 36449406

## **Active Grants and Grants Awarded**

Browne S. A peptide-decorated anti-microbial and pro-healing hyaluronic acid dressing to promote diabetic wound healing, European Federation for the Study of Diabetes/Lily European Diabetes Research Programme, January 2023, €100,000

Browne S. In vitro and in vivo analysis of the pathophysiology of peristomal skin complications (PSC), IP 2022 1031, Enterprise Ireland Innovation Partnership (with Hollister Inc.), December 2022, €205,920

Browne S, Gawenda J, The contribution of intestinal bacteria to the pathophysiology of peristomal skin complications in models of ileostomy, EPSPG/2023/1651, Irish Research Council Enterprise partnership (with Hollister Inc.), May 2023, €55,000

Conway C. Cerebrovascular risk predictions post-transcatheter aortic valve replacement, EPSPG/2019/508, Irish Research Council, March 2019, €96,000

Conway C. DIgital models for Next generAtion MITral prosthEses, 20/FFP-P/8588, Science Foundation Ireland, October 2021, €610,852

Conway C. BIOMechanics role in ECtopic CAlcification progression (BIOMECCA), EC20221336, Enterprise Ireland, August 2022, €15,645

Curtin C. Collagen-based scaffolds as platforms for the study of prostate cancer, 1054002629, Embassy (Saudi Arabia), October 2020, €140,000

Curtin C. Collagen-nanohydroxyapatite gene-activated scaffolds as treatment platforms for 3D breast cancer bone metastasis, Anatomical Society Summer Studentship 2023, May 2023, €3,720

Curtin C, O'Brien F. 3D collagen-based scaffolds as gene delivery platforms for the treatment of human breast cancer, 18151A01, HRB, December 2019, €369,955

Curtin C. 21391A19, Collaborate Initiative – IPO, RCSI, January 2023, €5,000

Davis, N., O'Brien F.J. (co-applicant). Exploring failure of ureteric stents due to radial and circumferential compressive forces exerted on the stented ureter, RCSI-MD-202112, RCSI star MD funding, 10/2021, funding allocated €20,000

Hameed A. PReduction - A novel device for Heart Failure with preserved Ejection Fraction (HFpEF), CF-2019-1136-P, Enterprise Ireland, Commercialisation Fund, November, 2019, €499,975

Hameed A. RCSI spin-out in pipeline, Pumpinheart as a Lead applicant with RCSI, Gentian Health and Boston Scientific in the consortium secured Disruptive Technology Innovation Fund. A miniaturised smart pump for Heart Failure with preserved Ejection Fraction (HFpEF), DT 2021 0312, Department of Enterprise, Trade and Employment/Enterprise Ireland, November 15, 2022, €3.14 million - RCSI share: €665,077

Hodgkinson T. Development of a gene activated construct targeting proinflammatory signalling to promote zonal regeneration of osteoarthritic cartilage. EIA-2022-009, October 2022, Health Research Board, €729.485

Hodgkinson T. Regeneration of articular cartilage through biomaterial-controlled in situ cell reprogramming to recover youthful epigenetic information (RESTORE) 21/PATH-S/9306 SFI-IRC Pathway Programme, March 2022, €552,140

Kars, M, O'Brien F.J. (co-applicant) Regeneu (Consolidating the Expertise of Necmettin Erbakan University Towards the Development of Biofibers for Wound Healing and Tissue Regeneration), 101079123, EU Horizon Europe WIDERA Twinning call project, 07/2022, funding allocated €148,070

Kelly D, O'Brien F.J. (co-applicant), Buckley C, Hoey D, Morris M. Development of 3D printed composite scaffolds targeting infected bone defects, 17/SP/4721, Science Foundation Ireland/Johnson & Johnson, 1/2017, RCSI funding allocated €213,590

Kennedy OD. Subchondral bone microdamage in PTOA, CDA-17-1401, Science Foundation Ireland, November 2018, €607,981

Kennedy OD. Osteoleukins: Osteocytes as a source of inflammatory factors in PTOA'. FFP -06-2314, Science Foundation Ireland, December 2022 € 602,232

Kennedy OD. Arthroscopic synovial microneedle technology for drug delivery to prevent PTOA. ON-21-008, Orthoregeneration Network, November 2021 €25,000

Kennedy OD. Arthroscopic microneedle design for PTOA. AS-2112, Anatomical Society, November 2020 €109,000

Murphy C. Characterising cellular biology in paediatric scoliosis spine for clinical impact in treatment strategies, RCSI/Industry, September 2022, €223,876

Murphy C. HEA Support for COVID-19 Related Research Costed Extensions, Higher Education Authority, March 2022, €23,000

Murphy C. NanoBoost, EU Horizon 2020, April 2021, € 184,590

Murphy C. RCSI Beacon Hospital StAR MD Programme 2020, RCSI, May 2020, €20,000

Murphy C. RCSI Cost Savings from Marie Curie, RCSI, August 2018, €70,533

Murphy C. Developing Innovative Injectable Collagen-Bioceramic Composites for Medical Devices, SFI, August 2018, €91,980

Murphy C. StAR Research Lecturer Programme, RCSI, February 2017, €146,380

Nicolosi, V., O'Brien F.J. (co-applicant), The development and assessment of tunable electrocondutive materials for the repair of spinal cord injury, 18/EPSRC-CDT/3581, Science Foundation Ireland, EPSRC-SFI Joint Funding of Research, 09/2022, funding allocated €26,130 (RCSI).

O'Brien, F.J., Gene-activated scaffolds for the treatment of Epidermolysis Bullosa, OBrien 2022, DEBRA Ireland Seed Funding, 09/2022, funding allocated €20,000

O'Brien F.J. (PI), Burke, J. (Student) Functionalizing Next Generation Nerve Regeneration Biomaterials with Electrical Stimulation and Gene Therapy, Fulbright Programme, 09/2023, funding allocated €167,000

- O'Brien F.J. (co-PI), Zheng, Y., An, S. (Student), The application of 3D printed biomaterials for the delivery of therapeutics to enhance cartilage repair and reduce inflammation in joint defects. StAR International PhD Programme, collaboration with Soochow University, funding allocated €20,000
- O'Brien, F.J., McCarthy, H., WoundActiv: Bioactive scaffolds functionalised for the delivery of genetic cargoes for the healing of complex wounds, FOB-HEANS-2022, Health Education Authority NorthSouth programme, 05/2022, funding allocated €199,021
- O'Brien F.J. (PI), Stasiewicz, M. (student), Non-viral targeting of cell junctional proteins to destabilise fibroglial scar after SCI, GOIPG-2022-2423; GOIPG-2022-2423, Irish Research Council (IRC) Gol Postgraduate Scholarship, 04/2022, funding allocated €27,500 (IRC); €10,000 (RCSI)
- O'Brien, F.J. (co-applicant), Development of neurotrophin receptor p75 extracellular domain (p75NTRECD) modified nerve guidance conduits ("TP27 Integra 3 Project"), SFI-Integra-003, 12/RC/2278, Science Foundation Ireland/Integra/AMBER, 12/2020, funding allocated €550,484
- O'Brien F.J., Gleeson, J.P., Non-surgical Repair of Tympanic Membrane Perforations (TympanoColl), CF-2021-1792-P, Enterprise Ireland Commercialisation Fund, 12/2021, funding allocated €250,042
- O'Brien F.J., Development of a nerve guidance conduit (NGC) incorporating nerve growth factor to promote accelerated repair of peripheral nerve defects, 12/RC/2278\_P2, SFI-Integra-004, Integra LifeSciences/Science Foundation Ireland/ AMBER, 12/2021, funding allocated €1,472,745
- O'Brien F.J. (PI), Matheson A. (lead applicant), Gene-Activated Multi-Layered Biomaterials for Superior Bio-lubrication and Enhanced Cartilage Repair, GA 945168, EU Horizon 2020 Marie Sklodowska-Curie actions CoFund, 10/2021, funding allocated €167,952
- O'Brien F.J. (PI), Boyle .C., Patton D., Verification and Validation of the Provizio® SEM Scanner's operational claims in a clinical skin tissue model. BBI Ltd. Collaboration with Bruin Biometrics LLC, Bruin Biometrics funding allocated €138,247
- O'Brien F.J. (PI), Woods I. (lead applicant), ElecTrophINK: Multifunctional conductive 3D printed scaffolds for enhanced spinal cord regeneration, GOIPD/2021/262; RCSI/2021/262, GOI Postdoctoral Fellowship Funding (Irish Research council), 08/2021, funding allocated €103,032
- O'Brien F.J. (PI), Boyle, C. (lead applicant), SKIN-REGEN-MECH A skin substitute optimised using mechanobiological simulation to restore weight-bearing function, 892407, EU Horizon 2020 Marie Sklodowska-Curie actions Individual Fellowships, 03/2020, funding allocated: €196,591
- O'Brien F.J. (PI), Dervan A., O'Connor C. (student), Development of a biomimetic 3-dimensional spinal cord model system to study inflammation-mediated astrogliosis, SSD-011020, Anatomical Society Research Studentship, 11/2019, funding allocated €81,854
- O'Brien F.J. 3D tissue engineering-based model of non-syndromic craniosynostosis for identifying potential therapeutic targets that control premature ossification, RPAC 19-01, Temple Street Children's University Hospital Foundation, 02/2020, funding allocated €209,014
- O'Brien F.J. AMBER Phase 2, 12/RC/2278\_P2, Science Foundation Ireland, 03/2019, funding allocated €2,373,430
- O'Brien F.J., McCarthy,H, Donahue, S., Dunne N., Non-viral Delivery of Genetic Cargo on Biomaterial Scaffolds for Bone Regeneration, 17/US/3437, Science Foundation Ireland US-Ireland R&D Partnership Planning Grant, 11/2018, RCSI funding allocated €464,054
- O'Brien FJ. Scaffold-based Therapeutic Delivery for Spinal Cord Repair, N/A, Irish Rugby Football Union Charitable Trust, 20/08/2018, funding allocated €500,000
- O'Brien F.J. Regeneration of Articular Cartilage using Advanced Biomaterials and Printing Technology (ReCaP), 788753, EU Horizon 2020 ERC Advanced Grant, 04/2018, funding allocated €2,999,410

O'Brien F.J. Development and evaluation of a novel product to promote ostreogenesis, Marigot, Private Donor, 21/01/2011, funding allocated €63,205

O'Brien F.J., Curtin C. Advanced scaffold-based therapeutics for regeneration of large volume, vascularised bone defects, 2165, HRB, 01 Oct 2017, €369,915

Piskareva O. Development of mRNA-based vaccine for children with neuroblastoma, HRB-HRCI 2022-2025, €280,000

Piskareva O. NeuVac-mRNA based vaccine for neuroblastoma, The HEA North-South Programme2022-2023, €170,000

Piskareva O. Regulation of crosstalk and signaling switches between RAF and MST2 pathways in neuroblastoma, DevelopMed MSCA COFUND Action 2022-2025, €260,000, (co-Applicant)

Piskareva O. Exosome-based liquid biopsies for children with neuroblastoma The Fulbright-RCSI StAR PhD Programme 2022-2026, €125,000 (co-Applicant)

Piskareva O. New Therapies for Neuroblastoma Consortium building meeting The EJP-RD Networking Support Scheme 2022, €30,000 (co-Applicant)

Piskareva O. The HEA COVID19 Support 2021-2022, PhD project extension support €20,000

Piskareva O. Exosome based nanomedicine for neuroblastoma RCSI-SU StAR Strategic International Partnership Programme 2021-2025, ∼€125,000

Piskareva O. Enterprise Ireland H2020 Support 2022-2023, €12,500

Piskareva O, Advanced humanised 3D in vitro system for modelling immune response and testing novel therapies for children with neuroblastoma The IRC Government of Ireland Postgraduate Scheme/EPS2021-2025, €110,000, (co-Applicant)

Piskareva O. Development of DNA vaccine for children with neuroblastoma RCSI StAR PhD Fellowship-Demonstratorship, 2020-2024 €125,000

Piskareva O. Modelling neuroblastoma - immune cell interactions in a tissue-engineered 3D platform Neuroblastoma UK, 2019-2022, €140,000

Piskareva O, Decrypting cascades of tumour - immune cell interactions using a 3D in vitro tissueengineered model, The IRC Government of Ireland Postgraduate Scheme, 2019-2023, €96,000, (co-Applicant)

Quondamatteo F & Browne S. Harnessing stem-cell derived vascular cells for the development of a proangiogenic ECM scaffold to treat diabetic foot ulcers. Anatomical Society PhD Studentships November 2021, €74,000

Quondamatteo F. Anatomical Society Departmental Seminar Grant, 2023 €400

## **Innovation and Commercialisation Activities**

Invention Disclosure Forms:

IDF filed by Fergal O'Brien, Katelyn Genoud, Danny Kelly. A non-antibiotic antimicrobial and osteogenic 3D printed polymeric bioink and its capacity in the fabrication of 3D printed scaffold for the prevention of osteomyelitis. IDF2023-01. Filing date: 09/03/2023.

## Patent Applications:

Patent (EP21217170.6) filed with the European Patent Office (EPO) - A system to treat heart failure with preserved ejection fraction (HFpEF). Inventors: Aamir Hameed, Andrew Malone, Grainne Malone.

Patent filing: Conor Buckley, Leyla Zilic, Fergal O'Brien. An acellular nerve graft. US17/779,783. Patent Filed: May 25<sup>th</sup> 2022.

# **CHEMISTRY**

#### Overview

The department continued to provide a blended undergraduate chemistry education in the Schools of Medicine, Physiotherapy and Pharmacy while expanding its research programs for PhD students and postdoctoral researchers.

# Summary of Key Achievements / Academic Activities Departmental:

Notable events during the year include; growing of the user base for the SFI funded Super Resolution Imaging Centre and principal investigator level participation in three different SFI Centres, SSPC, Amber and Curam. Continued growth of departmental international recognition for research publications and participation by academic staff on international peer review panels.

#### Individual:

#### O'Shea Donal

- Interviews on live national radio stations highlighting the public health risks of vaping.
- Participated in an Irish Times podcast discussing Irish vaping legislation.
- Conference presentations entitled "Forecasting vaping health risks through neural network model
  prediction of flavour pyrolysis reactions" at Cambridge University and "Real-time near infrared
  fluorescence imaging; research tools with the potential for clinical use" at the European Chemical
  Society Congress and the 7th International Conference on Molecular Sensors and Molecular Logic
  Gates.
- Participant in the RCSI MyHealth Podcast series called Vaping: What does the Science Tell Us?
- Co-authored an article in The Conversation titled "UK plan to encourage smokers to take up vaping means swapping one health risk with another".
- H2020-MSCA-IF-2022 and the French National Institute of Health and Medical Research (INSERM) funding proposal reviewer.

#### Barlow James

- Member of HPRA Herbal Medicines Sub-committee.
- External examiner for Pharmacy Technician Programmes at TUD.
- Co-supervised the successful MSc thesis of Blaithin Arnold at RCSI. 'A framework for assigning in-use shelf life for aseptically manipulated small molecule preparations in unlicensed hospital compounding units –A Delphi Study'.

## Devocelle Marc

- Developed (and delivered) a new (1-week) optional module for THEP-II.
- External examination: confirmation/transfer PhD registration, TU Dublin.

## Heise Andreas

- Proposal reviewer for the Fonds de la Recherche Scientifique FNRS, Belgium.
- Expert panel member for the PhD Fellowship programme Strategic Basic Research of the Research Foundation Flanders (FWO), Belgium.
- Expert panel member for the evaluation of Junior/Senior research projects "Fundamental Research (Chemistry)" of the Research Foundation Flanders (FWO), Belgium.

## Marmion Celine

- Member of the AMEE ASPIRE Academy (since August 2022).
- Council member of the International Society of Biological Inorganic Chemistry (2020-2024).
- Member of the International Scientific Committee for the 9th European Chemical Society (EuChemS) Congress to be hosted by the Institute of Chemistry of Ireland in Dublin, 2024.
- President (2019-2022) and current Council member of the Institute of Chemistry of Ireland.
- Committee member of the Irish Biological Inorganic Chemistry Society (IBICS).
- Member of the National Student Engagement (NStEP) Advisory Committee (2021-2023).
- Awarded the prize for Most Cited RCSI Senior Authored Paper 2017-2021.

- 'Multi-Targeted Metallodrugs Rationally Designed to Overcome the Evolving Paradigm of Drug Resistance', Inorganic Ireland Symposium, Trinity College Dublin, 19th May, 2023 (Invited plenary lecture).
- Marmion, C.J., 'Multi-Targeted Metallodrugs Rationally Designed to Overcome Drug Resistance', 16th European Biological Inorganic Chemistry Conference (EuroBIC-16), Grenoble, France, 18th July, 2022 (Invited lecture).
- Marmion, C.J., Crehan, M., 'Embedding a universal culture of student partnership across RCSI a study to identify key enablers from a staff and student perspective, INHED Conference, Queen's University Belfast, 29th March, 2023.
- Marmion, C.J., Bachari, A., 'Embedding a University-wide Culture of Student Engagement and Partnership', QQI 10th Anniversary Conference, Dublin, 19th October, 2022.
- Member of the National Organising Committee of the Inorganic Ireland Symposium, held in Trinity College Dublin, May, 2023.
- RCSI Deputy Dean for Student Engagement (2018-2024).
- PhD external examiner, University of South Australia, May 2023.
- External reviewer for Maynooth University (academic promotions), June 2023.
- Grant reviewer, UKRI Future Leader Fellowship Grant, May 2023.

## Griffith Darren

- External examiner, TU851 (DT203A) Year 4 BSc in Analytical Chemistry (Environmental, Forensic & Pharmaceutical) and TU852 (DT299T) BSc in Chemical Sciences with Medicinal Chemistry.
- PhD examiner, Chemical & BioPharmaceutical Sciences, TU Dublin.

#### Adamo Mauro

- Dec 2022: Served as External Examiner for the Committee for the award of four PhD (international) in Chemical Sciences Scienze Chimiche – CICLO XXXV (Chemistry including general, organic and medicinal).
- Feb 2023: Served as external PhD examiner for the Faculty of Chemistry of Faisalabad (Pakistan).
- March 2023: Served as panelist for the academic promotions in the Faculty of Chemistry University of Faisalabad (Pakistan).
- Jun 2023: Served as External Examiner for the Committee for the award of PhD (industrial) Chemical Sciences Scienze Chimiche (Chemistry including general, organic and medicinal).
- Jun 2023: Served as grant evaluator for Cancer Inserm (Fr).
- Jul 2022: served as grant evaluator for SETU Waterford PG grants.
- Jun 2023: served as grant evaluator for SETU Waterford Co-Fund grants.
- Sept 2022: Plenary lecture given to "RNA Summer School" Brno (5-9.9.2022): Development of Fast and Selective Fluorination (<sup>18</sup>F and <sup>19</sup>F) for Oligonucleotides, Peptides and Proteins.

## Monopoli Marco

- Working group leader for Education and Training at the European Technological platform for Nanomedicine (ETPN).
- PhD external examiner, Salford University, UK.
- Organiser of the NanoCarb final Symposium, 18-19 May 2022, Milan, IT.

## **Staff List**

Professor & Head of Department Donal O'Shea BSc (NUIG), PhD (NUIG)

## **Professors**

Mauro F A Adamo MSc (Florence), PhD (Sheffield), MRSC, MACS, MPSI Celine J Marmion BSc, PhD, PGCE, FRSC Andreas Heise PhD (Hannover)

Associate Professors
Marc Devocelle MSc, PhD (Lille)

#### Lecturers

James Barlow BSc (Pharm), PhD, MPSI Senior Lecturer in Pharmacognosy, Associate Vice Dean for Student Support & Development

Darren Griffith BSc, PhD (NUI), PGDip (Leadership & Management), Lecturer Medical Commencement Programme, RCSI/IT Tralee

Marco Monopoli PhD (UCD) StAR Researcher Lecturer

Dan Wu PhD (UCD) Honorary Lecturer

Laboratory Manager

Emmet Campion BSc (DCU), MSc (NUI, RCSI)

Senior Technicians Suzanne Donnelly BSc (DIT) Graeme Kelly BSc (UCD), PhD (NUI, RCSI)

Imaging Specialist

Massimiliano Garre MSc (University of Pisa)

Operations Coordinator Yuan Ge MSc (Donghua University)

Postdoctoral Research Fellows
Daniel Alencar PhD
Mahmoud Soliman PhD
Bo Li PhD
Rafal Bielas PhD
Robert Denis Murphy PhD
Ernesto Tinajero Diaz PhD
Thomas Leigh PhD
Karen Fox PhD
Boddu Umamaheswara Rao PhD
Gangaram Pallikonda PhD
Stephen Butler BSc, PhD

Apjohn Scholars Cathal Caulfield BSc Niamh Curtin BSc Sebastian Pim BSc

Postgraduate Research Students

Paul O'Dowd BSc

Lewis More O'Ferrall BSc

Marko Dobricic

**Eva Clemente** 

Avelino Ferreira

Alberto Martinez Serra

Siobhan O'Flaherty BSc

John Connolly MSc

Conor Shine BSc

Abayomi Yusuf

Mouna Hind Laiche

Adam Moloney (registered in TUD but in RCSI for secondment)

Valentina Magno (registered in TUD but in RCSI for secondment)

Sheila Fitzgerald

Jacqueline Smyth

Daniela Tomasino BSc
Nicola Judge BSc
Gianluca Torres BSc
Muireann Cosgrave
Smiljana Stefanovic
Eden Booth
Roberta Pacifico MSc
James Carr MSc
Antonia Scognamiglio MSc
Daniele Florio MSc
Alessio Vito MSc
Marco Satta BSc

# Undergraduate Research Student:

Aaron Daunt, Year 4 Pharmacy SRS project

Abdulla Alattas, Medicine SSC project

Kimia Esmaeilzadeh, Summer school research project 2022

Matar Alhammadi, Summer school research project 2023

Hitam Ameen, Year 5 Pharmacy Project 2022/2023

Caoimhe Kelly, Year 5 Pharmacy Project 2023

Edwina Geraghty, Year 5 Pharmacy Project 2023

Mansour Saraea, Student Selected Project (SSP)

Ahmad Alghanem, Student Selected Project (SSP)

Emmanuel Ujah, Summer school research project

Jamie Maclennan. Summer school research project

Aisling Lynch, TU Dublin BSc project

Brigid Etchingham Coll, RCSI Student Selected Project

Mehran Anwar, RCSI Student Selected Project

Velin Kolev, RCSI MPharm4 SRS Module

Jude Lim, TU Dublin, Final Year Research Project

Donal McGuinness, RCSI SSC Project

Chloe Hobbs, TCD Summer Research Placement

Anna Nakonechna, TUD

Ciara Greene, TUD

Paddy Froste, RCSI MPharm

Maryam Alshuaili, RCSI Medicine

## Erasmus Students

Claudia Paz Canales Sáez, visiting PhD student from Santiago, Chile.

Wim Ruhwinkel, Muenster University (part-time, as part of a joint project with TU Dublin, Erasmus mobility registered at TU Dublin)

# **Higher Degrees**

Daniela Tomasino; Glyco functionalized nanoparticles by PISA; PhD; RCSI & NUI 2023. Smiljana Stefanovic; Development of functional star-shaped polypeptides for biomedical applications; PhD, RCSI & NUI 2023.

Nicola Judge, Development of Ring Opening Mini-Emulsion Polymerisation of NCarboxyanhydride Monomers for the Formation of Polypeptide Nanoparticles, PhD, RCSI & NUI 2022.

Roberta Pacifico; Pyridine-Based 1,2,3-Triazoles: a new class of potential KAT2A inhibitors and scaffolds for C-H activation and catalysis; PhD, RCSI & NUI 2022.

# **Publications**

Alarcon, J. F., Soliman, M., Lüdtke, T. U., Clemente, E., Dobricic, M., Violatto, M. B., Monopoli, M. (2023). Long-term retention of gold nanoparticles in the liver is not affected by their physicochemical characteristics. doi:10.1039/d3nr00685a

- Antonello, G., Marucco, A., Gazzano, E., Kainourgios, P., Ravagli, C., Gonzalez-Paredes, A., Riganti, C. (2022). Changes of physico-chemical properties of nano-biomaterials by digestion fluids affect the physiological properties of epithelial intestinal cells and barrier models. doi:10.1186/s12989-022-00491-w
- Benowitz, N. L., Havel, C., Jacob, P., O'Shea, D.F., Wu, D., & Fowles, J. (2022). Vaping THC-O acetate: potential for another EVALI epidemic. doi:10.1007/s13181-022-00921-3
- Caulfield, C., Wu, D., Garre, M., & O'Shea, D. F. (2023). Substituent directed cellular imaging in the 800-850 nm range with BF<sub>2</sub>-azadipyrromethene fluorophores. doi:10.1039/d2ra07942a
- Caulfield, C., O'Shea, D.F., & Wu, D. (2023). Dynamic bioorthogonal imaging using a tetrazine NIR-AZA fluorogenic probe. doi:10.1016/j.tet.2023.133387
- Caulfield, C., Wu, D., Miller, I., Byrne, A., Aonghusa, P. M., Zhuk, S., O'Shea, D.F. (2023). BF<sub>2</sub>-azadipyrromethene fluorophores for intraoperative vital structure identification. doi:10.3390/molecules28052167
- Chanteli, A., Conaire, M. Ó., Brannigan, R., Heise, A., Weaver, P. M., & Manolakis, I. (2022) Cleavable epoxy networks using azomethine-bearing amine hardeners. doi.org/10.1016/j.reactfunctpolym.2022.105338
- Curtin, N., Garre, M., Wu, D., & O'Shea, D.F. (2023). Identifying STEDable BF<sub>2</sub>-azadipyrromethene fluorophores. doi:10.3390/molecules28031415
- Curtin, N., Garre, M., Bodin, J. -B., Solem, N., Méallet-Renault, R., & O'Shea, D.F. (2022). Exploiting directed self-assembly and disassembly for off-to-on fluorescence responsive live cell imaging. doi:10.1039/d2ra06534g
- Curtin, N., Garre, M., Bodin, J. -B., Solem, N., Meallet-Renault, R., & O'Shea, D.F. (2022). Exploiting directed self-assembly and disassembly for off-to-on fluorescence responsive live cell imaging. doi:10.26434/chemrxiv-2022-77rw1
- Bencivenni, G., Rosa, N. S., Grieco, P., Gillick-Healy, M. W., Kelly, B. G., Twamley, B., & Adamo, M. F. A. (2022). Quaternary Ammonium Salts Interact with Enolates and Sulfonates via Formation of Multiple +N-C-H Hydrogen Bonding Interactions. doi.org/10.3390/catal12070803
- Epperlein, J. P., Zayats, M., Tirupathi, S., Zhuk, S., Tchrakian, T., O'Shea, D.F., Cahill, R. A. (2022). Practical perfusion quantification in multispectral endoscopic video: using the minutes after ICG administration to assess tissue pathology.
- Farkas, E. & Marmion, C. J. (2023). Targeted Metallo-Drugs: Design, Development, and Modes of Action, Volume 24 of Metal Ions in Life Sciences, CRC Press, Boca Raton, USA.
- Flood, M., Strawbridge, J., Sheachnasaigh, E. N., Ryan, T., Sahm, L. J., Fleming, A., & Barlow, J. W. (2022). Supporting pharmacy students' preparation for an entry-to-practice OSCE using video cases, Currents in Pharmacy Teaching and Learning. <a href="https://doi.org/10.1016/j.cptl.2022.10.010">doi.org/10.1016/j.cptl.2022.10.010</a>.
- Fortino, V., Kinaret, P. A. S., Fratello, M., Serra, A., Saarimäki, L. A., Gallud, A., Greco, D. (2022). Biomarkers of nanomaterials hazard from multi-layer data. doi:10.1038/s41467-022-31609-5
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- Gleeson, L. L., Ludlow, A., Clyne, B., Ryan, B., Argent, R., Barlow, J. W., Flood, M. (2022). Pharmacist and patient experiences of primary care during the COVID-19 pandemic: An interview study, Exploratory Research in Clinical and Social Pharmacy. doi.org/10.1016/j.rcsop.2022.100193.

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Moccia, M., Piras, L., Bellini, G., Saviano, M., & Adamo, M. F. A. (2023). Synthesis and Characterization of Abasic β-Diol-C-nucleosides. doi.org/10.3390/chemistry5020091

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Ryan, A. L., Northcote-Smith, J., Mckeon, A., Roe, A., O'Dowd, P., Twamley, B., Griffith, D. (2022). A trans-Pt(ii) hedgehog pathway inhibitor complex with cytotoxicity towards breast cancer stem cells and triple negative breast cancer cells. doi.org/10.1039/D2DT02865D

Trinh, D. N., Radlinskaite, M., Cheeseman, J., Kuhnle, G., Osborn, H. M. I., Meleady, P., Monopoli, M. (2022). Biomolecular corona stability in association with plasma cholesterol level. doi:10.3390/nano12152661

Varbanov, M., Bensoussan, D., & Devocelle, M. (2023). Pre-Professional International Mobility of European Pharmacy Students-A French Example. Pharmacy (Basel). doi: 10.3390/pharmacy11020059.

Wu, D., Sampedro, G. D., Fitzgerald, S., Garre, M., & O'Shea, D. F. (2023). Double click macrocyclization with Sondheimer diyne of aza-dipyrrins for B-Free bioorthogonal imaging. doi:10.1039/d2cc06461h

Xu, T., Skoulas, D., Ding, D., Cryan, S-A., & Heise, A. (2022). Exploring the potential of polypeptide–polypeptoide hybrid nanogels for mucosal delivery. doi.org/10.1039/D2PY01126C

Yan, Q., Zhang, T., O'Connor, C., Barlow, J. W., Walsh, J., Scalabrino, G., Sheridan, H. (2023). The biological responses of vitamin K2: A comprehensive review. <a href="https://doi.org/10.1002/fsn3.3213">doi.org/10.1002/fsn3.3213</a>

## **Active Grants and Grants Awarded**

# Donal O'Shea

- Donal O'Shea, Bio-conjugations in flow for drug conjugates and theranostic imaging agents, 17/RC-PhD/3487, SFI, 01/10/2018, €194,550
- Donal O'Shea, SSPC Phase 2, 2/RC/2275 P2, SFI, 01/06/2019, € 551,531
- Donal O'Shea, Super-resolution imaging facility access fees, DOS-SFIRI-2021, 08/06/2021, € 50,000
- Sebastian Pim/Donal O'Shea, Continuous flow Bio-conjugations for Targeted Fluorescence Imaging Agents, Apjohn Scholarship, AJ-RCSI-2022, RCSI, 03/10/2022, €121,780
- Eden Booth/Donal O'Shea, Investigation of Exosome-Cell Interactions through Imaging Fluorescent Exosomes, GOIPG/2022/1939, IRC, 01/09/2022, €110,500

## Devocelle Marc

- PI: Eoghan O'Neill/Collaborator: Marc Devocelle. Wound infections: biofilms and the search for novel antimicrobial agents. ILP-POR-2019-009, HRB, 25-07-2019, Total Grant Value: € 366,087
- PI: Donal O'Shea/FI: Marc Devocelle. SSPC\_Phase 2. 2/RC/2275\_P2, SFI, 01-06-2019, FI share: €140,333

- PI: Marc Devocelle. Antimicrobial Pegtides. 19/FFP/6889, SFI, 01-10-2020, Total Grant Value: €200.128
- PI : Marc Devocelle. StAR International PhD Programme 2020, RCSI, 01-10-2020, Total Grant Value : €36.000
- PI : Marc Devocelle. Research and development of PNA Synthesis, Altratech, Total Grant Value: €7,000

## Griffith Darren

- Darren Griffith, The Development of a Bioorthogonal Toolkit for the Functionalisation of a Clinical Platinum-based Anticancer Drug, 12/RC/2275\_P2, Science Foundation Ireland, SSPC PharM5, €134.000
- Stephen Barrett/ Darren Griffith, Pretargeted "Click-to-Release" Activation of a Platinum Anticancer Drug, GOIPD/2022/160, IRC, 30th March 2022, €106,365
- Darren Griffith, Development of Pt-based PROteolysis TArgeting Chimeras (Pt-PROTACs) as Molecular Probes for Pt-binding proteins and Next Generation Anticancer Agents, 21/FFP-P/10216, SFI, 24th October 2022, €536,148

#### Monopoli Marco

- Marco Monopoli, Characterisation of Iron NP in biological fluid. SFI Amber project cofounded by CSL Vifor pharma. 12/RC/2278\_P2
- Marco Monopoli, Safe and sustainable design for advanced nanomaterials- Sunshine, 1/1/2021, grant agreement No 952924, €6,521,348 total amount, €204,125 awarded to the PI
- Marco Monopoli, Platform Optimisation To Enable NanomaTerIAL safety assessment for rapid commercialisation - Potential, Grant agreement ID: 10109290, 1/1/2023, €2,999,787, €347,000 awarded to the PI

## Heise Andreas

- Andreas Heise/Robert Murphy; Biopolymers for the Generation of 3D Tissue Engineering Scaffolds by Solution Mask Liquid Lithography; 842599; Horizon 2020 Marie Curie Action; 03/2019; €257,561
- Andreas Heise; Polypeptides-based tissue adhesives; 13/RC/2073\_P2; SFI-CURAM Centre; 08/2021; €159,480
- Andreas Heise; Synthesis and Evaluation of Biodegradable Crosslinked Materials; Industry (Syngenta); 18/05/21; €100,000
- Sally-Ann Cryan/Andreas Heise; StarMat Technologies; CF-2020-1366-P; Enterprise Ireland; 04/2019; €401,726; Heise: €180,000
- Sally-Ann Cryan/Andreas Heise; Development of an advanced tubular scaffold prototype for tracheal regeneration; 13/RC/2073 P2; SFI-CURAM Centre; 08/2021; €215,250; Heise: €57,711
- Andreas Heise/Thomas Leigh; Polypeptide hybrid nanoparticles for the delivery of inhalable drugs; 101063749; Horizon Europe Marie Curie Action; 04/2023; € 199,694
- Andreas Heise; Unprecedented photolithographic structuring of novel light-sensitive poly(amino acid) materials POLINA; CS20231580; 01/2023; € 4,428
- Andreas Heise/Bo Li; PEA-MAT: Novel poly(ester amide)s (PEA) as functional biomaterials in tissue engineering applications; 945168-1 and 12/RC/2278\_P2; 11/2022; € 183,552

#### Adamo Mauro

- Mauro F A Adamo, Karen Fox Preparation of 18F and 19F labelled RNAs via 4'-F and 2'F' deoxyribose nucleotides and their precursor, 21/IRDIF/9842, SFI, Award Date 23-11-2021, Total Grant Value €84.856
- Mauro F A Adamo, Synthesis of Alprarazol, Strategic Partnership €4,225

# **Innovation and Commercialisation Activities**

*Monopoli Marco* International Patent Application No. Corona Enrichment for RCSI Office of Research and Innovation (BB Ref. JDM126882P.WOP) [BB-CASES.FID2431273]

*Adamo Mauro* Patent Application: UK Patent Application 31st July 2022 Fluorination Process; inventors Mauro F. A. Adamo and Francesco Alletto.

# **CLINICAL MICROBIOLOGY**

**Overview** 'Infection and Host Response' is the theme of the department's activities with departmental members actively involved in teaching, research, public engagement and advocacy, in addition to national health policy and health services leadership roles in sepsis, antimicrobial resistance (AMR) and healthcare-associated infection (HAI).

Our goal is to support the battle against AMR and HAI at all levels from; promoting best clinical practice, sharing new developments, raising awareness of AMR and through impactful research in infection, immunology and medical education. Our dynamic team includes clinicians, other healthcare professionals and scientists. We are committed to teaching, research, patient-care and public service activities that underpin this goal. Public engagement included AMR presentations to transition year students in RCSI and Beaumont Hospital (F Fitzpatrick) and articles for The Conversation UK (F Fitzpatrick I D Fitzgerald-Hughes: Antibiotics are being inappropriately prescribed for COVID, increasing the threat of AMR, February, 2023 and F Fitzpatrick: Summer colds: this may explain why so many have suffered them this year, August 2022). As part of the RCSI StEP programme and in collaboration with RCSI students, departmental members developed a patient education video for diabetic patients (D Fitzgerald-Hughes) and a children's book on respiratory viruses (F Fitzpatrick, A Doherty).

We were delighted to celebrate success with Mairead Skally (MSc), Rachel Grainger and Zainab Baker (Higher Diploma in Healthcare Professions Education), Aaron Doherty (First prize at the British Infection Society Spring Meeting) and Sinead O'Donnell (leadership of Hub and Spoke programme for SARS-CoV-2 sequencing in Beaumont Hospital). We would like to congratulate Aoife Kearney for receiving the Vice-Chancellor Innovation Award for submission of an Invention Disclosure Form as a non-PI at Research Day.

Lastly, we wish to congratulate and thank the following staff as they depart RCSI; Dr Aaron Doherty (consultant microbiologist in Cork University Hospital), Dr Rob Brennan (clinical microbiology SpR scheme), Dr Collette Fogarty (clinical immunology SpR scheme) and Dr Muireann Fallon, R&D Microbiologist, Novus Diagnostics.

# **Summary of Key Achievements / Academic Activities Professor Fidelma Fitzpatrick**

Co-director Year 2: undergraduate medical programme, RCSI

Member: Medicine and Health Sciences Board, RCSI

The Chinese University of Hong Kong, External Examiner:

- Clinical Microbiology Undergraduate Medicine, January 2023.
- PhD June 2023

University of Dublin, Trinity College, External Examiner:

- MSc in Healthcare-associated Infection Management, June 2019 -present.

RCPI Trainer - SpRs in Microbiology, SHOs in general internal medicine

Chair (elected): European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Group for *Clostridioides difficile*, June 2020 – present

Chair: National Sepsis Steering group, HSE (May 2013 - present)

Member: Dublin Dental Hospital Board, September 2019 – present.

Member: National Steering Group, ECDC PPS in acute hospitals 2023, HPSC.

Member: Community antimicrobial prescribing committee, HSE Antimicrobial Resistance Infection Control (AMRIC).

Invited chair: 33<sup>rd</sup> Congress of the European Society of Clinical Microbiology and Infectious Diseases, Copenhagen. April 2023

Abstract reviewer, 33<sup>rd</sup> Congress of the European Society of Clinical Microbiology and Infectious Diseases. Invited lectures: *C. difficile* in Ireland (Teagasc *C. difficile* Symposium, October 2022), Lessons from a decade of managing CDI (Infection Prevention Society Annual Meeting, Bournemouth UK, Oct 2022), The ESCMID *C. difficile* study group (33<sup>rd</sup> Congress of the European Society of Clinical Microbiology and Infectious Diseases, Copenhagen, April 2023), CDI local and national trends (Infection Prevention Ireland, April 2023) and CDI data and definitions (Hong Kong, April 2023).

## **Professor Hilary Humphreys**

RCSI Hospital Group Chief Academic Officer, 2021-present

Healthcare Infection Society (HIS), President, November 2017-2022.

HIS 40th Celebration Scientific Meeting, Steering Committee (Chair), 2017-2022

European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Guideline Group on the Diagnosis and Treatment of Brain Abscess, Member, 2021-present

HIS and ESCMID Study Group on Nosocomial Infections (ESGNI) Working Group on Operating Theatre Rituals and Behaviours, Chair, 2018-2023.

ESGNI Executive Committee Member and Honorary Treasurer, 2017-2023.

University of Malta, Medical Curriculum, External Examiner 2021-2023

University of Galway, External Examiner, PhD, 2023

## Professor Eoghan O'Neill

Director Year 2 Graduate Entry Medicine (GEM), RCSI

External Examiner: Trinity College Dublin, School of Medicine, Clinical Microbiology (undergraduate program), August 2020 – June 2024 (1 year extension requested by TCD)

Associate Editor Irish Journal Medical Science

RAMI Research Awards judging panel

Lead in ongoing revision of RCPI Postgraduate Principles of Antibiotics e-learning course

Member of National Antimicrobial Consumption Committee

Extern member of two PhD review committees, NUIG (GRC April 2023)

Year 2 Lead for GEM THEP integration

## **Professor Catherine Greene**

Deputy Head, School of Postgraduate Studies, PhD Programmes

Co Editor-in-Chief, Journal of Innate Immunity, 2022-

Associate Editor, European Respiratory Journal 2021-

Editorial Board Member, American Journal of Respiratory and Critical Care Medicine 2022-

Fellow, European Respiratory Society 2021-

Head, European Respiratory Society, Assembly 3 Basic and Translational Science, 2019-2022

Member, ERS International Congress Programme Committee Society 2016-2022

Expert Monitor, Horizon 2020 Programme Grant, 2023

PhD External Examiner, University of Sheffield, 2023

PhD External Examiner, University of Dundee, 2023

Invited Seminar, Dartmouth College, Hanover, New Hampshire, 2023

External Interview Panel Member, Professor in Respiratory Biochemistry, Trinity College Dublin 2023

# Dr Deirdre Fitzgerald-Hughes

Deputy Head of School of Postgraduate Studies, Academic Quality

Elected Member of Academic Council, 2021-2023

PhD External Examiner, Technology University Dublin, 2022

Committee Member, Irish Biological Inorganic Chemistry Society, 2019-2023

Expert Reviewer, European Commission, European Innovation Challenge, Pathfinder call 2022

Invited Presentation, White Paper on Diabetes in Ireland, Joint Oireactas Committee on Diabetes, 2022

#### Dr Sinead O'Donnell

European Centre for Disease Prevention and Control (ECDC) Operational Contact Point (OCP) for Bioinformatics for Ireland (Nominated Microbiologist) (Sept 2022 – Present)

Member: Antimicrobial Stewardship Advisory Group, National Antimicrobial Resistance and Infection Control Team (AMRIC) (2020 – present)

Member: Act for Meningitis Charity Board Member (2021- Present)

Member: European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Groups for Clostridioides difficile (ESGCD) and for Genomic and Molecular Diagnostics (ESGMD)

RCPI Trainer - SpRs in Microbiology, SHOs in general internal medicine

# **Dr Niall Stevens**

Director, Research Summer School

Co-director Year 2, undergraduate medical programme, RCSI

Academic Director of the Learning Environment at RCSI

Member: THEP-II implementation team

# **Dr Rachel Grainger**

Member: Community antimicrobial prescribing committee, HSE Antimicrobial Resistance Infection Control

(AMRIC).

Member: Expert Advisory Group for antibioticprescribing.ie

## **Staff List**

Professor and Head of Department

Fidelma Fitzpatrick BA (Mod), MD, BCh BAO, PGDip HPE, FRCPI, FRCPath, FFPathRCPI

#### Emeritus Professors

Hilary Humphreys MD, DSc, BCh, BAO, DipHIC, FRCPI, FRCPath, FFPath RCPI, FRCP Edin, FESCMID.

Mary Cafferkey BA (Mod) (Physiol), MB, BCh, BAO, MD, FFPath (RCPI), FRCPath, FRCPI

#### Associate Professor

Catherine Greene BA (Mod), PGDip HPE, PhD, FERS

Associate Professor & Deputy Director Year 2 of Graduate Entry Medicine Program Eoghan O'Neill, MB BCh BAO, PhD, MRCPI, FRCPath, FFPathRCPI, PGDip HPE

#### Senior Lecturers

Deirdre Fitzgerald-Hughes BSc, PGDip HPE, PhD

Sinead O'Donnell BSc, PhD, MB, BCh, BAO (NUI, RCSI), LRCP & SI, MRCPI, MRCPUK, FRCPath, PGDip HPE

Niall T Stevens BA (Mod), PGDip HPE, PhD

#### Lecturers

Rachel Grainger MB, BCh, BAO, MRCPI, FRCPath Robert Brennan MB, BCh, BAO, MRCPI Melanie Cunningham LRCP & SI, MB, BCh NUI Aaron Doherty MB, BCh, BAO, MRCPI, FRCPath Colette Fogarty MB, BCh, BAO, MRCPI

ASPIRE Fellow, Infection Prevention and Control, Beaumont Hospital and RCSI Zainab Baker MB, BCh, BAO, MRCPI

Postdoctoral Researchers 4 PhD/MD/MSc Students 5

## Honorary Clinical Associate Professors

Edmond G Smyth MB BCh BAO, MSc, FRCPI, FRCPath, FFPathRCPI Karen Burns MB BCh BAO, MSc, FRCPI, FRCPath, FFPathRCPI Robert Cunney MB, BCh BAO, MSc, MRCPI, FRCPath Karina O'Connell MB, BCh BAO, MSc, MRCPI, FRCPath, FFPathRCPI Professor Binu Dinesh MBBS, MD (Micro), FRCPath, FFPathRCPI Richard Drew MB, FRCPI, FRCPath, MD, DipHIC

## Honorary Clinical Senior Lecturers

Suzanne Corcoran MB BCh BAO, FRCPI, FRCPath, FFPathRCPI Ciara O Connor MB BCh BAO, MRCPI, FRCPath, FFPathRCPI Hélene McDermott MD, BCh BAO, MD, FRCPI, FRCPath, FFPathRCPI Roisin Connolly MB BCh BAO, MRCPI, FRCPath, FFPathRCPI Alida FeTalento MD FRCPath, FFPath, FRCPI Marta Trzos-Grzybowska MD, FRCPath, FFPathRCPI

Honorary Lecturers
Mary Corcoran BSc, PhD
Robert Mulhall BSc, PhD
Edel O'Regan BSc, PhD, FACSL
Sadhbh Gash BSc, PhD

Teaching Co-ordinator
Tracey Dillane BSc, MSc
Cristina Heredia Acuna BSc, MSc

Administrator Ann Shannon

# **Higher Degrees**

Mairead Skally, MSc May 2023

Rachel Grainger, Higher Diploma in Health Professionals Education, October 2022

Zainab Baker, Higher Diploma in Health Professionals Education, October 2022

## **Publications**

Cheng C, **Humphreys H**, Kane B. Transition to telehealth: Engaging medical students in telemedicine healthcare delivery. Ir J Med Sci. 2022 Oct;191(5):2405-2422. doi: 10.1007/s11845-021-02720-1. Epub 2021 Oct 9. PMID: 34626350; PMCID: PMC8501374.

Cuevas Ocaña S, El-Merhie N, Kuipers ME, Lehmann M, Enes SR, Voss C, Dean LSN, Loxham M, Boots AW, Cloonan SM, **Greene CM**, Heijink IH, Joannes A, Mailleux AA, Mansouri N, Reynaert NL, van der Does AM, Wagner DE, Ubags N. ERS International Congress 2022: highlights from the Basic and Translational Science Assembly. ERJ Open Res. 2023 Apr 17;9(2):00561-2022. doi: 10.1183/23120541.00561-2022. PMID: 37077558; PMCID: PMC10107060.

De Santi C, Cavalleri GL, Kerrigan SW, **Fitzpatrick F**, McGrogan K, Gilroy J, Baxter R, Quadu V, Ryan K, **Humphreys H**. Screening medical students for SARS-CoV-2 to facilitate face-to-face clinical teaching and prevent onward spread to patients. J Hosp Infect. 2023 May;135:1-3. doi: 10.1016/j.jhin.2023.02.001.

Donnelly JA, Russell M, O'Brien G, O'Neill I, **Fitzpatrick F**, O'Connell K. Preparing for the next pandemic: lessons learnt from the implementation of point-of-care SARS-CoV-2 testing in an emergency department. Journal of Clinical Pathology 16 May 2023. doi: 10.1136/jcp-2023-208857

Domegan L, Brehony C, **Fitzpatrick F,** O'Connell K, Dinesh B, Cafferkey J, Burns K. Social network and genomic analysis of an OXA-48 carbapenemase-producing Enterobacterales hospital ward outbreak in Ireland, 2018-2019. Infect Prev Pract. 2023 Apr 8;5(2):100282. doi: 10.1016/j.infpip.2023.100282.

**Fallon M,** Kennedy S, Daniels S, **Humphreys H**. Technologies to decontaminate bacterial biofilm on hospital surfaces: a potential new role for cold plasma? J Med Microbiol. 2022 Oct;71(10). doi: 10.1099/jmm.0.001582. PMID: 36201343.

**Fitzpatrick F,** Safdar N, van Prehn J, Tschudin-Sutter S. How can patients with *Clostridioides difficile* infection on concomitant antibiotic treatment be best managed? Lancet Infect Dis. 2022 Nov;22(11):e336-e340. doi: 10.1016/S1473-3099(22)00274-2.

**Glasgow AMA, Greene CM**. Epithelial damage in the cystic fibrosis lung: the role of host and microbial factors. Expert Rev Respir Med. 2022 Jul;16(7):737-748. doi: 10.1080/17476348.2022.2100350. Epub 2022 Jul 15. PMID: 35833354.

Glynn E, **Fitzpatrick F,** Dinesh B, Mulrooney C, Kelly S, Burns K, O'Connell K, **O'Donnell S,** O'Connor C. Integrated infection surveillance in neurosurgery to inform patient management. J Infect. 2023 Jul;87(1):91-92. doi: 10.1016/j.jinf.2023.05.002.

**Grainger RJ, Kearney A, Humphreys H, Stevens NT**. A comparison of culture methods and polymerase chain reaction in detecting *Clostridioides difficile* from hospital surfaces. J Med Microbiol. 2023 Jan;72(1). doi:10.1099/jmm.0.001636. PMID: 36748639.

**Hughes D**. Modified poly(L-lysine)-based structures as novel antimicrobials for diabetic foot infections, an in-vitro study 2022 doi:10.12688/hrbopenres.13380.1

**Humphreys H,** Corcoran M, Mereckiene J, Cunney R, Cotter S. Invasive pneumococcal surveillance to assess the potential benefits of extended spectrum conjugate vaccines (PCV15/PCV20) in older adults. Epidemiol Infect. 2023 Jan 26;151:e27. doi: 10.1017/S0950268823000110. PMID: 36700424; PMCID: PMC9990380.

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**O'Donnell S**, Creedon M, Walsh J, Dinesh B, O'Brien DP, MacNally S, **Humphreys H**. Bone flap infections after craniotomy: a review of 63 cases and the implications for definitions, classification and surveillance methodologies. J Hosp Infect. 2023 Mar 31;136:14-19. doi: 10.1016/j.jhin.2023.03.019. Epub ahead of print. PMID: 37004785.

**O'Donnell S** HSE Antimicrobial Stewardship: Guidance for all healthcare settings. HSE/AMRIC August 2022 https://bit.ly/3o3vEyh

Ozaki M, **Glasgow A**, Oglesby IK, Ng WL, Kelly S, **Greene CM**, Durcan L, Hurley K. Sexual Dimorphism in Interstitial Lung Disease. Biomedicines. 2022 Nov 24;10(12):3030. doi: 10.3390/biomedicines10123030. PMID: 36551792; PMCID: PMC9775147.

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van der Schoor AS, Boyle M, Voor In 't Holt AF, Vos MC, **Humphreys H**; ESCMID Study Group for Nosocomial Infections. Environmental sampling of innate hospital surfaces: a survey of current practices and the need for guidelines. J Hosp Infect. 2022 Oct;128:92-95. doi: 10.1016/j.jhin.2022.07.024. Epub 2022 Aug 6. PMID: 35944791.

Zeden MS, Gallagher LA, Bueno E, Nolan AC, Ahn J, Shinde D, Razvi F, Sladek M, Burke Ó, **O'Neill E**, Fey PD, Cava F, Thomas VC, O'Gara JP. Metabolic reprogramming and flux to cell envelope precursors in a pentose phosphate pathway mutant increases MRSA resistance to β-lactam antibiotics. bioRxiv [Preprint]. 2023 Mar 7:2023.03.03.530734. doi: 10.1101/2023.03.03.530734. PMID: 36945400; PMCID: PMC10028837.

# **Active Grants and Grants awarded**

**Fitzpatrick F, Humphreys H (joint PI):** The Reality of Controlling the Three C's: COVID-19, carbapenemase-producing Enterobacterales and *Clostridioides difficile* infection in the Acute Hospital Setting. Analysing Real-Life Data to Drive Improvements. Irish Research Council, Workplace-based Fellowship - EBPPG/2022/196. Funding for Beaumont Hospital staff member for PhD programme, Sept 2023, €82,500

**Fitzpatrick F (co- applicant):** Study of rolE of PlateletS In Sepsis (SEPSIS), Health Research Board: ILP-POR-2022-083, 2022, €368,566

**Humphreys H.** (Principal applicant), Phase 2. Cold atmospheric plasma mist/fog to decontaminate air and surfaces. 20/COV/8556, Science Foundation Ireland. 2020-22, €354,228

Fitzgerald Hughes D (PI), Mary Pryce (Co-applicant), Caoimhe Finn (Societal Champion) New OneHealth OneWater AMR Solutions, Science Foundation Ireland, National Challenge Fund, Healthy Environment for All Challenge 22/NCF/HE/11252, 2023, €24,9527

**Aoife Kearney/Deirdre Fitzgerald Hughes/Hilary Humphreys.** Carbapenemase producing Enterobacteriales (CPE): Identifying the drivers of transmission to patients in the healthcare-environment, Irish Research Council, 2<sup>nd</sup> November 2020, €79,500

**Aaron Doherty/Deirdre Fitzgerald Hughes**, Progressing the Clinical Applications of Novel Antimicrobial Polypeptides for Recalcitrant Infections, British Infection Association, 1<sup>st</sup> July 2021, €12,000.

Mary Pryce/Deirdre Fitzgerald Hughes. Exploiting Singlet Fission: An Innovative Design Strategy For Antimicrobial Materials, Science Foundation Ireland, 5<sup>th</sup> October 2020, €883,260/€364,287

**Deirdre Fitzgerald Hughes/Fidelma Fitzpatrick** Public/patient educational video on antibiotic use for urinary tract infection under Strategic Goal 5 of Irelands National Action Plan (iNAP2) - antimicrobial resistance awareness – Health Services Executive (HSE) Antimicrobial Resistance and Infection Control (AMRIC) award 2022 €5,000

**De Santi C (PI)/Greene C**. Circular RNA in cystic fibrosis. RIA Award. Vertex Pharmaceuticals, November 2020, \$125,000.

**Glasgow A (PI)/Greene C**/Hurley K/Cloonan S/Teckman J. A role for mitochondrial danger-associated molecular patterns in AAT deficiency. Postdoctoral Fellowship 618087. US Alpha-1 Foundation May 2019 \$150,000

**Greene C**/Urban A (PI). February 2019. Correcting Pathogenic TGF beta Activity in the Airway, R01HL144539–01 National Institute of Health. January 2019. \$1,500,000. \$100,873 (to RCSI)

**Greene C (PI)/Glasgow A**. Estrogen regulation of microRNAs targeting alpha-1 antitrypsin in the female CF lung – a novel mechanism contributing to the gender gap. VIA Award. Vertex Pharmaceuticals; October 2018. \$144,000.

Molloy E (PI)/**Greene C**. GEMINI: GEnder and inflaMmatloN: In neonatal encephalopathy. NCRC Project Code – C/19/3. National Children's Research Centre, August 2019 €280K.

Oglesby I (PI)/**Greene C**/Hurley K. Mapping the miRNA atlas of CF airway epithelial cells using patient-derived gene-edited pluripotent stem cells. Career Re-entry Fellowship. The Wellcome Trust 215932/Z/19/Z. July 2019. Amount €336,485

Oglesby I (PI)/Cryan S/Hawkins F/Hurley K/ McNally P/**Greene C.** Interrogating the role of miRNA in predicting responses to novel modulator therapies in children with Cystic Fibrosis; Heath Research Board; Emerging Investigator Award; Mentor €608K.

## **Innovation and Commercialisation Activities**

# **Dr Deirdre Fitzgerald Hughes**

Remote Evaluator European Innovation Council and SMEs Executive Agency, June 2022

## Ms Aoife Kearney & Ms Muireann Fallon

Aoife Kearney and Muireann Fallon jointly filed an invention disclosure form with the Office of Research and Innovation relating to a technological system to enhance hospital cleaning

# CLINICAL NEUROLOGICAL SCIENCES

#### Overview

The Department of Clinical Neurological Sciences comprises all of the clinical specialists in neurology, neurosurgery, neuroradiology, neurophysiology and neuropathology. Each independent department has its own separate clinical and research structures but in several areas such as epilepsy, and mitochondrial and neuromuscular disease, there is considerable interaction. Each of these clinical groupings is involved in the teaching of RCSI medical students.

## **Staff List**

Professor and Head of Department
Ciaran Bolger MB, BCh UDubl PhD FRCSI

## **Publications**

Koustais, S., Sweeney, K.J., **Bolger, C.** (2023). Technical note: Novel use of recombinant tissue plasminogen activator for the evacuation of an acute extensive spinal epidural haematoma in a patient with coagulopathy. British Journal of Neurosurgery, 37(3) 495-498

Horan, J., Duddy, J.C., Gilmartin, B., Amoo, M., Nolan, D., Corr, P., Husien, M.B., **Bolger, C.** (2022). Neurotrauma admissions and COVID-19: a National Centre experience. Irish Journal of Medical Science, 191(4) 1871-1876

Mathiesen, T.I., Balak, N., Samprón, N. Broekman, M., **Bolger, C.,** (2022). Ethico-legal regional differences in European neurosurgical practice: Part 1-pre-COVID-19 era. Brain and Spine, 2

# FAMILY MEDICINE AND GENERAL PRACTICE

## Overview

The Department of General Practice is involved in teaching across both Undergraduate and Postgraduate levels within RCSI. Throughout all GP education, there is a strong emphasis on the practice of evidence-based medicine, professionalism, appropriate prescribing and reflection. At Undergraduate level, the department is involved in teaching throughout the medical programme being responsible for the Introduction to Professional Clinical Practice (ICPC) for Year 1 and 2. The Department also runs the main general practice clinical rotation in Year 1 utilising a network of over 90 GP tutors. At Postgraduate level the department is responsible for the delivery of the MSc in Healthcare Ethics and Law and the methodological component of the Masters of Surgery programme.

In terms of research activity, the department has been the home to the HRB Centre for Primary Care Research (2008-2021) which developed an international research profile in medicines management and drug safety; medicines optimisation and clinical prediction. More recently the department has a developing collaborative profile in cancer screening and diagnosis in primary care. The Department continues to support two Collaborative Doctoral Award Programmes "Right Care – Enhancing safe and appropriate care to older patients in Ireland" and "Managing complex morbidity in primary care", both due for completion in 2024.

## New Staff

We welcomed the following new staff to the Department: Benjamin Jacob, Clinical Lecturer, January 2023 Anthony Hoban, Clinical Lecturer, January 2023 David Byrne, Clinical Lecturer, March 2023

## Promotion

Patrick Redmond was appointed Associate Professor of General Practice in July 2022.

# **Summary of Key Achievements / Academic Activities**

Tom Fahey

Editorial board membership peer review publications

- Current-Editorial board member, Cochrane Collaboration Acute Respiratory Infections (ARI) Group 2001 - present
- Editorial board advisory member BMJ Open, 2010 present
- Editorial board member, *Medical Decision Making*, 2014 present
- Editorial board member, Evidence-Based Medicine (BMJ publishing), 20017 present

International committee membership peer review funding organisations

- Panel Board Member, Advisory Panel on University selection: NIHR School for Primary Care Research (NIHR SPCR), 2014
- Panel Board Member. Public Funding Agency of Portugal
   – Fundação para a Ciência e a Tecnologia (FCT), Member Health and Sport Sciences panel, 2016 present
- Panel Board Member, Research Council of Norway- Programme for High-quality and Reliable Diagnostic, Treatment and Rehabilitation interventions, 2017 – present

International research activities

 Peer review referee - peer reviewer for many national funding agencies - UK (NIHR, Wellcome Trust, MRC, ESRC, King's Fund, British Heart Foundation, British Lung Foundation), Belgium, Germany, Netherlands, Portugal, Slovenia, US and Canada

Committee membership national health organisations

Board Member, Health Research Board 2018 to present

Research governance

- Chair Programme Steering Committee, NIHR Programme Grant for Applied Research (PGfAR). Avoiding patient harm through the application of prescribing safety indicators in English general practices (PRoTeCT), Professor Tony Avery (PI), University of Nottingham 2016 onwards
- Chair, Study Steering Committee, NIHR/HTA funded study. Primary care Management of lower Urinary tract Symptoms in men (PriMUS Study): Development and validation of a diagnostic and decisionmaking aid. Professor Adrian Edwards (University of Cardiff) and Mr Chris Harding (University of Newcastle) 2017 onwards
- Chair, NIHR School of Primary Care Research, Research evidence and synthesis programme. Professor Carl Hennigan (University of Oxford) 2017 onwards

# David Smith

- Appointed Ethics Consultant to the Bon Secours Health System
- Member of European Patient's Forum (EPF) Data Saves Lives
- · Ethical Advisor to SAGE
- Advisory Panel to the National Review of Clinical Audit in the Irish Healthcare System HSE
- Appointed Ethics Consultant to the Mercy South Public Juridic Person Committee
- Appointed Ethics Advisor to the AVISTA Services
- Daughters of Charity Family Services Committee on Domestic Violence
- Appointed to the CervicalCheck Interval Cancer Audit Implementation Group 2021 ongoing
- Appointed to the National Research Ethics Committee 2021 ongoing
- Ethical Advisor to the Mater Private Hospital Research Ethics Committee
- Member of the Research Ethics Committee in Royal College of Physicians of Ireland
- Appointed Ethical Advisor to the Ethics Irish Association for Palliative Care
- Appointed Ethical Advisor to the St Vincent's Healthcare Group
- Appointed to the Scientific and Ethics Advisory Committee of the following Research Projects to a number of EU Vaccine Projects: TRANSVAC2; PREV\_PKDL; PurinexDX; Watersproutt; CRUZIVAX; HiberGene; HIPPOCRATES -- European Research Consortium to Address Key Unmet Clinical Needs in PsA; INCENTIVE Indo-European Consortium for Next Generation Influenza Vaccine Innovation; NeuroInsight; TITANEUM MSCA ETN; RECOVER Strengthening Health Systems Resilience in the Covid-19 Pandemic through E-health and Data Reuse (RECOVER) Outline; EpiCRAFT: Circular RNA and AAV as Future Therapy for drug-resistant epilepsy; SHIGETECVAX; TRICALS; TT4CL. VL-INNO; ERCEA EUROPEAN RESEARCH COUNCIL EXECUTIVE AGENCY (ERCEA); Disrupted Circadian Rhythms in Families an Endophenotype of Autism Spectrum Disorder?; ADVANCE\_VAC4PM Scientific and Ethics Advisory Committee; EUROPEAN RESEARCH COUNCIL EXECUTIVE AGENCY (ERCEA); Brain Tumour Biobank: A Bio-resource for Diagnostics and Therapeutics Development; iHEAR Adolescent Brain Development (ABD) Follow-up Study ERC iHEAR Study --

Investigating the meanings and mechanisms of psychotic experiences in young people: a novel mixed methods approach; COLOSSUS Project; CRUZIVAX; Al-enabled feedback research project; Delphi panel on palliative sedation; Magnet Study DSMB; ERC project FamilySleeps; EU FETOpen PRIME project; EVI; FutureNeuro; e PRIME; GENomic Oncology doctoral TRAINing program (GENO-TRAIN); GLIORESOLVE; GLIOTRAIN; H2020 MSCA ETN TITANEu; MSCA ETN TITANEuM; LAMP (Loop Mediated Isothermal Amplification) technology.; HIPPOCRATES; INCENTIVE; NeuroInsight Fellowship; PANIWATER; PREV\_PKDL; ProACT project; COVID 19 - Ethics Committee member vaccine clinical trial; SHIGETECVAX project; TRANSVAC2; TT4CL Independent Advisory Board meeting; VL-INNO Project Advisory Committee Meeting; WATERSPOUTT

#### Patrick Redmond

# Editorial Board membership

- RCSI ambassador, UK Society of Academic Primary Care (2022 present)
- British Journal of General Practice Open Editorial Board (2021- present)
- Editorial board member Prescriber journal (2022- present)
- Academic University Department of General Practice Ireland Executive committee member and Mid-Career Representative (2021- present)
- RCSI Undergraduate GP Society Faculty mentor (2021 present)
- National Cancer Control Programme Early Diagnosis Working Group 2022-
- Member, Society of Academic Primary Care & Medicines Optimisation Special Interest Group (2020-Present)

## International research activities

- Peer review referee NIHR School of Primary Care Research
- Clinical Practice Research Datalink Research Expert Review Committee member (2021- present) Committee membership/Board responsibilities
- Board member, Beaumont Hospital 2023-

## Barbara Clyne

## **Awards**

• IRC Research Ally Award winner 2022

#### International

- Associate Editor, *Trials*, 2021 present
- Panel Board Member. Public Funding Agency of Portugal
   – Fundação para a Ciência e a Tecnologia (FCT), Member Health and Sport Sciences panel, 2022 present

## National

- Member of the ICGP Research Ethics Committee (2017-2020)
- Executive committee member of the national Academic University Departments of General Practice in Ireland (AUDGPI) (2018-May 2021)
- Member of the early career academics in primary care sub-committee, AUDGPI (2018-present)
- Member RCSI Human research Ethics Committee (2018-present)
- RCSI Publishing for Impact Ambassador (2019-present)
- External advisory groups and working group membership
- Member, National Clinical Effectiveness Committee Guideline Appraisal Committee
- Member, HIQA COVID Evidence Synthesis team, collaborating on evidence synthesis to support public health decision making
- Member, HIQA Scientific Advisory Panel, Bariatric Surgery for Obesity in Type 2 Diabetes
- Collaborator, HIQA international review on the configuration and reform of Public Health systems to support the work of The Public Health Reform Expert Advisory Group

#### Fiona Boland

- Member of HIQA Advisory Group Information management standards for national data collections
- Vice chair of the Research Ethics Committee in Royal College of Physicians of Ireland
- Member of the Skin Wound and Trauma (SWaT) Research Network
- Associate Editor Journal of Multimorbidity and Comorbidity
- Member of the Diabetes Ireland Research Alliance (DIRA) Committee
- Member of the Irish Statistical Association

## Caroline McCarthy

- ICGP Research Ethics Committee (2021-present)
- Executive committee member of the national Academic University Departments of General Practice in Ireland (AUDGPI) (2021-present)
- Evidence Advisor to iHealthFacts (2022-present)

## Karen Kyne

- Member of the Irish College of General Practitioners research ethics committee (2021- Present)
- Member of the Irish College of General Practitioners Postgraduate Clinical Knowledge Test (CKT) Exam Committee (2021-Present)
- Assistant Scheme Director, ICGP Dublin Mid Leinster GP Training Scheme (2021-Present)
- Member of Association of Study of Medical Education (ASME) Educator Development Committee (2022-Present)
- Member of Irish Network of Healthcare Educators (2022-Present)
- Member of Society for Academic Primary Care Quality and Safety Improvement Special Interest Group (2022-Present)

#### Máirtín Ó Maoláin

- Member of the Ethics Committee of the Medical Council 2020 present
- Co-chair of Migrant Health in Primary Care Special Interest Group 2022 present
- Academic Mentor to RCSI Association of Medical Students, Ireland 2022-23

## Melissa Sharp

- Member of National Clinical Effectiveness Committee (NCEC) Advisory Panel, Department of Health
- Member of working group on STROBE-Equity and TARGET trial reporting guidelines
- RCSI representative to national Irish Research Staff Association
- Reviewer for BMC Public Health, PLoSOne, Journal of Health Communication, National Patient Safety Office Conference 2023

#### Ellen Stuart

- Member of RCSI Research Ethics Committee
- Member of RCSI Case Based Learning Development Support Group
- Mentor on RCSI International Citizenship Programme
- Incoming President of All-Ireland Association of Undergraduate Societies for General Practice in Ireland (AAUSGPI)

## Emer O'Brien

- Member of Equality, Diversity and Inclusion, Visability Forum. RCSI committee member April 2021 present
- Member of the ICGP QSIP Committee, July 2020 to June 2023
- ICGP QSIP Clinical Lead June 2023 to present
- MSc Healthcare Ethics and Law Board Member. November 2022 present

## James Larkin

Editorial Board Member of Journal of Multimorbidity and Comorbidity

## **Invited Lectures**

## Caroline McCarthy

• Invited expert for ICGP Therapeutics Module 2023/2024

## Aisling Croke

• Invited expert for ICGP Therapeutics Module 2023/2024

# David Smith

- Ethics for Social Media BSHS/RCSI
- Ethical Challenges and their origins today; insights from both an Irish and USA perspective, BSHS/RCSI

- Ethical approaches to common dilemmas in Ireland and the USA A Case Study discussion, BSHS/RCSI
- What makes Research Ethical, BSHS/RCSI
- Ethical Challenges in Clinical Practice, BSHS/RCSI
- The Assisted Decision Making Capacity Act 2015 ethical considerations and implementation, BSHS/RCSI
- CHI Professionalism Conference, 18th May 2022
- HSE REC Training 1st March 2022
- IPOSSI Training Programme, Becoming an impactful PPI Partner in Research Ethics
- UCD Graduate Diploma in Health Risk
- Global Brain Health Institute University of California, San Francisco/Trinity College Dublin

## **Staff List**

# Academic Department - Undergraduate Programme

Professor & Head of Department

Tom Fahey MB, BCh, BAO, DCH, DO, MSc, MFPH, MD, FRCGP

Associate Professor of Healthcare Ethics and Programme, Director MSc in Healthcare Ethics and Law David Smith MSc, BPhil, BD, MA, STL, STD

## Associate Professor in General Practice

Patrick Redmond MB, BCh, BAO, PhD, MMEd, MRCPI, MICGP, FRACGP, FHEA, PG Dip(Statistics)

#### Clinical Lecturers

Caroline McCarthy MD, MB, BCh, BAO, MICGP, DROG

Emer O'Brien MB, BCh, BAO, DRCOG, BSc (Pharmacology), MICGP

Ellen Stuart MB, BCh, BAO, MICGP, MSc (Clinical Education), BSc (Physiotherapy), DME, PGDip (Derm), PGCert (Pall Care)

Karen Kyne MB, BCh, BAO, MICGP, MSc, DRCOG

Sumi Dunne BM, BSc (Hons), MICGP, MSc, FFSEM

Máirtín Ó Maoláin Dioplóma sa Ghaeilge, MB, BCh, BAO, PDipHSc (Clin Ed), DOWH, MICGP

Anthony Hoban MB, BAO, BCh, BSc Physio, PGDip Med Ed, MSc, SEM, MICGP, MRCSI, FFSEM

Benjamin Jacob MB, BCh, BAO, MRCGP, MICGP, MSc (Statistics), GradStat

David Byrne MICGP, MRCPI, DME, DRCOG, PGDipHPEd, PGDipHCM

Noreen O'Carroll MA, HDip Ed PhD DPMSA

#### Year 1 & Year 2 Tutors

Laura Barker MB, BCh, BAO, DFP, MRCGP

Aine Greene MB, BCh, BAO, MICGP, DCH DObst

Jane Uygur BA, MD, MSc

Erika Keane MB, BCh, BAO, LRCSI, LRCPI, MRCGP, MICGP, DObs, DCH, DME

Sami Termanini LRCP&SI, MB, BCh, BAO

Alison McDonald MB, BA, BAO, BCh, DME, DCH, MICGP

Ciara Lambe BSc (Physio) MB, BCh, BAO, DOWH, MRCPI

Muireann O'Shea MB, BCh, BAO, MICGP

Paula Greally MB, BCh, BAO, LRCPI&SI, MICGP

Shane Dunlea MB, BCh, BAO, DOWH, BSc, MSc, DCP

## Postgraduate Programme

Masters in Health Care Ethics and Law

Associate Professor Health Care Ethics and Law and Director MSc Course in Health Care Ethics and Law David Smith MSc, BPhil, BD, MA, SL, STD

Postdoctoral Researchers / Research Fellows / Senior Research Fellows / MDs/Research Assistants and PhD students

Caroline McCarthy MD, MB, BCh, BAO, MICGP

Barbara Clyne PhD

David Byrne MICGP, MRCPI, DME, DRCOG, PGDipHPEd, PGDipHCM

Bridget Kiely MB, BCh, BAObs, MRCPI, MRCGP, MPH

Aisling Croke BA, MPharm, MPSI Sami Termanini LRCP&SI, MB, BCh, BAO James Larkin PhD, MSc, BA Benjamin Jacob MB, BCh, BAO, MRCGP, MICGP, MSc (Statistics), GradStat David Byrne MICGP, MRCPI, DME, DRCOG, PGDipHPEd, PGDipHCM Emer O'Brien MB, BCh, BAO, DRCOG, BSc (Pharmacology), MICGP

Masters in Surgery and MSc in Healthcare Ethics and Law 17 students graduated from MSc in Healthcare Ethics and Law in November 2022 18 students graduated from Masters in Surgery in November 2022

# **Higher Degrees**

Larkin James, The burden of financial costs of healthcare for people with multimorbidity. PhD, RCSI & NUI 2023.

## **Publications**

AlMutairi M, Redmond P, Cromie S, Grimes T. Household medicine disposal and waste management in Ireland, the need for a systems-based approach. Ir J Med Sci 2022 Jul 26. doi: 10.1007/s11845-022-03099-3.

Byrne D, Prendergast C, Fahey T, Moriarty F. Clinical study reports published by the European Medicines Agency 2016-2018: a cross-sectional analysis. BMJ Open. 2023 May 15;13(5):e068981. doi: 10.1136/bmjopen-2022-068981. PMID: 37188475; PMCID: PMC10186437.

Byrne D, Prendergast C, Fahey T, *et al.* 151 Clinical study reports published by the European medicines agency 2016–2018: a cross-sectional analysis. BMJ Evidence-Based Medicine 2022;27:A25-A26.

Chong MC, Sharp MK, Smith SM, O'Neill M, Ryan M, Lynch R, Mahtani KR, Clyne B. Strong recommendations from low certainty evidence: A cross-sectional analysis of a suite of national guidelines. BMC Med Res Methodol. 2023 Mar 25; 23(1):68.

Conneely M, Leahy A, O'Connor M, Gabr A, Okpaje B, Saleh A, Corey G, Barry L, Griffin A, O'Shaughnessy Í, Ryan L, O'Carroll I, Leahy S; Trépel D, Ryan D, Robinson K, Galvin R. A physiotherapy-led transition to home intervention for older adults following Emergency Department discharge: A pilot feasibility randomised controlled trial. Rural and Remote Health. 2023; 23: 8154.

Conneely M, Leahy S, Trépel D, Robinson K, Boland F, Moriarty F, Galvin R. Is there evidence of an association between acute healthcare utilisation and function in older adults over time? A Population-Based Cohort Study. Innovation in Aging. 2022; 7(1):igac072.

Croke A, Cardwell K, Clyne B, Moriarty F, McCullagh L, Smith SM. The effectiveness and cost of integrating pharmacists within general practice to optimize prescribing and health outcomes in primary care patients with polypharmacy: A systematic review. BMC Prim Care. 2023 Feb 6; 24(1):41.

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## Seminars, Conferences and Workshops

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ChongMC, Sharp,MK, Smith SM, O'Neill M, Ryan M, Lynch R, Mahtani KR, Clyne B. The strength of clinical guideline recommendations and the underlying certainty of the evidence: a cross-sectional analysis of a suite of national guidelines. (2022, October). National Patient Safety Office Conference. Dublin, Ireland.

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Kyne K, Barrett A. Educational change in a crisis; what has changed and what is here to stay in undergraduate assessment in General Practice. Ottawa Lyon, France 2022 Hybrid Conference. 31st August 2022.

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Redmond P. Research on Cancer Screening in Ireland: Exploring an integrated approach across cancer types. The contribution of General Practice to Cancer Screening Galway 17<sup>th</sup> February 2023

Ó Maoláin M, Skuce A, Stuart E, What can we learn from each other about improving migrant healthcare in the community? Workshop. Irish Street Medicine Symposium, University of Limerick, 19<sup>th</sup> May 2023

O'Brien E, Duffy S, Harkins V, Smith SM, O'Herlihy N, Walsh A, Clyne B, Wallace E. A scoping review of evidence-based guidance and guidelines published by General Practice professional organisations. Presented by Emer O'Brienat the AUDGPI AGM 3-4 March 2023

O'Brien E, Walsh A, Boland F, Collins C, Harkins V, Smith SM, O'Herlihy N, Clyne B, Wallace E. General Practitioner preferences and use of evidence in clinical practice: a mixed methods study. Presented by Emer O'Brien at the AUDGPI AGM 3-4 March 2023.

O'Brien E, Walsh A, Boland F, Collins C, Harkins V, Smith SM, O'Herlihy N, Clyne B, Wallace E. General Practitioner preferences and use of evidence in clinical practice: a mixed methods study. Presented by Emer O'Brien at the EQuiP conference, Dublin, 12-13 May 2023

## Chapters in Books

Article

Smith David (2023) Assisted dying – navigating an ethical minefield, Forum, pp 10-12.

# **Active Grants and Grants Awarded**

Fiona Boland. Co-applicant. Medicines and Social Prescribing to aDdress pAtient priorities in multimorbidity (MIDAS): A multi-arm definitive cluster randomised trial in Irish general practice. DIFA-2023-002, HRB Definite intervention Feasibility Award, 2023, €1,200,000

Fiona Boland. Co-applicant. Preliminary testing of the Safety, Usability and Functionality of an innovative and smart medical device: Compression Therapy System Prototype for Venous Leg Ulcer treatment in healthy volunteers. El Innovation Partnership, 2022, €1,000,000

Fiona Boland. Co-applicant. The impact of Cutimed® Siltec® on pressure ulcer incidence, among at risk individuals, residing in a long stay health care setting (a pilot feasibility study). BSN, 2022, €50,000

Barbara Clyne. Principal Investigator. Evidence synthesis and translation of findings for national clinical guideline development: addressing the needs and preferences of guideline development groups. HRB Emerging Investigator Award, €727,136.

Barbara Clyne. (Co-Applicant, Workpackage lead). Medicines and Social Prescribing to aDdress pAtient priorities in multimorbidity (MIDAS): A multi-arm (definitive) cluster randomized trial in Irish general practice. HRB DIFA, €1,192,174 (2023-2027)

Barbara Clyne. Collaborator. Health Research Board Clinical Trials Network 2021-2026. Primary Care Clinical Trials Network Ireland. €999,979

Barbara Clyne. Co-Applicant. Health Research Board Ireland Applied Partnership Awards 2019-2022. Evidence-based guidance in general practice: exploring general practitioner preferences, content prioritisation and dissemination. €207,815

Barbara Clyne. Co-applicant. Development of a Model of Care for Osteoarthritis in Primary Care in Ireland- A mixed methods study. 2020-2022. €366,000

Barbara Clyne. Collaborator. Characterising problematic polypharmacy in older community dwelling people attending general practice. PI Dr Emma Wallace, Emerging Clinician Scientist Award 2020, €1,000.006

Barbara Clyne. Collaborator. HRB Collaborative doctoral award Lead Applicant. 2018-2023 Managing complex multimorbidity in primary care: a multidisciplinary doctoral training programme. €1,416,644

Barbara Clyne. Collaborator. Sláintemedicines – a roadmap to essential medicines entitlement for universal health coverage. PI Dr Frank Moriarty, HRB Investigator Led Projects, €282,879

Caroline McCarthy. Pl/Supervisor. Post CSCST Fellowship in Essential Medicines in General Practice. Pl/Supervisor. July 2023-July2024 €84,000

Patrick Redmond. Co-investigator. 2022-23 "Systems based exploration of patient's and carer's self-management of medication at care transitions in Ireland". Meath Foundation. €49,534

Patrick Redmond. Co-PI Beaumont RCSI Irish Cancer Society Lung Cancer Research Programme. Linking Cancer Care to Primary Care. €4,900,000

Patrick Redmond. Collaborator. TEAMCARE Project. ERASMUS Lump Sum Grants – Alliances for Education and Enterprise). €1,104,868

Patrick Redmond. Co- Investigator. Strengthening the screening of Lung Cancer in Europe (SOLACE). April 2023-March 2026. EU4Health Project Grant. €9,707,367

Patrick Redmond. PI. Lung Cancer Screening Recruitment Intervention Development. HRB PCTNI Seedfund Award June 2023. €12,500

# **GRADUATE ENTRY MEDICINE**

#### Overview

The Graduate Entry Medicine programme (GEM) is a four year medical degree programme. The programme is bespoke for the first two years and delivered in dedicated facilities in Mercer (year 1) and Connolly Hospital (year 2). Following this, the students join those in the direct entry programme for their senior clinical years. The class size of approximately 80 students per year facilitates the delivery of the programme using a hybrid of large group didactic sessions and significant small group work to develop communication, team working and clinical skills. RCSI was the first university in Ireland to introduce a graduate medicine programme and the success of the programme is reflected in the quality of the graduates, the excellent match rates for North American students and the position of RSCI as the number one GEM programme in the country based on admission GAMSAT score.

#### **Summary of Key Achievements / Academic Activity**

During 2022-23, post-pandemic, the programme returned to an on-site programme with continued streaming of lectures. There was little disruption to clinical activity and weekly hospital clinical placements for year 1 students during semester 2 were able to recommence and were well received by the students. A class of 82 students commenced the programme in September 2022 and all successfully completed the year. The GEM year 2 class of 67 also all successfully advance to year 3. The GEM students continued to perform very well in the programme. The 2023 graduating GEM class, the fourteenth group of graduates, performed very well with 95% achieving honours degrees and the North American students were again highly successful in the matches in the US and Canada.

# **Staff List**

Director & Professor
Professor Seamus Sreenan MB, BCh, BAO, MD, FRCPI, FRCPUK

Deputy Directors
Pre-clinical
Professor Marian Brennan BSc, PgDipEd, MSc, PhD
Clinical
Professor Eoghan O'Neill MB, BCh, BAO, PhD, MRCPI, FRCPath, PgDipEd

## Faculty

Professor Annette Byrne (Physiology), BSc, PhD Professor Dermot Cox (Pharmacology), BSc, PhD Dr Aamir Hamid (Anatomy), MBBS, MD, PgDipEd (Health Professions Education) Professor Jim O'Neill (Medicine/Cardiology), MB, BCh, BAO, MD

Clinical Lecturers 2021-22
Claire Stenson MB, BCh, BAO
Robert Trueick MB, BCh, BAO
Candice Fraser MB, BCh, BAO
Jack Logue MB, BCh, BAO
Maria Batool MBBS
Rennessa Williams MB, BCh, BAO
Izabella Orban MB, BCh, BAO
Katie de Jong MB, BCh, BAO
Cathal Delaney MB, BCh, BAO

Administrative Gerard Farrell Laura Finnegan Helen Rennick Sara Tubb Ann Slattery Aisling Ryan

## **Publications**

Lynn TM, D'Urzo KA, Vaughan-Ogunlusi O, Wiesendanger K, Colbert-Kaip S, Capcara A, Chen S, Sreenan S, Brennan M. The impact of a student-led anti-racism program on medical students' perceptions and awareness of racial bias in medicine and confidence to advocate against racism. Medical Education On-line: 2023; 10.1080/10872981.2023.2176802

# Active grants and grants awarded

Several GEM students were awarded StEP funding to complete projects in 2022-23

Irish Medical Council INHED Research in Medical Education (RIME) award. Exploring attitudes towards interprofessional teams and the team approach to care, from the perspectives of graduate entry medical students and physician associate students. May 2023, €4,916

# Innovations in teaching Active learning

Dr Michael Daly was awarded the most innovative teacher of the year award at the Times Higher Education awards in London in November 2022. The award was based on Dr Daly's initiative to develop a novel wearable vest that can simulate the heart sounds and sounds of murmurs due to valvular disease. The work was completed in conjunction with the staff of the RCSI simulation centre and Prof. Jim O'Neill, consultant cardiologist at Connolly Hospital and formed the subject of Dr Daly's MD degree, awarded in 2022 for his study ASSIMILATE ExCELLENCE performed in conjunction with GEM 2 students.

The GEM programme was the first to trial delivering a clinical assessment using Practique in December 2022. The GEM year 1 formative clinical assessment was delivered successfully and feedback from students and examiners on the utility of the system was very positive enabling its wider use in the programmes later in the academic year.

Dr Claire Stenson, clinical tutor in year 1 of the GEM programme, developed a new ECG teaching workshop delivered in the simulation center during semester 2. Dr Stenson also introduced a communications skills recording session for students which was well received by the students.

Within Year 2, the lecture series on Medical Professionalism introduced by Dr Eoin Judge, consultant in Respiratory Medicine, Connolly Hospital in 2021-22, in collaboration with Professor Denis Harkin, was revised by Dr Judge to become more interactive and targeted more towards a class of students with undergraduate degrees. Professor Jim O'Neill, Consultant Cardiologist, Connolly Hospital, continued to deliver leadership training, supported by Dr Paul O'Dwyer, adjunct faculty in the Graduate School of Healthcare Management.

# Peer mentoring programme

The peer-mentoring programme was initiated in the GEM programme in 2018 based on a student PRISM project. The programme aims to provide a mentor in the senior years for incoming GEM students. This has been extended incrementally each year and in 2021 all incoming GEM1 students were assigned a GEM2 mentor. This programme is led by GEM students in collaboration with GEM faculty. A research project is currently in progress to investigate the impact of this programme in collaboration with GEM students Nandini Nandeesha and Savannah Naylor.

## **EDI** initiatives

Professor Brennan has continued in her lead role for the Education work stream of the Race Equality Forum. Activities during this year have included:

# Anti-racism reading programme

The RCSI anti-racism reading programme, developed by RCSI graduates Therese Lynn, Oluwarotimi Vaughan-Ogunlusi, Kathryn Weisendanger, Sarah Colbert Kaip, Austin Capcara, Sarah Chen and Katrina Durzo during their time as students, in partnership with EDI and GEM Faculty (Professor Sreenan and Professor Brennan) was again delivered to GEM1, GEM2 and Direct Entry year 3 students. A paper on the programme was delivered by Dr Lynn at AMEE in August 2022 and a manuscript based on a research study carried out to assess the impact of the initiative was accepted for publication in Medical Education.

## Diversity in clinical cases

The GEM 1 programme continued to incorporate diversity into the clinical cases delivered in conjunction with simulated patients. This built on work completed by Amir Bachari and Austin Capcara as part of a StEP project in 2021 in collaboration with Dr Syama Gollipali and supervised by Professor Sreenan and Professor Brennan. Amir delivered a paper on this work at AMEE in August 2022 and this is currently being prepared for publication.

Invited presentations and faculty engagement relating to race equality

Professor Marian Brennan and Emeka Okereke. Invited speakers at Race Equality in the higher education sector launch event for the HEA Race Equality Implementation Plan. *Focus on Race Equality. The RCSI Experience*, September 2022.

Professor Marian Brennan. Invited speaker at the Biochemical Society. *Focus on Race Equality. The RCSI Experience*. November 2022.

Professor Marian Brennan. Chair of the one-year anniversary of the launch of the RCSI Race Equality Action Plan, November 2022

Presentation at the International Education Forum. EDI Race Equality Action Plan, Liz Hughes, Dr Gozie Offiah, Professor Marian Brennan, June 2023.

#### **RCSI Student-Led Translator Service**

Eric Dunne and Isidora Rovic (GEM 3), continued to work with Professor Brennan and Professor Sreenan, received StEP funding to further work towards developing a student-led translator service for clinical sites.

# **RCSI Student-led Schwartz Rounds**

GEM 1 students, Mark Polemidiotis and Nadim Sayani, were awarded StEP 1 and 2 funding to develop Schwartz rounds for students. The objective was to provide a safe supportive space for students to discuss personal challenges or concerns that they may have during the programme. The first iteration of the rounds, facilitated by Mark and Nadim, was very well received by students and it is planned to broaden out the access to the Schwartz rounds during the next academic year.

## **Facilities**

The building work on the new Research and Education facility at Connolly Hospital, a €22 million investment by RCSI progressed well during the year. Professors Sreenan and Eoghan O'Neill worked with the estates team and Rebecca Kirrane from the simulation centre on the design of the teaching space in the new building. An event was held at Connolly on June 7<sup>th</sup> to mark the topping off of the building. A plaque to mark the occasion was unveiled by Professor Laura Viani, President of RCSI, at the ceremony, which was attended by Ministers Roderick O'Gorman and Jack Chambers.

# **Curriculum changes**

In 2022-23 we completed the preparation for implementation of THEP in GEM. This includes a change to the assessment strategy adopting programmatic assessment and changing to a GPA scale in line with the DEM programme. Preparation in 2022-2023 involved consultation with faculty regarding curriculum changes, engagement with IT to develop the Kaizen templates and dashboard and submission of documents to A&QC for approval for the curricular and assessment changes planned for implementation in September 2023. We have also significantly been involved in the planning for the automated transcript development with IT.

# GRADUATE SCHOOL OF HEALTHCARE MANAGEMENT

#### Overview

The Graduate School of Healthcare Management (GSM) is a postgraduate school within RCSI, offering healthcare management education to healthcare and related professionals worldwide. The School strives to drive excellence and impact through education, training and research.

GSM offers a suite of postgraduate academic programmes in the areas of healthcare management, leadership, innovation, quality, safety and digital health. Programmes are delivered via a digital delivery model, with the credit-bearing element of all programmes delivered online, as part of an engaging, context-specific and experiential learning approach. GSM's innovative approach to teaching and learning was recently recognised through a HEA grant award for the development of entrepreneurship micro credits.

GSM also offers commissioned professional and executive development programmes on behalf of national and international clients in the healthcare industry. These bespoke programmes are delivered both in-person and virtually.

The growing research activity of the School is directed at tackling grand challenges and complex problems in health and care. The School collaborates nationally and internationally with public and private stakeholders to support and shape health and healthcare delivery with partners such as the HSE, regional hospital groups, Community Health Organisations and the World Health Organisation.

# **Summary of Key Achievements / Academic Activities**

## Appointments

This year GSM welcomed two new lecturers in Dr John-Paul Byrne and Dr Anjali Westwood Raj. Dr Claudine Kearney was also appointed Senior Lecturer.

# Academic Activities

Over the past year, GSM has continued to graduate students from across the globe through its diploma and Masters programmes. This has included working with partners in Saudi Arabia and Ireland to bring cohorts of future leaders through our professional diploma in clinical leadership. A commitment to continuous improvement has also seen successful digital revamp of the flagship Health Care Management Masters.

Underpinning our teaching and learning excellence is a commitment to impactful research. This year saw an acceleration in research funding, output and reach with GSM faculty partnering with national and international collaborators to increase grant income (e.g. WHO, HRB, HEA), publish in top-tier health and management journals and inform policy and debate. The research of the School is supported through dedicated Research & Impact clinics (which include doctoral students and post-docs), research workshops, School level funding and a dedicated director of research.

#### Executive Education

The GSM supports the healthcare system and executive and senior management through a range of bespoke, co-designed programmes and initiatives. These include working with the national healthcare provider (HSE), the Department of Health, and strategic groups to deliver multidisciplinary executive level leadership programmes and conferences to support systems change and the government reform programme. The GSM also provides consultancy and advisory services at a national level.

## Dr Alexis Amaye:

- Rosalind Member of London Journals Press, London Journal of Research in Computer Science and Technology (LJRCST) 2021-present.
- International Journal for Disaster Risk Reduction, Reviewer, 2018-present
- International Conference for Information Systems, Reviewer, 2017-present
- European Conference for Information Systems, Reviewer, 2016-present

## Dr Anjali Westwood Raj:

- Fellow of Advance HE
- British Journal of Healthcare Management, Reviewer, 2020-present
- British Journal of Obstetrics and Gynaecology, Reviewer, 2022-present
- Association of Coaching, Member, 2021-present
- International Network for Health Workforce Education, Member, 2021-present
- British Academy of Management, Member, 2022-present

## Ms Caroline O'Regan:

- Association for Coaching (AC); and
  - Accredited AC Professional Executive Coach;
  - AC Coach Accreditation Assessor (coach; leader, executive, master) and
  - AC Lead: Coach Accreditation Assessor (2023)
- Accredited Coaching Supervisor (Oxford) (2023)
- Accredited Mediator and Member of the Mediator Institute of Ireland (MII) (2023)
- Health Management Institute (HMI) Council Member and Hon. Editor Health Manager Journal
- Editorial Board Member, European Association Hospital Managers (EAHM)
- Member Global Compassion Coalition (GCC), Health Impact Cluster (2023)
- Member Five Nations Compassionate Collaborative Leadership The Kings Fund UK
- Member of the British Psychological Society (BPS)

# Ms Cathy Doyle:

- Appointed to the Board of Directors of St Francis Hospice, Dublin.
- Board representative on Board's Quality and Safety Committee

#### Dr Clare Harney:

- Elected to the Executive of the Health Informatics Society of Ireland (HISI) 2018, re-elected 2023
- Awarded Fellowship of the Irish Computer Society (ICS), 2023
- Awarded CIO & IT Leader of the Year (non-profit) for RCSI Leading Digital Health Transformation Education
- Member of the Health Information Standards Committee at NSAI, 2018-present
- World Taekwon-Do Championship Silver medallist, 2022-present

#### Dr Claudine Kearney:

- RCSI Academic and Qualifications Committee (A&QC) Committee Member.
- RCSI School of Pharmacy Innovation in Healthcare Module Development.
- Editorial Board Member: Advances in Business-Related Scientific Research Journal.
- Scientific Board Member: Advances in Business-Related Scientific Research Conference (ABSRC).
- Journal of Business Venturing, ad hoc reviewer 2010 to date.
- Journal of Management Inquiry, ad hoc reviewer 2012 to date.
- Small Business Economics, ad hoc reviewer 2013 to date.
- Canadian Journal of Administrative Sciences, Reviewer, 2008– to date.
- SAGE Publications, Reviewer, 2007- to date.
- Association: Academy of Management Member.

- Association: Strategic Management Society Member.
- Academy of Management Conference, Reviewer, 2006 to date.
- Chair at the Entrepreneurship General Track at the European Academy of Management Conference (EURAM 2023 Conference in Dublin).

## Mr Dermot O'Flynn:

 Delivery of the first blended Train the Trainer Programme for the College of Anaesthetists of East Central South Africa (CANECSA) November 2020.

#### Dr Dorothy Breen:

College of Anaesthesiologists of Ireland, HSE Liaison Committee member 2021-2022

#### Dr Éidín Ní Shé:

- Honorary Senior Research Fellow, Healthcare Engagement and Workplace Behaviour Stream, Australian Institute of Health Innovation, Macquarie University, Sydney. 2021-Current
- Member of UCD Centre for Interdisciplinary Research Education and Innovation in Health Systems (IRIS). 2018-Current
- Reviewer for the International Journal of Integrated Care. 2018-Current
- Honorary Senior Research Fellow, Healthcare Engagement and Workplace Behaviour Stream, Australian Institute of Health Innovation, Macquarie University, Sydney

#### Dr Gloria Kirwan:

- Co-Editor, Journal of Social Work Practice. Taylor & Francis/Routledge. UK (2020-2023).
- Editor, Groupwork. Whiting & Birch Publishers. UK (2018 ongoing).
- Independent Ethics Advisor, GEOFIN Project: 'Western Banks in Eastern Europe: New Geographies of Financialisation'. Trinity College Dublin. https://geofinresearch.eu/ (2017-2023).
- Member, National Services Advisory Sub-Committee, Focus Ireland (2015- ongoing).
- Member, KOINONIA: Interdisciplinary Research Group on Social Work, History, Law and Social Intervention, UNED, Spain (2021- ongoing).
- Trustee, Group for the Advancement of Psychodynamics
- External Examiner, Professional in Practice (PiP) Award, Northern Ireland Social Care Council (2018 2021; reappointed for three year term 2021-2024).
- Member, Department of Health National Research Ethics Committee (Medical Devices)
- Member, Health Committee of the Medical Council
- Member, Tusla National Review Panel

## Dr John-Paul Byrne:

• Board member, and chair of Research Advisory Sub-committee, for the Childhood Development Initiative [https://www.cdi.ie/]

#### Dr Kristina Brown:

• Reviewer for the International Journal of Business Science and Applied Management 2018 to date

# Dr Mary E. Collins:

- Member of Council for the Institute of Training & Development
- Psychological Society of Ireland Coaching Psychology Special Interest Group Committee Member
- Judge for Graduate Ireland Best Training & Development Award
- Judge for Engineer's Ireland CPD Awards
- · Coach Assessor, The Association for Coaching
- Role Model, Aurora Women in Education Programme

## Dr Niamh Humphries:

2022 External Examiner PhD viva voce examination, Dublin City University.

## Professor Robert McMurray:

- Editorial Board Management learning (2021 onward)
- Series Editor: McMurray, R & Pullen A. Routledge Focus Series on Women Writers in Organization Studies.
- HEA Fellow (UK)
- Stream Chair: McMurray R. (2022) All you need is love, Art of Management & Organisation, Liverpool 18-21 July, 2022.
- Durham University Business School, External Examiner, 2023 onward, (MBA)
- External DBA examiner, Heriot Watt University, 2022

## Dr Siobhán McCarthy:

 Memberships: Q Community, Health Foundation; Council of Partners, All Ireland Institute of Hospice and Palliative Care.

# Ms Tina Joyce:

- Association of Coaching, Member, 2018-present
- Speaker at Arab Health Conference Innovation in Healthcare.
- Member of the 5 Nations Health and Social Care Group.

#### Staff

Executive Director Sara McDonnell MA, BSc

Academic Director, Professor of Management and Organisations Robert McMurray PhD, MSc, BA, PG Cert

Director of RCSI-Dubai Hasan Altug MBA

Lecturers (Ireland)
Anjali Raj BBA, MSc, PhD
Alexis Amaye MA, PhD
Cathy Doyle MBA, MA ED

Cathy Doyle MBA, MA ED Claudine Kearney PhD

Dorothy Breen MD, FFARCSI, FCICM, MBBS

Éidín Ní Shé BA, MSc, PhD

Gloria Kirwan LL.M, LL.B, PhD, MSc, M.Litt, BA

John Paul Byrne PhD, MSc

Kristina Brown PhD, FHEA, MBA, Dip PFS

Niamh Humphries BSocSc, MPhil, PhD

Siobhan McCarthy PhD, MSocSc, BSocSc, PGDipLHPE

Tina Joyce MSc, MBA, FIBMS, IDHA

## Senior Executive Development Specialists

Caroline O'Regan MEd, HDip P&IR, Dip HSMgt, MCIPD, MIITD

Mary Collins EdD, HDip Psych, MSc, BA

# Director of Corporate Training & Development

Dermot O'Flynn MSc, DipMat, MIITD, MIHCI

#### Post-Doctoral Researchers

Mairead Finn BA, MSc, PhD John Paul Byrne PhD, MSc Mehmet Ali Icbay PhD

Gintare Valentelyte BA, MSc, PhD

PhD Scholar

Niamh Rohan BA

Academic Operations Team

Siún Aherne MSc, MiM, BSc, Dip Nursing

Beatriz Gonzaga Burke, BA

Lucas Irrazabal BEng

Elaine Carton MA, BA, HDSDA

Elaine Hurley MApplSc, MSc, BSc, Grad Dip, H Dip

Myriam O'Farrell MA, BA

Winona D'Souza BA

Anna Morris BA, PG Dip

Jean Carter BEd, MSc, QFA

Eimear Finnegan BA

Lenka Kertisova BA, MSc

Brian O'Driscoll BA, MSc

## Marketing and Recruitment Team

Franco Francisco BBA

Miriam Holden BA

Katie Oliver BA, PGCE

Jade Moxley BA, PG Dip, MA

Tara Hyland BA, MSc

Lucy Dawson

Sarah Sultan

## Adjunct Faculty

Aisling Doyle PhD

Aisling McDonald, Senior Dentist, HSE

Andy Kelly NUIG, MSc Mgmt (TCD), DIT/TUD

Brendan Colclough MIITD, MICHI

Clare Harney BA, MSc

Cris Scotter PGDMS, MSc, MBA

Cyril Sullivan PhD, MBA, NMBI Board of Directors, HRB Board of Directors, FSPO Council Member and Chair of An Garda Siochana's Audit and Risk Committee

David Rowlands, A/Professor at RMIT University, Director at WentWest Pty Ltd, Attunga International and Digital Health Workforce Australasia

Denis Murphy, Chief Administrative Officer, Association for Dental Education in Europe

Derek Cribbin, Nurse Lead National Critical Care Programme

Eleni Tzouramani PhD, PGC, MBA, BSc

Geraldine McDermott, MSc Leadership, BDent Sci ,General Dental Surgeon, HSE

Grace Bloomer, Beacon Hospital

Hilary Meehan, PhD, MBS, BBS. HEO – Senior Crime & Policing Analyst, An Garda Siochana.

Ian Callanan MB, BCh, BAO (Med) MBA

Jenny Hogan, MSc, BA, RGN, Acute Strategy on Scheduled Care Transformation Programme

Louise O'Nolan DBA, BSc, MA, ADip

Lorna Ross PG in Computer Related Design

Luke Feeney, Director of Risk, Audit & Safety, National Maternity Hospital

Mairead Finn BA, MSc, PhD

Mary McCarthy Area Director, Planning and Development, HSE

Mary O'Neill EdD of Education, MSc Primary Healthcare

Paul O'Dwyer BDS, MSc, Dental Care Ireland Mgt, Dip Personnel, BSocSc

Orla O'Shea RGN, BNS, MSc

Pauline Connolly PhD, MSc, Grad Dip Pub Sector

Phillipe Vande Wiele PhD, CTTL, PG Dip

Ricky Ellis Programme Development Officer, PHECC

Robert Worrall MA, PhD

Rosemary Collier MSc, Professional Doctorate - current participant Tavistock (Consulting to Organisations Sheila Barrett, MSc Social Work, MSc Occupational Psychology, BSc (Hons) Psychology.

Sibéal Carolan FFNRCSI, MSc, RNT, RGN, RCN

Steve Pitman MSc, BSc, RGN, Head of Education & Professional Development at Irish Nurses & Midwives Organisation

Ms Valerie Pierce MA (Phil), MSc (Executive Coaching), Founder of Clear and Critical Thinking

## **Publications**

Brennan, N., Langdon, N., Bryce, M, Burns, L, **Humphries, N,** Knapton, A and Gale, T. Drivers and barriers of international migration of doctors to and from the United Kingdom: a scoping review. Hum Resour Health 21, 11 (2023). <a href="https://doi.org/10.1186/s12960-022-00789-y">https://doi.org/10.1186/s12960-022-00789-y</a>

**Byrne J.P.**, **Humphries N.**, and **McMurray**, **R**. (2022) Understanding the impact of COVID-19 on the mental health of the health workforce in WHO Europe Member States. RCSI GSM for the World Health Organisation.

Campbell, J., Davidson, D., **Kirwan, G.**, McCartan, C., & McFadden, D. (2023, online). The mental health needs of social work students: findings from an Irish survey. Social Work Education, (1-17). <a href="https://doi.org/10.1080/02615479.2022.2130232">https://doi.org/10.1080/02615479.2022.2130232</a>

Castillo de Mesa, J., López Peláez, A., Méndez-Domínguez, P., & **Kirwan, G.** (2022). Digital Communication Engaged in by Spanish Associations of Social Workers in Social Net-working Sites: Coalition, Hierarchisation, or Isolation? (Comunicación digital de los Colegios de Trabajo Social en España en las redes sociales online: ¿coalición, jerarquización o aislamiento?). Revista Española de Investigaciones Sociológicas (REIS), 178: 39-60.

Chróinín, D. N., Hunter, C. L., Shaw-Jones, M., Duruchukwu, E., Huang, F., Ngov, A., & **Ní Shé, É.** (2022). Identifying the needs of our older community-based patients in the COVID era: a telephone survey. Aging and Health Research, <a href="https://doi.org/10.1016/j.ahr.2022.100073">https://doi.org/10.1016/j.ahr.2022.100073</a>

Credland, N. Griffin, M. Hamilton, P, Harness, O. & **McMurray**, **R**. (online first) The impact of Covid-19 on mental health and well-being in Critical Care Nurses – a longitudinal, qualitative study. Nursing in Critical Care.

Creese, J, **Byrne, J-P.**, Olson, R and **Humphries, N**. (2022) A catalyst for change: Developing a collaborative reflexive ethnographic approach to research with hospital doctors during the COVID-19 pandemic. Method Innov. 16(1):3–14. doi: 10.1177/20597991221137813.

**Finn M.**, Mellon L, Walsh A, O'Brien N, Williams DJ, Rafter N, McCarthy SE. (2022) 'What effect do safety culture interventions have on health care workers in hospital settings?'A systematic review of the international literature. HRB Open Research. 5(48):48.

Griffin, M. Credland, N. Hamilton, P, Harness, O. & **McMurray, R.** (online first) "Running towards the bullets": Moral injury in Critical Care Nursing in the Covid-19 Pandemic. Journal of Management Inquiry

Harrison R, **Ní Shé É.**, Debono D. (2022) Implementing and evaluating co-designed change in health. Journal of the Royal Society of Medicine.;115(2):48-51. doi:10.1177/01410768211070206

Harrison, R, **Ní Shé, É**., Debono, D, Chauhan, A, Newman, B.(2022) Creating space for theory when codesigning healthcare interventions. J Eval Clin Pract.. doi:10.1111/jep.13720

**Humphries N.**, **Byrne J-P**., Creese J, McKee. (2022) 'Today Was Probably One of the Most Challenging Workdays I've Ever Had': Doing Remote Qualitative Research with Hospital Doctors During the COVID-19 Pandemic. Qual Health Res. 32(10):1557-1573. doi: 10.1177/10497323221106294.

**Humphries, N.**, **Byrne, J-P.**, & Creese, J. (2022) Hospital doctors in Ireland working through COVID-19 pandemic: learning from individual experience, European Journal of Public Health, Volume 32, Issue Supplement 3, , ckac129.044, https://doi.org/10.1093/eurpub/ckac129.044

Kearney, C. (2022). Compassionate Leadership for Innovation in Healthcare. Health Manager Journal.

- **Kearney, C.** (2023). Entrepreneurship: Reducing Risk of Burnout and Enhancing Well-Being Among. Healthcare Professionals. Health Manager Journal.
- **Kearney, C.**, & Lichtenstein, B. (2023). Toward A Leadership of Emergence: Insights From. Entrepreneurs Pursuing New Venture Creation. European Academy of Management Conference, June 2023.
- **Kirwan, G.** (2022). Superdiversity Reimagined: Applying superdiversity theory to research beyond migration studies. Current Sociology, 70(2): 193-209
- Locock, L, O'Donnell, D, Donnelly, S., **Ní Shé, É.**, Ryan, S. (2022) 'Language has been granted too much power'.1,p.1 Challenging the power of words with time and flexibility in the precommencement stage of research involving those with cognitive impairment. Health Expect. 1- 5. doi:10.1111/hex.13576
- McFadden, P., Ross, J., Byrne, J., Flanagan, N., Dolan, P., **Kirwan, G.**, Kelly, E.....Katola, M. (2023). The role of social work education in relation to empathy and self-reported resilience: Results from entry to exit of social work education on the island of Ireland during the Covid-19 pandemic. British Journal of Social Work, bcad046, <a href="https://doi.org/10.1093/bjsw/bcad046">https://doi.org/10.1093/bjsw/bcad046</a>
- **McMurray, R.**, Credland, N., Griffin, M., Hamilton, P., Harnes, O. (Online First) Toxic absence: why leader presence matters in times of crisis. Journal of Nursing Management. ISSN 0966-0429
- **McMurray, R.**, Credland, N., Griffin, M., Hamilton, P., Harness, Harness, O., and Kimberly, J (2023) Emotional Labor: Concept and Practical Categorizations in Light of COVID Critical Care Nursing. In: Shifting Categories of Work. Taylor & Francis, New York, NY, United States, pp. 175-188.
- Mullens, A. B., Krishnamoorthy, G., **Ní She, É.,** & Burton, L. J. (2022). Applications and Careers in Psychology within Public Health and Community Settings to Build Wellbeing and Promote Social Justice. The Australian Handbook for Careers in Psychological Science, USQ PRESS, Toowoomba ISBN: 978-0-6453261-1-6.
- Nic Giolla Easpaig B, **Ní Shé É**., Chauhan A, Newman B, Joseph K, Tieu NT, Harrison R. (2022) Enabling the space and conditions for co-leadership in co-design: an evaluation of co-facilitator training for culturally and linguistically diverse consumers. Public Health Res Pract. 32(2):e3222214
- O'Donnell, D., O'Donoghue, G., **Ní Shé, É.**, O'Shea, M & Donnelly, S. (2023) Developing competence in interprofessional collaboration within integrated care teams for older people in the Republic of Ireland: A starter kit, Journal of Interprofessional Care, 37:3, 480-490, doi:10.1080/13561820.2022.2075332
- O'Donnell, D, Davies, C, Christophers, L, **Ní Shé, É**., Donnelly, S, Kroll, T. (2023) An examination of relational dynamics of power in the context of supported (assisted) decision-making with older people and those with disabilities in an acute healthcare setting. Health Expect. 26: 1339- 1348. doi:10.1111/hex.13750
- Roberts, N. J., Harvey, L. A., Poulos, R. G., **Ní Shé, É.**, Dillon Savage, I., Rafferty, G., & Ivers, R. (2022). Lesbian, gay, bisexual, transgender and gender diverse and queer (LGBTQ) community members' perspectives on palliative care in New South Wales (NSW), Australia. Health & Social Care in the Community, 30, e5926– e5945. <a href="https://doi.org/10.1111/hsc.14024">https://doi.org/10.1111/hsc.14024</a>

## **Edited Books:**

López Peláez, A. & **Kirwan, G.** (Eds.) (2023). Routledge International Handbook of Digital Social Work. Routledge.

# **Book Chapters:**

**Kirwan, G.** (2023). Networked Relationship: Relationship-Based Social Work Practice in the Digital Era. In A. López Peláez & G. Kirwan (Eds.), Routledge International Handbook of Digital Social Work. Routledge.

**Kirwan, G.** & Byrne. J. (2023). Mechanisms of Power in the Digital Age: Surveillance, Privacy and Professional Boundaries in Social Work Practice. In A. López Peláez & G. Kirwan (Eds.), Routledge International Handbook of Digital Social Work. Routledge.

López Peláez, A. & **Kirwan, G.** (2023). Digital Social Work – Reshaping Social Work Practice in the 21st Century. In A. López Peláez & G. Kirwan (Eds.), Routledge International Handbook of Digital Social Work. Routledge.

López Peláez, A. & **Kirwan, G.** (2023). The Future of Digital Social Work: Trends, Challenges and Opportunities. In A. López Peláez & G. Kirwan (Eds.), Routledge International Handbook of Digital Social Work. Routledge.

**Kirwan, G.** & López Peláez, A. (2023). Universal Design and Social Work Management Education. In M. Arnold (Ed.), Handbook of Applied Teaching and Learning in Social Work Management: Theories, Methods and Practices in Higher Education. Springer: Switzerland.

**Kirwan, G.** & O'Driscoll, B. (2023). Applying Threshold Concept Theory in Social Work Management Education: The Pedagogy of Emotional Labour in Social Work Practice. In M. Arnold (Ed.), Handbook of Applied Teaching and Learning in Social Work Management: Theories, Methods and Practices in Higher Education. Springer: Switzerland.

**Kirwan, G.** (2022). Manifesting an inclusive society: using universal design theory with ICT to supercharge empowerment and participation of marginalizsed populations. In: A. López Peláez, S-M. Suh, & S. Zelenev (Eds.), Using ICTs for Social Inclusion and Social Welfare around the World. Routledge.

**McMurray, R** (2023) Dirty work. In Ödül Bozkurt, Rachael Finn, Edward Granter, Arun Kumar, Carolyn Hunter, Nina Kivinen, Leo McCann and Brian Wierman (editors) Encyclopaedia of Critical Management Studies. London: Edward Elgar.

**McMurray, R.** Credland, N. Griffin, M. Hamilton, P, Harness, O. & Kimberly, J (2023) Emotional labour: concept & practical categorizations in light of covid critical care nursing in Herzog, L. and Zimmermann, B. (editors) Shifting categories: Unsettling the way we think about work. London: Routledge.

## **Edited Journal Issues:**

- **Kirwan, G**. (2023). Groupwork, 30(2)
- Kirwan, G. & Whittaker, A. (2023). Journal of Social Work Practice, 37(1)
- Whittaker, A. & Kirwan, G. (2022). Journal of Social Work Practice, 36 (3)
- Whittaker, A. & Kirwan, G. (2022). Journal of Social Work Practice, 36 (1)

## **Book Reviews:**

**Kirwan, G.** & Millán-Franco, M. (2022). Book Review: Elaine Chase and Jennifer Allsopp, Youth Migration and the Politics of Wellbeing. Stories of Life in Transition. British Journal of Social Work. <a href="https://doi.org/10.1093/bjsw/bcac065">https://doi.org/10.1093/bjsw/bcac065</a>

## **Active Grants and Grants Awarded**

PI: **Humphries** (RCSI) Co-Applicants: Byrne, Collins, Cullen, Harty, Murphy, **Ní Shé**, A. Murphy & Smith. Co-Applicant: Health Research Board (HRB).The GP Retention Project (GP-R) 2023 €239,980.

PI: O'Donnell (UCD), Co-Applicants: Brennan, **Ní Shé**, Davies, De Brún, et al., Health Research Board (HRB) ILP-HSR- 2022-007 A realist process evaluation of an intervention to promote competencies in interprofessional collaboration among interdisciplinary integrated care teams for older people. 2022 €369,882.

**Niamh Humphries** (PI). Hospital Doctor Retention and Motivation Project. EIA 2017 022, Health Research Board. Awarded December 2017. €799,000.

# INTERNATIONAL HEALTH & TROPICAL MEDICINE

## Overview

The inception of the Department of International Health and Tropical Medicine at RCSI coincided with Ireland's growing involvement in international aid.

The Government's Agency for Personnel Service Overseas (APSO) was created in 1974; other major Irish international development NGOs (Concern, Goal, Trocaire) also began at that period, and the RCSI Department of Tropical Medicine became a critical advisory resource for them. The department also runs outpatient clinic services from Beaumont Hospital, Our Lady of Lourdes Hospital, Drogheda.

The department of International Health and Tropical Medicine has a focus on research and teaching. This includes teaching in the new curriculum, for THEP2, Year 1 and Year 2 PIH with a focus on topics in GIHEP and Respiratory teaching which includes stand-alone lectures, workshops and small-group teaching.

THEP1 Year 3 Tropical Medicine combined with the Public Health and Epidemiology module (PHE) forming the Public and International Health (PIH) module.

Haemato-Lymphoid Tropical Medicine for Intermediate Cycle 2 GEM students based at Connolly Hospital, Blanchardstown offers both the tropical medicine component and integrates cross-departmental and interdisciplinary teaching.

The research activities of this department are about control and prevention of diseases in resource-poor areas however, methodologically the activities span from the molecular and immunological, through clinical trials and cohort studies to health systems.

Members of the academic department attended The European Society of Clinical Microbiology and Infectious Diseases (ECCMID) conference in Denmark on behalf of RCSI presenting research abstracts and case studies in April 2023.

## **Staff List**

Vice Dean for International Curriculum Engagement, Professor & Head of Department Sam McConkey MD, FRCPI, FRCP(London), DCH, AM(Statistics), DTM&H(Liverpool)

Consultant and Senior Lecturer Eoghan de Barra BSc, BAO, BCh, MD, MRCPI

Honorary Senior Lecturer
Peter Coakley MB, BCh, DTM&H, FRCPI FACP

Honorary Clinical Lecturer Cora McNally MB, BCh, BAO, FRCPI, MPH, MSc Health Care Management

Honorary Lecturer
Niall Roche BSc (Env. Health), MHSc(Public Health and Health Promotion)

Clinical Lecturer
Kate Jackson MB, BCh, BAO, BMedSci, MRCP UK, MRCPI, DTM&H
Josephine Hebert MB, BCh, BAO, MRCPI, MSc

Research Nurses Benson Jacob Suchitra Vengathodi

Administrator Camilla Wemyss

1 PhD student

## **Publications**

O'Connell J, De Barra E, McNally C, McConkey S A survey of latent tuberculosis screening and treatment practices in a tertiary centre, IMJ, 24 Oct 2022.

O'Connell J, de Barra E, McConkey S. Systematic review of latent tuberculosis infection research to inform programmatic management in Ireland. Ir J Med Sci 2022;191:1485–1504 <a href="https://doi-org.proxy.library.rcsi.ie/10.1007/s11845-021-02779">https://doi-org.proxy.library.rcsi.ie/10.1007/s11845-021-02779</a>

O'Regan R, Al-Yammahi A, Reynolds B, Crawford R, Redmond D, Hamilton J, Banahan M, McConkey S, De Barra E, Coakley P, et al. Covid-19 vaccine uptake in people living with HIV, IMJ, 26 Oct 2022

# **Active Grants and Grants Awarded**

RCSI Research study: To develop, implement and evaluate an educational intervention for medical students at RCSI and prepare them to work effectively with diverse multicultural patients. PhD Research Project: 3, March 2023, €140,000

EU-COVAT-2 BOOSTAVAC, https://cordis.europa.eu/project/id/101037867, 21 October, 2021, EU Horizon funding, Co-applicant Eoghan de Barra, €13,500

Redefining Institutional Stigma Education (RISE) Industry Fellowship (Postdoctoral), 17817 – Gilead, 29 September 2022, Applicant Eoghan de Barra, Co-applicant Amir Bachari, €50,000,

# LIBRARY

# **Overview**

RCSI Library supports the learning, teaching, research and clinical activities of RCSI and preserves and promotes the RCSI Heritage Collections.

The team manage systems and services for discovery, curation and preservation of institutional information assets past and present. Our team of health information specialists provide advice and services ranging from expert search and retrieval, information and digital literacy skills development, research data management, bibliometric profiling, open access publishing, digital preservation and onsite and online services.

# **Summary of Key Achievements & Team Highlights**

- The 4000<sup>th</sup> item was added to the RCSI Repository in November 2022, less than a year after the 3000<sup>th</sup>.
- The RCSIsmj (Student Medical Journal) began to be published on the RCSI Repository for the first time, with an open Creative Commons (CC) licence. The Repository will act as an archive and provide article level searching, with all back issues of the SMJ also being uploaded.
- Ruth Geraghty, the new Research Data Coordinator was able to roll out wider support for data management planning, FAIR data and archiving, holding workshops and consultations to help researchers to manage their research data.
- Digital Heritage Collections developments included the launch of a new publicly accessible website showcasing RCSI's extensive heritage collections and the newly digitized materials from the Sir Charles A. Cameron archive, funded by the Heritage Council of Ireland.
- Service enhancements included: return to regular in person service hours at the York Street Information Point alongside the virtual information desk (Sept 2022); integration of LibKey discovery with Primo VE to enhance ease of access to full text content for users (Feb 2023); refresh of the library group study room online booking system (Apr 2023); and the roll-out of Visitor kiosks to support Alumni & external visitor onsite access to library collections (May 2023).
- Hosted 62 pop-up events at the Expo Stage, Library Learning Commons, 26 York Street. The majority of events are student society/student union led.

- A new e-resource collection for Beaumont Hospital staff was purchased by RCSI, to provide access to key resources for our clinical partners. Support and training for these resources is available from RCSI Library, Beaumont Hospital.
- Commencement of a collaboration between the Library and School of Postgraduate Studies to develop a postgraduate module on Open Science at RCSI.
- Coordinated delivery of a range of activities during Heritage Week 2022 including a pop-up exhibition, social media campaign and thematic in person tours to promote RCSI's heritage collections.
- The Heritage Collections team supported a wide range of University events including: Heritage Week 2022, Culture Night 2022; and, Art Committee's monthly lunchtime Art Talks. The team facilitated bespoke displays of relevant collections material for the Emily Winifred Dickson Award 2022 and the Sir Charles A. Cameron Award 2023.
- Hosted a range of tours and talks for external groups including: 'RCSI Heritage Highlights' presented
  to North American Counsellor groups visiting Irish HEs; Dublin City & Council Library Executive Team;
  and, University of Galway's Library Senior Management Team.
- Hosted a UCD MA Archives & Records Management student intern in January 2023.

# Library in Numbers 1<sup>st</sup> June 2022 – 31 May 2023 (unless otherwise noted)

- Repository use: 750,763 repository views, 663,449 repository downloads, 1,256 open access items added. On average every item in the RCSI Repository was downloaded 145 times in the year equating to 1,818 downloads per day.
- Primo VE: 251,405 searches. An average of 20,920 searches per month. The most popular searches are Basic Search (81%, 203,760), Journal Search (9.6%, 24,119) Advanced Search (6.7%, 16,955) and Search for Databases (2.6%, 6,571)
- 104,011 library website views
- 112,675 unique user LibGuides sessions
- 10,656 views of library training videos on Panopto and YouTube.
- 8,127 queries received, 72% via the virtual information desk (LibChat 2,060 & Email 3,769) and 28% via the in-person service desks (2,298)
- 6,703 Digital Heritage Collections site page views
- 2,167 attendees of 54 live information skills taught classes, 34 of them delivered in person, 20 online, plus 11 recorded videos were provided to courses.
- Expert advice to 661 users in 589 consultations, 95% of them online, on a range of topics connected to literature searching, referencing, systematic reviews, metrics and open access publishing.
- 82 users received advice on research data management topics in 64 consultations.
- 491 document supply requests
- 12GB of digital heritage ingested into Preservica for long-term preservation
- 7,978 Heritage Blog page views
- 16,940 Library Group Study Room bookings
- Print book circulation:
  - 4,360 items were borrowed -89% via service points in York Street and 11% via the service desk in Beaumont Hospital.
  - 93% of renewals were facilitated by the auto renewal feature of the library management system and 7% of renewals took place in person at service desks or via self-service machines.
  - o 146 user requests were fulfilled via the new Holds feature introduced in September 2022.
- Social Media Followers: 55% Twitter (2,443), 35% Facebook (1,524) and 10% Instagram (449)

## Retirements

Paul Murphy BA, DLIS, MLIS, Information Specialist.

Paul retired in April 2023, his friends and colleagues in RCSI wish him all the best.

## **Staff List**

Library Management Team

Kate Kelly BA, DLIS, MSc, AHIP, FLAI, Director Library Services

Andrew Simpson BSc, MScEcon, MCLIP, Associate Librarian, Education Research & Clinical Support Kathryn Smith BSc, MLIS, Associate Librarian, Library Services Delivery

## Library Team

Rose Bissett Library Assistant, part-time

Chiara Cecchinelli BA Hons, MA, MSc, Teaching & Learning Support Librarian (From May 2023)

Claire Costigan BA, MLIS, Library Assistant

Carol Creavin DipInfStud, Library Assistant

Christine Cullen BAMod, MLIS, Customer Services & Communications Coordinator (From August 2022)

Christina Doherty, Library Assistant

Ciara Dorgan, Library Assistant, part-time

Ruth Geraghty BA, MA Sociology, MSc Applied Social Research, Research Data Coordinator (From April 2022)

Anne Gregg, Library Assistant

Jessica Handy BA, MA, Digital Archivist

Patrick Keegan BA, HDipA, PGDE, MLIS Teaching & Learning Support Librarian (From May 2023)

Ronan Kelly BA, DipLIS, MFA, PhD Heritage Research and Outreach Officer (From February 2023)

Bc. Eliška Komárková MLIS, Content & Metadata Management Librarian

Susan Leyden BA, HDip Archival Studies, Archivist

Sinéad Magee BA, Dip (Women's Studies), Library Assistant

Grainne McCabe BA, DLIS, Scholarly Communications and Research Support Officer

Joseph Marum BA, MPhil, Library Assistant, part-time

Kathryn Moorhouse, Library Shelver, part-time

Jean Murphy BA, MLIS, Library Digital System and Services Coordinator

Lorna Murphy MSc, MBCS, Dip Sci, Administrator, part-time

Maire O'Donovan BA, Library Assistant, part-time

Breffni Smith BA, HDLIS, MPhil, MSc, Clinical Librarian

Nicola Smith BA. PGDip. Library Assistant

Sarah Timmins BA PGCert LIM, Library Assistant

Killian Walsh BA, MA, Information Specialist (From June 2023)

Bethany Webb McConville BA, MLIS, Library Assistant, part-time (Until April 2023 and from June 2023)

# **Academic Activities**

Claire Costigan

Member, Library Association of Ireland (LAI) including Health Sciences Libraries Group and Academic & Special Libraries Section

## Christine Cullen

Committee Member, Consortium of National and University Libraries (CONUL) Customer Services Group Member, Library Association of Ireland (including Health Sciences Libraries Group)

## Ruth Geraghty

Member, National Research Service and Infrastructure Forum (RESIN)

# Gabriel Graves

Member, ABGRA - Asociación de Bibliotecarios Graduados de la República Argentina.

#### Anne Gregg

Member, Acquisitions Group of Ireland

#### Jessica Handy

Member, Archives and Records Association Ireland and Digital Scholarship Network Ireland

## Patrick Keegan

Member, Library Association of Ireland (LAI)

#### Kate Kelly

Board Member Irish Consortium of National & University Libraries (CONUL)

Board of Directors Society of College, National & University Libraries (SCONUL) UK

Editorial Board An Leabharlann, Journal of the Library Association of Ireland (LAI)

Member: Library Association of Ireland (LAI); University Health & Medical Librarians Group (UHMLG);

European Association for Health Information & Libraries (EAHIL); US Medical Library Association (MLA); Academy of Health Information Professionals (AHIP).

#### Eliška Komárková

Committee Member, Irish Research Electronic Library (IReL) Monitoring Group (until May 2023)

Committee Member, Consortium of National and University Libraries (CONUL) Collections Group

Member: Acquisitions Group of Ireland (AGI); Library Association of Ireland (including Rare Books Group, Health Sciences Libraries Group and Academic & Special Libraries Section)

## Susan Leyden

Committee Member, Consortium of National and University Libraries (CONUL) Unique and Distinct Collections Group

Member: Irish Society of Archives; Archives & Records Association, UK & Ireland

#### Sinéad Magee

Member: Library Association of Ireland (LAI) and Chartered Institute of Library; and Information

Professionals (CILIP)

#### Grainne McCabe

Committee Member, Consortium of National and University Libraries (CONUL) Research Support Sub-Committee

Member: SciVal User Group Ireland; UK and Ireland; Figshare User Group; and, IReL APC Approvers Group.

#### Jean Murphy

Treasurer, LIR HEAnet User Group for Libraries

Member: Ex Libris Products User Group (UK and Ireland); International Group of Ex Libris Users (IGeLU); and, Sentry User Group.

## Paul Murphy

Committee Member, CONUL Copyright & Regulatory Affairs Committee (until December 2022)

Member: European Association for Health Information & Libraries (EAHIL); and Health Science Library Group, Library Association of Ireland

# Niall O'Brien

Honorary Secretary, Library Association of Ireland (LAI)

Committee Member, Consortium of National and University Libraries (CONUL) Teaching and Learning Committee

Member, Library Association of Ireland (LAI)

## Andrew Simpson

Member, Irish ORCID Steering Group

Member, HRB FAIR Data Stewards group

Chartered Member, Chartered Institute of Library & Information Professionals (CILIP)

Member, CILIP Health Libraries Group; CILIP Academic and Research Libraries Group; and European Association for Health Information and Libraries (EAHIL)

#### Breffni Smith

Member: Health Sciences Library Group (HSLG); and European Association for Health Information & Libraries (EAHIL)

## Nicola Smith

Committee member, Consortium of National & University Libraries (CONUL) 2023 Conference Committee

## Kathryn Smith

Committee Member & Research Award Co-ordinator, Consortium of National and University Libraries (CONUL) Training & Development Committee (until December 2022)

Committee Member, CONUL Regulatory Affairs Committee (from December 2022)

Committee Member, Irish Research Electronic Library (IReL) Steering Group

Committee Member, Library Association of Ireland (LAI) Education Committee – Continuing Professional Development

Committee Member, ScienceDirect National Consortium Monitoring Group

Committee Member, CONUL ERASMUS Library Staff Mobility Week 2023

Member: Library Association of Ireland (LAI); University Health & Medical Librarians Group (UHMLG); Association of Academic Health Sciences Libraries (AAHSL); and European Association for Health Information & Libraries (EAHIL).

#### Sarah Timmins

Secretary, Rare Books Group, Library Association Ireland (LAI) Member, Irish Museums Association (IMA)

#### Killian Walsh

Member, Library Association of Ireland (LAI)

#### Grants

Awarded €25,000 from Heritage Council to celebrate the life and legacy of pioneering Irish Surgeon Abraham Colles on the 250<sup>th</sup> anniversary of his birth in 2023.

# **Invited Lectures**

- RCSI Arts Strategy Launch, 9 May 2023 Jessica Handy, Digital Archivist was a discussion panel member.
- Jessica Handy presented a lightning talk on the digital preservation landscape in RCSI Heritage Collections at Digital Scholarship Network Ireland (DSN-IE) workshop in NLI 25 January 2023.
- Joint EOSC Future and RESIN workshop on research support services (3 March 2023) Andrew Simpson, Associate Librarian, presented a talk on the RCSI Repository and the set-up with RIMS as part of a workshop exploring existing RDM services at Irish institutions and how HEAnet and GEANT could potentially deliver an integrated set of research data services.

#### **Publications**

Kelly, R. Healing Hands: Abraham Colles. RCSI Alumni Magazine 2023, 46-48.

# **Acquisitions & Donations**

- Bound set of Irish Medical Times (1967- 2000) kindly donated to RCSI by daughter of the late Dr John O'Connell TD and LRCSI.
- Medical History Archive relating to RCSI activities kindly donated to RCSI by Prof Eoin O'Brien (transferred from UCD Special Collections).
- Set of surgical instruments belonging to Major Dr Thomas J Crean (LRCSI & FRCSI) kindly donated to RCSI by the daughters and son of the late Patricia Moorhead.
- Manuscript Book of Hours, 14<sup>th</sup> century, kindly donated to RCSI by John Widdess son of former Prof of Biology and RCSI librarian Prof JDH Widdess.
- Presentation of the 28th Edition Bailey and Love & 2019 Hunterian Orator Gold Medallion by Prof Ronan O'Connell (PRCSI 2020-2022).
- Set of medical instruments belonging to the late Dr Daniel Maher LRCSI and FRCSI.
- Addition of two new portrait busts Florence Nightingale and Elizabeth O'Farrell to the RCSI Art Collection as part of a commission made by the Faculty and School of Nursing and Midwifery and RCSI Art Committee.

# **MEDICINE**

Professor McElvaney leads a department, which emphasises excellence in teaching, research and clinical medicine. The Department has re-edited its very popular clinical medicine book, now in its fifth edition, with added features to enable access to on line teaching videos and tutorials. Both print and online versions are available to students. The Department is developing an app which will encompass all the contents of the book and will be available for the next edition. Professor McElvaney as Head of the Medical School, works closely with Professor Hill, Dean of Medical Programmes, in driving the THEP2 programme. This programme is already showing signs of being an enormous success. The Department owes a considerable debt to the Medicine tutors and lecturers and medical staff in Beaumont hospital for their tremendous contribution to teaching and examining throughout the year.

In 2022, Professor McElvaney was elected as a member of the Royal Irish Academy (RIA), the highest academic honour in Ireland. Professor McElvaney continues his work in the areas of CF and AATD and has contributed significantly to the understanding of the pathogenesis and treatment of COVID-19 ARDS. A paper from his laboratory on the inflammatory response to COVID-19 infection is now one of the most cited papers ever in the American Journal of Respiratory Critical Care Medicine (AJRCCM) with over 560 citations since its publication in 2020. Professor McElvaney continues to receive funding from the Health Research Board, Alpha-1 Foundation (US) and the National Institutes of Health (US). In 2023, the Alpha 1 global organization held a very successful international conference in Dublin in conjunction with the Department of Medicine RCSI and the Irish Alpha 1 Foundation. Professor McElvaney has been invited on to the Editorial Board of the AJRCCM

Dr Tomás Carroll runs the National Alpha-1 antitrypsin deficiency (AATD) targeted detection program and coordinates the Irish AATD registry, one of the largest of its kind in Europe. He is an active researcher in the field of genetic lung disease and a senior lecturer in RCSI. He teaches in the MSc in Technologies and Analytics in Precision Medicine and the Cell Signalling and Molecular Medicine module, a paninstitutional educational module for post-graduate students. He is presently developing a position paper on the roadblocks facing people with genetic disorders who wish to participate in clinical research. He is also the recipient of a major award from the Alpha-1 Foundation (US) where he will explore the risk of emphysema in people with severe AATD in a large Irish family study. He has recently been asked to jointly chair a US task force on repurposing diagnostic nomenclature in AATD.

Professor Emer Reeves from the Department is Deputy Head of the School of Postgraduate Studies and has been instrumental in introducing the StAR MD programme to a significant number of private hospitals in Dublin. This highly competitive programme has been extremely popular with SpRs with resulting attraction and retention of highly qualified doctors to the RCSI community.

Professor Peter Branagan runs the post graduate teaching program in Beaumont Hospital which has been immensely successful in attracting top class NCHDs to the hospital, many of whom are active teachers in the undergraduate teaching program. His success rate in facilitating doctors pass the various stages of the MRCPI exam is unparalleled and has played a major role in Beaumont's ability to attract the highest grade NCHDs.

Dr Muirne Spooner has spearheaded novel teaching methods in the undergraduate teaching programme in the Department of Medicine. In addition to her work on educational technology, assessment and teacher education she has published in the areas of feedback, inter-professional learning and the challenges and opportunities associated with the emergence of artificial intelligence

Professor David Williams spearheads the Department's efforts in the preparation of students for the Prescribing Safety Assessment (PSA) exam and heads up the Department teaching in SC1. He has been mainly responsible for the streamlining of evaluations within SFC1 and this has been of major importance in developing plans for THEP2. In addition to leading out prescribing teaching throughout the Medical school, Prof Williams continues his active research programme in stroke, medication safety and patient safety, also playing a leading role in the provision of care to patients at Beaumont Hospital. Under the guidance of Prof Williams the RCSI team were once more successful in the Dr Jack Flanagan prize with the winning team comprised of Andrew Mati, Evelyn Flynn, Christine O'Keefe and Lori Israelian. Dr Enda McElduff (Clinical Lecturer, RCSI), Dr Emma Jennings, Dr Adam Roche and Dr Kristina Juamanova were integral to winning the competition. As a result RCSI has the singular honour of hosting this year's event.

Professor Mark Sherlock is Director of the Clinical Research Centre (CRC) in the Smurfit Building Beaumont Hospital, in addition to continuing his pioneering work in the areas of adrenal insufficiency, polycystic ovarian syndrome and glucose and lipid metabolism. The CRC is vital for Beaumont's status as a first class academic research centre. Prof Sherlock runs the phaeochromocytoma service in Beaumont hospital which is also a National service. Prof Sherlock is on the editorial board for Clinical Endocrinology and an associate Editor for the Journal of Clinical Endocrinology and Metabolism

Professor Richard Costello's airways research group, INCA, has continued its high productivity. Professor Costello has extended his collaborations with the Maths department of University College Dublin and Dublin-based digital company S3 Connected Health to develop a patient-centred easy to use mobile application for patient care. This has led to several important research outputs including a recent paper in Lancet: Respiratory Medicine.

The Nephrology Department at Beaumont has contributed greatly to Medicine teaching over the past year in addition to their very busy clinical commitment, with in excess of 35,000 dialysis treatments. Professor Conall O'Seaghdha continues his research into the development of an Artificial Intelligence-enabled software medical device that will provide continuous assessment and biofeedback on dry weight in dialysis patients. This was funded though the Disruptive Technologies Innovation Fund and Dr Vicky Sandys continues her PhD studies under Professor O'Seaghdha as part of this award. The renal group continues its exciting collaboration between Professor Peter Conlon and Professor Gianpiero Cavalleri at RCSI, looking at polygenic risk scores for predicting allograft survival.

The 2022 Sheppard Prize was won by Dr James Clerkin and the 2022 Shane O'Neill medal by Dr Jean McBrya (these prizes were sponsored by AstraZeneca). 2022 Paul O'Connell award for best non-RCSI affiliated clinical teacher in Medicine was won by Dr Kathryn Allen.

#### Staff List

Professor & Head of Department
Noel G McElvaney MB, BCh, BAO, DSc, FRCPI, FRCPC

**Professors** 

Mark Sherlock MB, BCh, BAO, LRCP&SI Richard Costello MB, MD, FRCPI David Williams MB, BCh U Dubl, MRCPI Peter Conlon MB, BCh, BAO, DMed, MRCPI, FRCPI

Associate Professor & Deputy Head of the School of Postgraduate Studies Emer Reeves

Senior Lecturers Tomás Carroll Muirne Spooner

Lecturer
Hannah Gogarty

Clinical Lecturers and Tutors
Muireann Byrne
Shaunna Kelly
Cathal McCarthy
Oliver McElvaney
Caroline O' Leary
Enda McElduff
Stephanie Ryan
Ghada Shakir
Robyn Poole
Darragh Garraghy
Sarah Lawless
Daniel Fraughen

Malcolm Herron Shams Almallah Louise Hanly Isobel McDonald Michael John Dalv Izabella Orban Rennessa Williams Cathal Delanev Neil Mac Eoin Catherine Uhomoibhi Arveen Jeyaseelan

Post-Doctoral Researchers Mark Murphy Emma Leacy

MD and PhD Scholars Daniel Fraughen Oliver McElvaney Oisin McElvaney Michelle Casey Ciara Gough

## Administrators

Siobhan Murray – Professor Gerry McElvaney Maureen Rvan - Professor Richard Costello Claire Stanton - Tutors and Lecturers

# Honorary Clinical Professors

Clare Fallon, Consultant Geriatrician, Midland Regional Hospital Mullingar Dubhfeasa Slattery, Consultant Respiratory Paediatric Physician, Children's University Hospital Garry Courtney, Consultant Physician, St Luke's General Hospital Kilkenny James Hayes, Consultant Physician/Clinical Director, Cavan Monaghan Hospital Jim O'Neill, Consultant Cardiologist, Connolly Hospital John Hurley, Group CEO and Master, Mater Misericordiae Hospital John McDermott, Consultant Endocrinologist, Connolly Hospital Mahen Varma, Consultant Cardiologist, South West Acute Hospital Nihal Thomas, Professor of Endocrinology, American Mission Hospital Norman Delanty, Consultant Neurologist, Beaumont Hospital Richard Farrell, Clinical Lead and Consultant Gastroenterologist, Connolly Hospital Riona Mulcahy, Consultant Geriatrician, University Hospital Waterford Shane O'Neill, Consultant Respiratory Physician, Beaumont Hospital

# Honorary Clinical Associate Professors

Abel Wakai, Consultant in Emergency Medicine, Beaumont Hospital Alan Martin, Consultant Geriatrician, Beaumont Hospital Alan Moore, Consultant Geriatrician, Beaumont Hospital Amar Agha, Consultant Endocrinologist, Beaumont Hospital Ashraf Butt, Consultant in Emergency Medicine, Cavan General Hospital Barry Moynihan, Consultant Geriatrician, Beaumont Hospital Bill Maher, Chief Executive, Bon Secours Blanaid Hayes, Consultant Occupational Physician, Beaumont Hospital Brendan McAdam, Consultant Cardiologist, Beaumont Hospital

Brian O'Neill, Consultant Radiation Oncologist, St Luke's Radiation Oncology Network Cedric Gunaratnam, Consultant Respiratory Physician, Beaumont Hospital

Ciaran Donegan, Consultant Physician in General & Geriatric Medicine, Beaumont Hospital Claire Smyth, Consultant Gastroenterologist and General Physician, Connolly Hospital Clare Faul, Clinical Director, St Luke's Radiation Oncology Network Beaumont Hospital

Conall O'Seaghdha, Consultant Nephrologist, Beaumont Hospital

Cora McNally, Consultant in General Medicine and Infectious Diseases, Beaumont Hospital

Dan Healy, Consultant Neurologist, Beaumont Hospital

Declan De Freitas, Consultant Nephrologist and Transplant Physician, Beaumont Hospital

Diarmuid Smith, Consultant Endocrinologist, Beaumont Hospital

Dominic O'Brannigan, Consultant in Palliative Care Medicine, Our Lady of Lourdes Hospital Drogheda

Donough Howard, Consultant Rheumatologist, Beaumont Hospital

Eamon Leen, Consultant Histopathologist, Connolly Hospital

Eavan McGovern, Consultant Neurologist, Beaumont Hospital

Emmet O'Brien, Consultant Respiratory Physician, Beaumont Hospital

Eoin Judge, Consultant Respiratory and General Physician, Connolly and Beaumont Hospital

Ezzat Elhassadi, Consultant Haematologist, University Hospital Waterford

Frances Dockery, Consultant Physician, Beaumont Hospital

Frank Murray, Consultant Gastroenterologist, Beaumont Hospital

Frank Walker, Consultant Nephrologist, University Hospital Waterford

Gabor Szeplaki, Head of Cardiac Electrophysiology / Cardiology Consultant, Mater Private

Gavin Harewood, Consultant Gastroenterologist, Beaumont Hospital

George Cheriyan, CEO & Chief Medical Officer, American Mission Hospital, Bahrain

Ian Carter, CEO, Beaumont Hospital

Imran Sulaiman, Consultant Respiratory Physician, Beaumont Hospital

Jacinta Morgan, Consultant in Rehabilitation Medicine, NRH and Beaumont Hospital

John Cooke, Consultant Geriatrician, University Hospital Waterford

John Keohane, Consultant Gastroenterologist/General Physician, Our Lady of Lourdes Hospital Drogheda

John Ryan, Consultant Hepatologist/Gastroenterologist, Beaumont Hospital

Karen Boland, Consultant Gastroenterologist, Beaumont Hospital

Karl Boyle, Consultant Stroke Physician, Beaumont Hospital

Laura Durcan, Consultant Rheumatologist and Physician, Beaumont Hospital

Liam Cormican, Consultant Respiratory and General Internal Medicine Physician, Connolly Hospital

Liam Grogan, Consultant Medical Oncologist, Beaumont Hospital

Linda Brewer, Consultant Geriatrician, Beaumont Hospital

Mark Delargy, Consultant in Rehabilitation Medicine, National Rehabilitation Hospital Dun Laoghaire

Mark Kennedy, Consultant Cardiologist, Beaumont Hospital

Mark Laher, Consultant Physician, Blackrock Clinic

Martin Mulroy, Consultant Physician & Geriatrician, Our Lady of Lourdes Hospital Drogheda

Michael O'Reilly, Consultant Endocrinologist, Beaumont Hospital

Monica Monaghan, Consultant Cardiologist, South West Acute Hospital

Orla McArdle, Consultant Radiation Oncologist, Beaumont Hospital

Oscar Breathnach, Consultant Oncologist, Beaumont Hospital

Patrick Manning, Consultant Respiratory Physician, Bon Secours

Patrick Morris, Consultant Medical Oncologist, Beaumont Hospital

Patrick Thornton, Consultant Haematologist, Beaumont Hospital

Paul O'Connell, Consultant Rheumatologist, Beaumont Hospital

Peter Branagan, Consultant Respiratory Physician, Beaumont Hospital

Peter Conlon, Consultant Nephrologist/Renal Transplant Physician, Beaumont Hospital

Philip Murphy, Consultant Haematologist, Beaumont Hospital

Regina Mc Quillan, Consultant in Palliative Medicine, St. Francis Hospice/Beaumont Hospital

Richard Sheahan, Consultant Cardiologist, Beaumont Hospital

Richard Watchorn, Consultant Dermatologist, Beaumont Hospital

Ross Morgan, Consultant Respiratory Physician, Beaumont Hospital

Seamus O'Reilly, Consultant Medical Oncologist, Cork University Hospital

Shu Hoashi, Consultant Endocrinologist, Midland Regional Hospital Mullingar

Steve Patchett, Consultant Gastroenterologist, Beaumont Hospital

Subhasish Sengupta, Consultant Gastroenterologist, Our Lady of Lourdes Hospital Drogheda

Terence McManus, Consultant Respiratory Physician, South West Acute Hospital

Tidi Hassan, Consultant in Respiratory Medicine, Our Lady of Lourdes Hospital Drogheda

Trevor Duffy, Clinical Director, Connolly Hospital

Honoary Clinical Senior Lecturers

Abdur Aftab, Consultant Physician and Gastroenterologist, St Luke's General Hospital Kilkenny

Abel Devadass, Consultant Neuropathologist, Beaumont Hospital

Abirami Subramaniam, Consultant Respiratory Physician, Connolly Hospital

Adrian Murphy, Consultant Medical Oncologist, Beaumont Hospital

Aine Merwick, Consultant Neurologist, Beaumont Hospital

Aisling O'Gorman, Consultant in Palliative Medicine, Our Lady of Lourdes Hospital, Drogheda

Albi Chalissery, Consultant Neurologist, Connolly Hospital

Anandan Natarajan, Consultant Respiratory and General Physician, Our Lady's Hospital Navan

Anne Marie Liddy, Consultant Stroke Physician, Beaumont Hospital

Annette Neary, Consultant Physician, Galway Clinic

Aoibhlinn O'Toole, Consultant Gastroenterologist and General Physician, Beaumont Hospital

Ashraf Morcos, Consultant Gastroenterologist, University Hospital Waterford

Benedict Glover, Consultant Cardiologist, Cavan General Hospital

Blaithin Ni Bhuachalla, Consultant Geriatrician, Our Lady of Lourdes Hospital Drogheda

Breda Cushen, Consultant Respiratory Physician, Beaumont Hospital

Brian Christopher, Consultant Gastroenterologist and General Physician, Midland Regional Hospital

Brian Creedon, Palliative Medicine Consultant, University Hospital Waterford

Bryan Hennessy, Consultant Oncologist, Beaumont Hospital

Carmel Curran, Consultant Geriatrician, Beaumont Hospital

Carol Traynor, Consultant Nephrologist, Beaumont Hospital

Catherine Brown, Consultant Nephrologist, University Hospital Waterford

Claire Louise Murphy, Consultant Rheumatologist, Connolly Hospital

Claire O'Driscoll, Consultant Microbiologist, Blackrock Health Galway Clinic

Collette Barry, Consultant Physician, Bon Secours

Colm McGurk, Consultant Endocrinologist, St Luke's General Hospital Kilkenny

Concepta Merry, Consultant in Infectious Disease, St. James' Hospital

Cormac McCart, Consultant in Acute Medicine, University Hospital Waterford

Daniel Cagney, Clinical Director Radiation Oncology, Mater Private Hospital

Daniel Ryan, Consultant Respiratory Physician, Beaumont Hospital

Daniele Giacoppo, Consultant and Senior Researcher, Alto Vicentino Hospital/University of Padua

Danny Cheriyan, Consultant Gastroenterologist, Beaumont Hospital

Des Fitzgerald, Consultant in Emergency Medicine, University Hospital Waterford

Dilip Jondhale, Consultant Physician, St Luke's General Hospital Kilkenny

Donncha O'Gradaigh, Consultant Rheumatologist, University Hospital Waterford

Dorothy Ryan, Consultant Respiratory Physician, Beaumont Hospital

Eamon Dolan, Consultant Geriatrician, Connolly Hospital

Edward McKeever, Consultant Physician, South West Acute Hospital

Eithne Murphy, Consultant Rheumatologist, Connolly Hospital

Elaine Hayes, Consultant Respiratory Physician, Our Lady of Lourdes Drogheda

Eoghan McCarthy, Consultant Rheumatologist, Beaumont Hospital

Faisal Zeb, Consultant Gastroenterologist, St Luke's Hospital

Faith Cranfield, Palliative Medicine Consultant, Connolly Hospital

Filipa Aguiar, Consultant in General Medicine, Beaumont Hosptial

George Pope, Consultant Geriatrician, University Hospital Waterford

Gordon Pate, Consultant Cardiologist, Galway Clinic

Graham Roberts, Consultant Endocrinologist, University Hospital Waterford

Hannah Forde, Consultant Endocrinologist, Beaumont Hospital

Hany El Naggar, Consultant Neurologist and Epileptologist, Beaumont Hospital

Helen O'Brien, Consultant Orthogeriatrician, Our Lady of Lourdes Hospital Drogheda

Hilary Cronin, Consultant Geriatrician, Midland Regional Hospital Mullingar

Inam UI Haq Khan, Consultant Cardiologist, Midland Regional Hospital Mullingar

Jarushka Naidoo, Consultant Medical Oncologist, Beaumont Hospital

Judith Lyons, Respiratory Consultant, Connolly Hospital

Karen Eustace, Consultant Dermatologist, Beaumont and Connolly Hospital

Karl Ewins, Consultant Haematologist, Beaumont Hospital

Kieran Hannan, Consultant Nephrologist, Cavan Monaghan Hospital

Killian Hurley, Consultant Respiratory Physician, Beaumont Hospital

Lavanya Saiva, Consultant Cardiologist, Connolly Hospital

Lisa Costelloe, Consultant Neurologist, Beaumont Hospital

Lorraine Mc Conway, Consultant Physician, University Hospital Waterford

Maha Abdul Azeez, Consultant Rheumatologist, Beaumont Hospital

Malik Anwar, Consultant Gastroenterologist and Physician, Our Lady's Hospital Navan

Margaret Boland, General Manager/CEO, Connolly Hospital

Margaret Walshe, Consultant Physician, Our Lady of Lourdes Drogheda

Mark Roberts, Consultant Physician, South West Acute Hospital

Mark Rogan, Consultant Respiratory Physician, University Hospital Waterford

Mazen Al-Alawi, Consultant in Respiratory and General Internal Medicine, Our Lady's Hospital Navan

Mian Basit, Consultant Physician, Our Lady of Lourdes Hospital Drogheda

Michael Conway, Consultant Cardiologist, St Luke's General Hospital Kilkenny

Michael Mc Weeney, Consultant in Respiratory & General Internal Medicine, Galway Clinic

Michelle O'Brien, Consultant Geriatrician, Beaumont Hospital

Miriam O'Connor, Consultant Medical Oncologist, University Hospital Waterford

Muhammad Majeed, Consultant Surgeon, Midlands Regional Hospital

Mustafa Salem, Consultant Physician, Our Lady of Lourdes Hospital Drogheda

Nay Myo Oo, Registrar, University Hospital Waterford

Niamh Collins, Consultant in Emergency Medicine, Connolly Hospital

Niamh Murphy, Consultant Cardiologist, Our Lady of Lourdes Hospital, Drogheda

Niamh O'Regan, Consultant in Geriatric and General Internal Medicine, University Hospital Waterford

Nicholas Young, Clinical Director, VHI

Olwyn McWeeney, Healthcare Systems Management Consultant, Consultant

Orla Sheehan, Consultant Geriatrician and Stroke Physician, Connolly Hospital

Orlaith Kelly, Consultant Gastroenterologist and Physician, Connolly Hospital

Padraig Bambrick, Consultant Geriatrician, University Hospital Waterford

Patrick O'Boyle, Consultant Interventional Cardiologist, Beaumont and Connolly Hospital

Patrick O'Donoghue, Consultant Geriatrician, Connolly Hospital

Patrick Owens, Consultant Cardiologist, University Hospital Waterford

Paul Cotter, Consultant Geriatrician, St Luke's General Hospital Kilkenny

Paul Keelan, Consultant Cardiologist, Our Lady of Lourdes Hospital Drogheda

Pauline Kane, Consultant in Palliative Medicine, Midland Regional Hospital Mullingar

Paulo Pinheiro, Consultant Physician, Cavan Monaghan Hospital

Peter Widdess Walsh, Consultant Neurologist, Beaumont Hospital

Poochellam Muthalagu, Consultant Endocrine Physician, Cavan Monaghan Hospital

Rachel Gilmore, Consultant in Emergency Medicine, Connolly Hospital

Raymond Carson, Consultant Physician, National Rehabilitation University/Beaumont Hospital

Ricardo Bagina, Consultant Physician, Our Lady of Lourdes Hospital Drogheda

Robert Kelly, Consultant in Cardiology and Lifestyle Medicine, Beaumont Hospital

Roisin Colleran, Consultant Interventional Cardiologist, Cardiovascular Research Institute, Mater Private

Ronan Kilbride, Consultant Neurophysiologist, Beaumont Hospital

Rory Durcan, Consultant Physician in Geriatric Medicine, Beaumont Hospital

Rory Mc Govern, Consultant Geriatrician and Stroke Physician, St Luke's General Hospital Kilkenny

Sarah McLean, Consultant in Palliative Medicine, Beaumont Hospital

Sardar Ali, Consultant Respiratory Physician, Galway Clinic

Sean Leavey, Consultant Nephrologist and General Physician, University Hospital Waterford

Shabahat Shah, Consultant Endocrinologist, Our Lady's Hospital Navan

Shiva Sreenivasan, Consultant Acute and General Physician, South West Acute Hospital

Siobhan Kennelly, Consultant Geriatrician, Connolly Hospital

Solomon Asgedom, Consultant Cardiologist, University Hospital Waterford

Stela Lefter, Consultant Neurologist, Beaumont and Our Lady of Lourdes Hospital

Tomas Ahern, Consultant Endocrinologist, Our Lady of Lourdes Hospital Drogheda

Tora Leong, Consultant Cardiologist, Hermitage Clinic

Usama Boles, Consultant Cardiologist, Mater Private Hospital

## Honorary Clinical Lecturers

Ahmed Abdul Hafeiz, Registrar, University Hospital Waterford

Ahmed Gabir, Registrar, University Hospital Waterford

Aisling McDonnell, Specialist Registrar, University Hospital Waterford

Alwaleed Abdelgadir, Registrar, University Hospital Waterford

Amal John, Registrar, University Hospital Waterford

Amy Fogarty, Specialist Registrar, University Hospital Waterford

Anthony Noone, SHO, University Hospital Waterford

Arveen Jeyaseelan, Registrar, University Hospital Waterford

Brendan Phelan, SHO, University Hospital Waterford

Brian Murphy, SHO, University Hospital Waterford

Brian Rigney, SHO, University Hospital Waterford

Caoimhe Brennan, Specialist Registrar, University Hospital Waterford

Casey Card, Specialist Registrar, University Hospital Waterford

Clare Crowley, SHO, University Hospital Waterford

Daniel Creegan, Cardiology SpR, Connolly Hospital

Darragh O'Sullivan, SHO, University Hospital Waterford

David Jackson, Registrar, University Hospital Waterford

Devin O'Shea Farren, Intern, University Hospital Waterford

Edmond Morrissey, SHO, University Hospital Waterford

Eimear Connolly, Specialist Registrar, University Hospital Waterford

Elgelani Bahaeldein, Registrar, University Hospital Waterford

Emily Buckley, Specialist Registrar, University Hospital Waterford

Evelyn Lynn, Specialist Registrar, University Hospital Waterford

Hazel Denton, SHO, University Hospital Waterford

Helena Dolphin, Specialist Registrar, University Hospital Waterford

Himanshu Rai, Head of Imaging Core Lab, Cardiovascular Research Institute Mater Private

Hind Awad, SHO, University Hospital Waterford

Jasim Usmar Khan, SHO, University Hospital Waterford

Karena Maher, Haematology Clinical Nurse Specialist, University Hospital Waterford

Karim Botros, Registrar, University Hospital Waterford

Kasun Samarasinghe, SHO, University Hospital Waterford

Laura Reaney, Specialist Registrar, University Hospital Waterford

Lisa Kelly, Specialist Registrar, University Hospital Waterford

Lisa Loughney, Clinical Exercise Physiologist, MedEx Wellness, DCU

Madeleine O'Rourke, Intern, University Hospital Waterford

Mahmood Ahmad, SHO, University Hospital Waterford

Maria Walsh, Specialist Registrar, University Hospital Waterford

Marianne Vail, Physician Associate, George Washington University

Mark Bolger, Registrar, University Hospital Waterford

Mekki Hassan, Registrar, University Hospital Waterford

Michael Daly, Senior Registrar, Connolly Hospital

Michael Flanagan, Specialist Registrar, University Hospital Waterford

Michael Nugent, SHO, University Hospital Waterford

Michelle Madden, Specialist Registrar, University Hospital Waterford

Mohamed Alfatih Hamza, Registrar, University Hospital Waterford

Mohammed Ali Mohammed, Registrar, University Hospital Waterford

Mohammed Khairul Nazri, Registrar, University Hospital Waterford

Muhammad Abdullah Khalid, Registrar, University Hospital Waterford

Muhammad Adeel Sarwar, SHO, University Hospital Waterford

Muhammad Fahad Iftikhar, SHO, University Hospital Waterford

Muhanad Mohamed, Registrar, University Hospital Waterford

Munzir Hamid, Registrar, University Hospital Waterford

Nadine Copty, Intern, University Hospital Waterford

Naomi Davey, University Hospital Waterford, Specialist Registrar

Niamh O'Donnell, SHO, University Hospital Waterford

Paul Eduarad Stanciu, Registrar, University Hospital Waterford

Paula Finnegan, SHO, University Hospital Waterford

Peter Lalor, SHO, University Hospital Waterford

Randa Ibrahim, Registrar, University Hospital Waterford

Razan Elsheikh, SHO, University Hospital Waterford

Rebecca Howley, SHO, University Hospital Waterford

Robert Kerley, Specialist Registrar, University Hospital Waterford

Rodhri Hill, SHO, University Hospital Waterford

Roisin O'Sullivan, Registrar, University Hospital Waterford

Sam Gaine, Intern, University Hospital Waterford

Sean Landers, SHO, University Hospital Waterford

Sean O'Sullivan, SHO, University Hospital Waterford

Sebastian Gracias, Senior House Officer, Beaumont Hospital

Shivran Singh, Intern, University Hospital Waterford

Tobias Maharaj, SHO, University Hospital Waterford

## **Publications**

- Adenan, M.H., Khalil, M., Loh, K.S., Kelly, L., Shukralla, A., Klaus, S., Kilbride, R., Mullins, G., Widdess-Walsh, P., Kinney, M., **Delanty, N.**, El-Naggar, H. (2022). A retrospective study of the correlation between duration of monitoring in the epilepsy monitoring unit and diagnostic yield. Epilepsy and Behavior, 136
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- Zia-ul-Hussnain, H.M., Kgosidialwa, O., Kennedy, C., Quinn, M., Dolan, E., Deignan, P., **Sherlock, M.,** Thompson, C.J., Smith, D., O'Neill, J.P., Hill, A., Leader, M., Barrett, H., Ryan, C., Keeling, F., Morrin, M.M., Agha, A. (2022). Is repeat fine needle aspiration required in thyroid nodules with initial benign cytology? Results from a large Irish series. BMC Endocrine Disorders, 22(1)

# **MOLECULAR MEDICINE**

#### Overview

Professor Bryan Hennessy, Dr Sinead Toomey and their research teams are particularly interested in translational oncology research. Their research includes studies on ovarian, breast and lung cancer. Professor Warren Thomas was RCSI USMLE Programme Director and Lead for developing the Foundations for Practice 2 Module in THEP phase 2 but has recently taken on a new post as Associate Professor in Human Biology in RCSI Bahrain. Professor Brian Harvey is Emeritus Professor in Molecular Medicine and visiting research professor at the Cordeliers Research Centre, Sorbonne University Paris and investigador adjunto at the Centro de Estudios Cientificos Chile <a href="https://www.cecs.cl">www.cecs.cl</a>

## **Staff List**

Interim Head of Department Fergal O'Brien PhD, FAS, FEAMBES, CEng, FIEI, MRIA

#### Professor

Bryan T Hennessy MD, MB, BCh, BAO, MRCPI

Associate Professor Warren Thomas BSc, PhD

#### Emeritus Professor

Brian J Harvey PhD, HDR, MAE, MRIA, DSc (honoris causa), Chevalier de l'Ordre National du Merite, Chevalier des Palmes Académiques

#### Lecturer

Sinead Toomey BSc, PhD

## Laboratory Manager

Olive McCabe BSc, Grad Dip (Tox), PhD

Department Operations Administrator Lorraine Nolan Daly Grad Dip (ICM), MSc

## Researchers

1 Post-doctoral researcher

6 MD researchers

## **Higher Degrees**

Aslam Razia, Synergistic effects of Alpelisib (PI3K inhibitor) and Ribociclib (CDK4/6 inhibitor) combination in preclinical colorectal cancer models. MD, RCSI & NUI 2023

# **Publications**

Abancens, M., Harvey, B. J , McBryan, J. (2022). GPER Agonist G1 Prevents Wnt-Induced *JUN* Upregulation in HT29 Colorectal Cancer Cells. Int J Mol Sci. 23(20):12581. doi: 10.3390/ijms232012581.PMID: 36293473

Biswas, A., Connor, K., Duessmann, H., King, E., Murphy, B., O'Farrell, A., Prehn, J. (2023). Comparative analysis of deeply phenotyped GBM cohorts of 'short-term' and 'long-term' survivors. doi:10.1007/s11060-023-04341-3

Conlon, N., Roche, S., O'Neill, F., Meiller, J., Browne, A., Breen, L., Collins, D. (2022). Neratinib plus dasatinib has pre-clinical efficacy against HER2-positive breast cancer. European Journal of Cancer, 174, S64. doi:10.1016/S0959-8049(22)00974-1

Dowling, G. P., Keelan, S., Toomey, S., Daly, G., Hennessy, B., Hill, A. (2023). Review of the status of neoadjuvant therapy in HER2-positive breast cancer. doi: 10.3389/fonc.2023.1066007

Fitzpatrick, O. M., Murphy, C., Duignan, E., Egan, K., Hennessy, B. T., Grogan, L., Morris, P. G. (2022). The cost of cancer care: how far would you go for a trial?. Irish Journal of Medical Science, 191(6), 2487-2491. doi:10.1007/s11845-021-02915-6

Horgan, D., Čufer, T., Gatto, F., Lugowska, I., Verbanac, D., Carvalho, Â., Alix-Panabières, C. (2022). Accelerating the Development and Validation of Liquid Biopsy for Early Cancer Screening and Treatment Tailoring. *Healthcare (Switzerland), 10*(9). doi:10.3390/healthcare10091714

Jacquot, Y., de Cremoux, P., Harvey, B.J., Wehling, M. (2023). The Rapid Responses to Steroid Hormones meetings: An important event for steroid science. Ann Endocrinol (Paris). 84(2):235-237. doi: 10.1016/j.ando.2023.02.003. Epub 2023 Feb 22.PMID: 36822474

Jagadeesan, S., Chiroma, S.M., Moklas, M.A.M., Baharuldin, M.T.H., Taib, C.N.M., Amom, Z., Vishnumukkala, T., Thomas, W., Mahdi, O, (2022). *Centella asiatica L. Urban* protects against morphological aberrations induced by chronic unpredictable mild stress in rat hippocampus via attenuation of oxidative stress. Egypt. J. Basic Appl. Sci. 9, 324-339. doi: 10.1080/2314808X.2022. 2091265

Linehan, A., Fitzpatrick, O., Cowzer, D., Hennessy, M. A., Coyne, Z. L., Nolan, A. Breathnach, O. (2022). COVID-19-related mortality in cancer patients in an Irish setting. Irish Journal of Medical Science, 191(5), 2013-2018. doi:10.1007/s11845-021-02815-9

Mukherjee, N., Browne, A., Ivers, L., Santra, T., Cremona, M., Hennessy, B. T. Eustace, A. J. (2022). A Systems Biology Approach to Investigate Kinase Signal Transduction Networks That Are Involved in Triple Negative Breast Cancer Resistance to Cisplatin. Journal of Personalized Medicine, 12(8). doi:10.3390/jpm12081277

Rashed, A., Fitzpatrick, O. M., Easty, D. J., Coyne, Z., Collins, D., Mallet, V. Morris, P. (2023). An observational study of dose dense chemotherapy with lipegfilgrastim support in early breast cancer. doi:10.1186/s12885-023-10603-0

Singh, S.K., Fadil Azim, D.H., Thomas, W. (2022). Comparative health status of women of child-bearing age in rural and urban Malaysia. Public Health Open J. 7, 7-12. doi: 10.17140/PHOJ-7-162.

Singh, S.K., Thomas, W., Murthy, A.V.S.G., Karikalan, B., Jamaluddin, A. (2022). The underlying mental health status of women in the Indian minority population of Malaysia. Bullet. Natl. Inst. Health Sci. 140, 2795-2806. ISSN:1343-4292.

Thomas, W., Harvey, B.J. (2022). Estrogen-Induced Signalling and the Renal Contribution to Salt and Water Homeostasis. Steroids. 109299. doi: 10.1016/j.steroids.2023.109299. Online ahead of print.PMID: 37619674

Yamashita, M., Shibato, J., Rakwal, R., Nonaka, N., Hirabayashi, T., Harvey, B.J., Shioda, S., Takenoya, F. (2023). Molecular and Physiological Functions of PACAP in Sweat Secretion.Int J Mol Sci.24(5):4572. doi: 10.3390/ijms24054572.PMID: 36902003

#### **Book Chapter**

Thomas, W. The Role of Phospholipase D in Breast Cancer. In *Phospholipases in Physiology and Pathology*, ed Chakraborti S. vol 3: *Role of Phospholipases in Cancer*. Elsevier, Amsterdam (2023).

## **Active Grants and Grants Awarded**

Bryan Hennessy, North Eastern Cancer Research & Education Trust, NECRET/RCSI/2/2021, Private Donor, September 2021€112,273

Bryan Hennessy/Sinead Toomey, An investigation of the utility of exhaled breath condensate to detect sub-clonal mutations in early stage lung adenocarcinoma, HRCI-HRB-2020-023, Health Research Board/ Breakthrough Cancer Research, November 2020, €227,622

Bryan Hennessy/Sinead Toomey, Molecular evolution of metastatic HER2-positive breast cancer, ILP-POR-2019-006, Health Research Board, August 2019, €369,001

# **NURSING AND MIDWIFERY**

#### Overview

The RCSI School of Nursing and Midwifery is the largest provider of postgraduate nursing education in Ireland. Our programmes are tailored to meet the educational needs of nurses and midwives working in the current health service. All of our programmes are delivered with a blend of classroom attendance and technology enhanced learning. We aim to maximise our students' engagement and make learning as accessible as possible.

Wounds research is the flagship area of expertise in the School of Nursing & Midwifery, evidenced by the Skin, Wounds and Trauma (SWaT) Research Centre, led by Head of School, Professor Zena Moore. The School houses methodological expertise in the areas of qualitative, quantitative and mixed methods research. The School also has a long-standing track record in the successful completion of clinically-focused systematic reviews. In relation to research funding, the School has attracted funding from national and international funding agencies and industry, all of which is geared towards clinical research with a clear patient outcomes focus. Dissemination is a central component of the School's overall research strategy; staff and students are regular contributors to national and international nursing and healthcare conferences and publish in high-impact factor peer-reviewed journals.

# **Summary of Key Achievements / Academic Activities**

# **Key staff appointments**

Comiskey, M., Projects Officer
Matthews, N., Operations Assistant
Murray, B., Lecturer & Programme Director
O' Connor, T., Professor & Deputy Head of School
Rooney, V., Programme coordinator
Strapp, H., Nurse Tutor & Programme Director

#### **Awards**

Athena Swan Bronze Award: School of Nursing and Midwifery and School of Physiotherapy

# Key teaching initiatives

Development and delivery of 6 week blended learning programme on leadership development for the Emirates Health Service Oct/Nov 2022

Commencement of first RCSI Level 9 Occupational Health Programme Sept 2022 Commencement of Orthopaedic Trauma PG Cert/Dip/MSc

#### Individual

Blanchfield, D. & Varley, J. Development and delivery of plan for contribution to ICN/IAANP International Conference 22-24<sup>th</sup> August 2022, highlighting the RCSI SoNM contribution to advanced nursing & midwifery practice in Ireland. Outcome: Recorded Live Event attended by 140 participants circulated widely in Clinical & Professional networks and uploaded to ICN Conference Website

## Blanchfield, D.

- Completion of Post Graduate Certificate in Healthcare Education (2022-2023)
- Faculty Fellowship Nursing and Midwifery Royal College Surgeons Ireland (FFNMRCSI)

## Budri, A.

• Member of the International Skin Tear Advisory Panel (ISTAP), 2020 to present

## Chima. C.

• National Lymphedema Guidelines, Committee Member

#### Derwin, R

Elected Trustee European Pressure Ulcer Advisory Panel (EPUAP) 2023 to present

#### Moore, Z.

- Directors of Nursing, Directors of Midwifery and the RCSI Nursing & Midwifery Hospital Group Team:
   2013 to present
- DoH National Clinical Effectiveness Committee: Appraisal Panel for clinical guidelines and audit. 2018 to present
- European Pressure Ulcer Advisory Panel, Chair, Guideline Governance Group: 2021-present
- Health Research Board of Ireland Diabetes Collaborative Clinical Trial Network Member 2023 to present
- Irish Council of Professors, Deans and Heads of Nursing and Midwifery: 2013-present
- Member of CMC Hygea Ltd advisory board: 2020-present
- Member of the BBI Global Scientific Advisory Board: 2021-present

## Murray, B.

- European Thoraic Society 2023
- Irish Thoracic Society, 2023
- Respiratory Nurses Association of Ireland (ANÁIL)

#### O'Connor, T.

- Co-Chair of the EPUAP Education Committee (2021- 2022)
- Co-Chair of the EPUAP Scientific Committee (2022- present)
- Elected Trustee European Pressure Ulcer Advisory Panel (EPUAP) 2021-present
- Member Education Committee European Wound Management Association (2018-2022)
- Member of the Capabilities Framework Group at the Faculty of Rural and Remote Health at RCS Ed (2021-present)

#### Patton, D.

- All Ireland Nursing Athena SWAN group member (2023-present)
- Deputy Chair of the National Research Ethics Committee for Medical Devices
- Editor in Chief of the Journal of Tissue Viability
- Health Research Board of Ireland Diabetes Collaborative Clinical Trial Network Member (2023present)
- Royal Irish Academy Life and Medical Sciences Multidisciplinary Committee
- Society of Tissue Viability Strategy group member (2022-present)

## Renjith, V.

- · Academic Editor, PLOS One
- Member, World Stroke Organization
- International co-advisor, PhD programs, Amrita University, India

## Strapp, H.,

- Tissue Viability Association of Ireland committee member
- President of the Wound Management Association of Ireland
- Elected Trustee European Pressure Ulcer Advisory Panel (EPUAP) 2021 to present

## Varley, J.

• Completion of PostGraduate Diploma in Health Professionals Education

#### Watson, C.

- Nursing and Midwifery Board of Ireland Site Inspector for undergraduate and postgraduate education programmes. 2022 to present
- Research Ethics Committee Member Carlow Institute of Technology (now South East Technological University). 2018-present
- Vice President for Omega Epsilon At-Large Irish Chapter of Sigma Theta Tau International Honor Society of Nursing. April 2023 to present

#### **Awards**

Moore, Z., Lifetime Achievement Award: World Union of Wound Healing Societies 2022

Moore, Z., RCSI Vice Chancellor Innovation Award for industry engagement 2023

Patton, D., RCSI Vice Chancellor Innovation Award for industry engagement 2023

Sullivan, G., Watson, C. & Murray, B. Jean Norton Award for the best research paper on chronic restrictive pulmonary disease ITS Annual scientific meeting November 2022: Poster and presentation Idiopathic pulmonary fibrosis and palliative care a qualitative exploration of nurses experiences

#### **Erasmus**

Chima, C., May 2023: Teaching mobility placement with Istanbul University, Faculty of Nursing and Midwifery, Istanbul, Turkey.

Rohan, N., April 2023: Training mobility placement with the Health workforce and service delivery Unit in the WHO Regional Office for Europe

#### **External Examinerships**

Nugent, L., University of South Eastern Norway

O'Connor, T., Technological Universities and ITs

O'Connor, T., Trinity College Dublin

Renjith, V., PhD Examiner, NITTE University, India

Varley, J., University College Cork

Varley, J., Waterford Institute of Technology

Watson, C., University College Cork

Watson, C., University of South Wales

## **Distinguished Visitors**

Dr Omeima Salih Mohammed, Vice President for Academic Affairs, Ahfad University for Women, Khartoum, Sudan (as part of Esther Ireland grant awarded in 2022)

Professor Saud Babiker, Professor of Obstetrics and Gynaecology Ahfad University for Women, Khartoum, Sudan (as part of Esther Ireland grant awarded in 2022).

Professor Sumaia Elsayed, Ahfad University for Women Khartoum, Sudan (as part of Esther Ireland grant awarded in 2022).

Professor Sally Decker, Fulbright Scholar, from Sagina Vally State University.

Professor Wendy Chaboyer from Griffith University in Australia, addressed the inaugural StAR Professional Doctorates and PhD Research Students.

## **Staff List**

#### **Academic Staff**

Professor & Head of School

Zena Moore RGN, PG Dip, Dip First Line Management, MSc (Leadership in Health Professionals Education), MSc (Wound Healing & Tissue Repair), FFNMRCSI, PhD

Professor & Deputy Head of School

Tom O'Connor RGN, RNT, Dip Nur, BSc, MSc Ad Nursing, PG Dip Ed, EdD

Associate Professor & Director of Nursing and Midwifery Research Declan Patton RPN, RNT, BNS, PGDipEd, PGCRM, MSc, PhD

Senior Lecturer & Deputy Director of Nursing and Midwifery Research Linda Nugent RGN, BSc, MSc, PhD, PG Dip Education, FFNMRCSI, PhD

Senior Lecturer & Deputy Director of Academic Affairs Chanel Watson RGN, MSc, FFNMRCSI, PGDipHPE, EdD

## Lecturer & Programme Director

Rosemarie Derwin RGN, RNT, BSc, PGDip Haematological Nursing, MSc, PhD

## Lecturer & Programme Director

Sherly George RGN, BSc (Hons) Nursing, PGDipHPE, MSc, PhD

## Lecturer & Programme Director

Aglecia M V Budri RGN, BSc (Hons) Nursing, PGDipHPE, PhD

## Lecturer & Programme Director

Jarlath Varley RGN, RNP, RANP, Higher Diploma (Emergency Nursing), MSc, FFNMRCSI, PhD

## Lecturer & Programme Director

Pinar Avsar BSc, RGN, MSc, PhD

## Lecturer and Programme Director

Vishnu Renjith RN, MSN, PhD, FRSPH, FFNMRCSI

## Lecturer and Programme Director

Denise Blanchfield RGN, RNP, RANP, Higher Diploma (Diabetes Nursing), Masters (Advanced Practice Nursing), FFNMRCSI, PhD

## Lecturer and Programme Director

Bridget Murray RGN, RNT, BSc (Nursing), HDip (ICU), PG Dip (CHSE), PG Dip (Respiratory Care in Nursing Practice) BSc (Nursing), MSc (Nursing), FFNMRCS, EdD

## Nurse Tutor & Programme Director

Comfort Chima RGN, RM, RNT, FFNMRCSI, PGDip Public Health, PGDip CHSE BSc (Nursing), MSc (Nursing)

# Nurse Tutor & Programme Director

Niamh Rohan RGN, RNT, BNS, MHSc (Specialist Nursing), PG Dip (Nursing Education), PG Dip (Oncology Nursing)

# Nurse Tutor & Programme Director

Sinead Plunkett RGN, RNT, BSc, PG Dip (Emergency Nursing), MSc (Emergency Nursing)

## Nurse Tutor & Programme Director

Helen Strapp RGN, MSc

## **Research Staff**

Postdoctoral Researcher Teagan Weatherall

#### **Professional Staff**

Academic Operations Manager Rosie Brady

# Programme Coordinator

Cassandra Kelly

## Programme Coordinator

Anne Maire Kirby

# Programme Coordinator

Erika White

## Programme Coordinator

Vivienne Rooney

Research Administration
Nicole Matthews

Projects Officer
Mary Comiskey

## **Publications**

Al Khaleefa, N., Moore, Z., Avsar, P., O'Connor, T., Budri, A., Nugent, L., & Patton, D. (2022) What is the impact of skincare bundles on the development of skin tears in older adults? A systematic review. *International Journal of Older People Nursing*, 17(4) 01. doi: 10.1111/opn.12455.

Avsar, P., Patton, D., Sayeh, A., Ousey, K., Blackburn, J., O'Connor, T., & Moore, Z. (2022) The Impact of Care Bundles on the Incidence of Surgical Site Infections: A Systematic Review. *Advances in Skin & Wound Care*, 35(7), 386-393. doi:10.1097/01.ASW.0000831080.51977.0b

Baldauf, B., Avsar, P., Illing J., Watson, L, & Watson, C. (2022) Professional Nurse Advocate Programme: Literature review: *Final report for NHS England* 

Benn, S., Moore, Z., Patton, D., O'Connor, T., Nugent, L., Harkin, D., & Avsar, P. (2023) What is the prevalence of chronic venous disease among health care workers? A scoping review. *Int Wound J.*, 1-19. doi:10.1111/iwj.14222

Blackburn, J., Ousey, K., Patton, D., Moore, Z., & Avsar, P. (2023) What is the evidence that there is antimicrobial resistance associated with the use of topical antimicrobial preparations? Wound Practice & Research: *Journal of the Australian Wound Management Association*, 31(1), 40-48. doi:10.33235/wpr.31.1.40-48

Blanchfield D & O'Connor L. (2022) A participatory action research study to inform combined type 2 diabetes and chronic kidney disease care provided in the context of advanced practice nursing. *Journal Advanced Nursing*, 78(10), 3427-3443. doi: 10.1111/jan.15362

Breen, A., Avsar, P., Moore, Z., O'Connor, T., Nugent, L., & Patton, D. (2022). What is the impact of home non-invasive ventilation on the health-related quality of life of patients with chronic obstructive pulmonary disease? A systematic review. *Quality of life research: an international journal of quality of life aspects of treatment, care and rehabilitation,* Advance online publication. <a href="doi:10.1007/s11136-022-03310-z">doi:10.1007/s11136-022-03310-z</a>

Budri, A. & McEvoy N. (2022) Moisture-associated skin damage: a framework to guide decision making. *British Journal of Nursing*, 31(15), S4-S6. doi: 10.12968/bjon.2022.31.15.S4.

Byrne, S., Patton, D., Avsar, P., Strapp, H., Budri, A., O'Connor, T., Nugent, L., & Moore, Z. (2022) Sub epidermal moisture measurement and targeted SSKIN bundle interventions, a winning combination for the treatment of early pressure ulcer development. *International Wound Journal*, 1(13). <a href="https://doi.org/10.1111/iwj.14061">doi:10.1111/iwj.14061</a>

Camallan, J., Avsar, P., Patton, D., Moore, Z., O'Connor T., Nugent L, Budri, A, (2023) What is the effect of fast feed advancement in the duration to establish full enteral feeds among preterm infants ≤35 weeks gestation with birth weight ≤2000 g? A systematic review. *Journal of Neonatal Nursing*, 29(2), 253-9. doi:10.1016/j.jnn.2022.07.021

Campbell, J., Chaboyer, W., Tobiano, G., Harbeck, E., Nowicki, T., Moore, Z., Allen, G., Gillespie, B., Coyer, F., & Walker, R. (2022). The effect of sub-epidermal moisture on pressure injury prevention strategies and incidence of pressure injuries: A feasibility pilot randomised controlled trial. *Journal of tissue viability*, 31(4):776-782. doi:10.1016/j.jtv.2022.07.008

Chan, M.S., Avsar, P., McEvoy N., Patton D., O'Connor, T., Nugent, L., Moore, Z. (2023) The role of proinflammatory cytokines in the detection of early pressure ulcer development: a systematic review. *Journal of Wound Care*, 32(2), 83-91. doi: 10.12968/jowc.2023.32.2.83

Chima, C., Murray, B., Moore, Z., Costello, M. & George, S., (2022) Health-related quality of life and assessment in patients with lower limb lymphoedema: a systematic review. *Journal of Wound Care*, 31(8), 690-99.

- Clerkin, R., Patton, D., Moore, Z., Nugent, L., Avsar, P. & O'Connor, T. (2022) What is the impact of video as a teaching method on achieving psychomotor skills in nursing? A systematic review and meta-analysis. *Nurse Education Today.* 111, 105280. doi: 10.1016/j.nedt.2022.105280
- Cuddigan, J., Haesler, E., Moore, Z., Carville, K., & Kottner, J. (2022) Development, dissemination and evaluation of a smartphone-based app for pressure ulcer/injury prevention and treatment for use at the bedside. *Journal of Wound Care*, 31(sup12). doi:10.12968/jowc.2022.31.Sup12.S29
- Cunningham, C., Patton, D., Moore, Z., O'Connor, T., Bux, D., & Nugent, L., (2022) Neonatal kangaroo care What we know and how we can improve its practice: An evidence review. *Journal of Neonatal Nursing*, 28(6), 383-387. doi:10.1016/j.jnn.2021.10.004
- Cunningham, C., Patton, D., Moore, Z., O'Connor, T., Bux, D., & Nugent, L., (2023) An exploratory quantitative study to ascertain neonatal nurse confidence in kangaroo care provision in an Irish neonatal hospital setting, *Journal of Neonatal Nursing*, 28(1). doi:10.1016/j.jnn.2023.02.013.
- Derwin, R., Patton, D., Avsar, P., Strapp H., Moore, Z. (2022) The impact of topical agents and dressing on pH and temperature on wound healing: A systematic, narrative review, *International Wound Journal*, 19(6), 1397-1408. doi: 10.1111/iwj.13733
- Derwin, R., Patton, D., Strapp, H., & Moore, Z. (2023) The effect of inflammation management on pH, temperature, and bacterial burden. *International Wound Journal*, 20(4), 1118- 1129. doi:10.1111/iwj.13970
- Derwin, R., Patton, D., Strapp, H., & Moore, Z. (2023) Wound pH and temperature as predictors of healing: an observational study. *Journal of Wound Care*, 32(5), 302-310. doi:10.12968/jowc.2023.32.5.302
- Devine, R., Avsar, P., Moore, Z., O'Connor, T., Nugent, L. & Patton, D. (2022) The effects of water-based exercise on body weight in people with type 2 diabetes. *Journal of Diabetes Nursing*, 26, JDN238.
- Dooley, R., Nugent, L., Moore, Z., Patton, D. & O'Connor, T. (2022) Milrinone vs norepinephrine administration in preventing delayed cerebral ischaemia in cerebral vasospasm: a systematic review. 18(Sup2), S14-S24. doi.org/10.12968/bjnn.2022.18.Sup2.S14
- Ennis, C., Avsar, P., Moore, Z., Patton, D., Tom O'Connor, T., & Varley, J. (2023) The impact of brain tissue oxygenation monitoring on mortality in adult patients with severe traumatic brain injuries: a systematic review. *British Journal of Neuroscience Nursing*, 19(1). doi: 10.12968/bjnn.2023.19.1.16
- Fitzgerald, J.M, Murphy, D.M., Heaney, L.G., Costello R.W., ...., Plunkett, S. et al (2023) INCA Research Team. Use of digital measurement of medication adherence and lung function to guide the management of uncontrolled asthma (INCA Sun): a multicentre, single-blinded, randomised clinical trial. *Lancet Respir Med*, 21:S2213-2600(22)00534-3. doi: 10.1016/S2213-2600(22)00534-3
- Gabler, L., Patton, D., Begonia, M., Daniel, R., Rezaei, A., Huber, C., Siegmund, G., Rooks, T., & Wu L. (2022) Consensus head acceleration measurement practices (CHAMP): Laboratory validation of wearable head kinetic devices, *Annals of Biomedical Engineering*, 50(11),1356-1371. <a href="https://doi.org/10.1007/s10439-022-03066-0.">doi:10.1007/s10439-022-03066-0.</a>
- Gaspar, S., Peralta, M., Budri, A., Ferreira, C., & Gaspar de Matos, M. (2022) Pressure ulcer risk profiles of hospitalized patients based on the Braden Scale: A cluster analysis. *Int J Nurs Pract*, e13038. doi:10.1111/ijn.13038
- Hearne, C., Patton, D., Moore, Z., Wilson, P., Gillen, C., & O'Connor, T. (2022) Effectiveness of combined modulated ultrasound and electric current stimulation to treat diabetic foot ulcers. *Journal of Wound Care*, 31(1), 12-20. doi: 10.12968/jowc.2022.31.1.12.
- Kellett, P., O'Lynn, C. E., Herakova, L. L., & O'Connor, T. (2023). Gender Role Conflict and Male Nursing Students' Academic and Program Success. *Journal of Nursing Education*, 62(1), 42-46. doi: 10.3928/01484834-20221109-07
- Kuo, C, Patton, D., Rooks, T., Tierney, G., McIntosh, A., Lynall, R., Esquivel, A., Daniel, R., Kaminski, T., Mihalik, J., Dau, N., & Urban, J. (2022) On-field deployment and validation for wearable devices. *Annals of Biomedical Engineering*, 50(11), 1372-1388. doi: 10.1007/s10439-022-03001-3

- Mairghani, M., Sorensen, J., Elmusharaf, K., Patton, D., Moore, Z. (2023) The health–related quality of life in patients with diabetic foot ulcers in the Kingdom of Bahrain, *Journal of Tissue Viability*. doi:10.1016/j.jtv.2023.06.007.
- Maher, S., Moore, Z., Avsar, P., Patton, D. (2022) What is the impact of a fast-track pathway on length of stay for adult patients with a hip fracture? A systematic review, *Archives of Orthopaedic and Trauma Surgery*, 142(12), 3803-3816. doi:10.1007/s00402-021-04248-6
- Mc Carroll, S., Avsar, P., Moore, Z., O'Connor, T., Nugent, L., & Patton, D. (2022) The impact of specialist community palliative care teams (SCPCT) on acute hospital admission rates in adult patients requiring end of life care: A systematic review. *European Journal of Oncology,* 102168. doi:10.1016/j.ejon.2022.102168
- McEvoy, N., Friel, O., Clarke, J., Browne, E., Geoghegan, P., Budri, A., Avsar, P., Connolly, S., Patton, D., Curley, G., Moore, Z. (2022) Pressure ulcers in patients with COVID-19 acute respiratory distress syndrome undergoing prone positioning in the intensive care unit: A pre- and post-intervention study. *Nurs Crit Care*, 1- 9. doi:10.1111/nicc.12842
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## **Oral Presentations**

- Avsar, P., Moore, Z., et al., European Wound Management Association, Milan May 2023 "A meta-review of the impact of compression therapy on venous leg ulcer healing"
- Avsar, P., Patton, D., Moore, Z. European Pressure Ulcer Advisory Panel, Conference, September 2022 "Dressings and topical agents for preventing pressure ulcers"
- Byrne, S., Patton, D., Moore, Z. European Pressure Ulcer Advisory Panel, Conference, September 2022 "What is the impact of sub epidermal moisture (SEM) measurement and targeted pressure ulcer prevention, versus visual skin assessment and usual care, on mean SEM delta scores and early pressure ulcer development"
- Byrne, S., Strapp, H., Moore, Z., et al., European Wound Management Association, Milan May 2023 "Sub epidermal moisture measurement and targeted skin bundle interventions, a winning combination for the treatment of early pressure ulcer development"

Derwin, R., Moore, Z., et al., European Wound Management Association, Milan May 2023 "Use of a bacterial fluorescence imaging device for bacterial detection and guidance of wound debridement"

McEvoy, N., Patton, D., Avsar, P., Curley, G., Kearney, C., Clarke, J., & Moore, Z. European Pressure Ulcer Advisory Panel, Conference, September 2022 "What are the effects of vasopressor agents on the development of pressure ulcers in critically ill patients in intensive care units? a systematic review"

McEvoy, N., Patton, D., Curley, G., Moore, Z. European Pressure Ulcer Advisory Panel, Conference, September 2022 "The relationship between sub-epidermal moisture measurements and inflammatory markers in the early identification of pressure ulcers"

Moore, Z., Moore, D., Mc Evoy, N., Avsar, P., O' Connor, T., Budri, A., Curley, G., Walsh, S., Burke F, Porter-Armstrong A, Chaboyer W, Rice J, Patton, D. European Pressure Ulcer Advisory Panel, Conference, September 2022 "Preventing facial pressure injuries among health care staff working in diverse COVID-19 care environments"

Murray, B. ERS Conference Barcelona September 2022 "An exploration of the experiences of a Respiratory Clinical Nurse Specialists and Advanced Nurse Practitioners from Irish health care settling"

O'Connor, T., Wilson, P., Patton, D., Boland, F., Moore, Z., & Phelan, N. 9th International Symposium on the Diabetic Foot. The Hague, May 10-13<sup>th</sup> 2023 "An epidemiological profile of people at risk for diabetic foot ulceration"

O'Connor, T., Wilson, P., Patton, D., Boland, F., Moore, Z., & Phelan, N. 9th International Symposium on the Diabetic Foot, The Hague, May 10-13<sup>th</sup> 2023 "The use of Infrared thermometry in the identification of diabetic foot ulceration".

Patton, D., Avsar, P., Sayeh, A., Budri, A., O'Connor, T., Walsh, S., Nugent, L., Harkin, D., O'Brien, N., Cayce, J., Corcoran, M., Gaztambide, M., Moore, Z., European Wound Management Association, Milan May 2023 "A meta-review of the impact of compression therapy on venous leg ulcer healing"

Rohan, N. Sigma 6th Biennial European Conference, Dublin, June 2022 "From Bedroom to Boardroom, the cliff edge of professional growth in nursing"

Šajnić, A., Kelly, C., Smith, S., Heslop-Marshall, K., Axelsson, M., Padilha, J.M., Roberts, N., Hernández, C., Murray, B., Poot, B. and Narsavage, G. ERS Barcelona Spain September 2022 "Need and baseline for harmonising nursing education in respiratory care: preliminary results of a global"

Watson, C. NET NEP Conference Sitges October 2022 "Prescription for empowerment and agency"

Watson, C. NET NEP Conference Sitges October 2022 "The right prescription"

Wilson, H., Avsar, P., Patton, D., Budri, A., & Moore, Z. European Pressure Ulcer Advisory Panel Conference, September 2022 "Skin hydration measurement and the prediction of the early development of pressure ulcers among at risk adults: A systematic review"

Wilson, H., Moore, Z., et al., European Wound Management Association, Milan May 2023 "Exploring the correlation between sub-epidermal moisture, epidermal hydration, temperature, pain and ultrasound, in the early detection of pressure ulcers, within an acute patient population"

#### **Editorials**

Patton, D. Future proofing wound care research and its dissemination, Journal of Tissue Viability 2022 31(4): 564, ISSN 0965206X, doi: 10.1016/j.jtv.2022.10.005

#### **Invited Lectures**

Budri, A. "Pressure ulcer risk factors and risk assessment" Postgraduate Programme Wound Care and Prevention, Higher School of Nursing S. Francisco das Misericordias, Portugal, March 2022

Moore, Z. "Current trends in wound care" NHMRC CRE in Wiser Wound Care Symposium: Implementing evidence-based wound care, Griffith University, Gold Coast, Australia, April 2023

Moore, Z. "Using technologies in PI detection" NHMRC CRE in Wiser Wound Care Symposium: Implementing evidence-based wound care, Griffith University, Gold Coast, Australia, April 2023

- Moore, Z. "SEM Measurement unlocking the potential for early PU detection" NPIAP Annual Conference, San Diego, USA, March 2023
- Moore, Z. "Detecting Early Skin Changes in Dark Skin Tones" Pre Symposium, NPIAP Annual Conference, San Diego, USA, March 2023
- Moore, Z. "Prevention and Management of Pressure Ulcers" 1st Bahrain International Wound Conference, Bahrain, December 2022
- Moore, Z. "Sub-epidermal moisture measurement unlocking the potential for early PU detection" 43rd AASTN & 10th APETNA Conference, Fremantle, Western Australia, April 2023" European Pressure Ulcer Advisory Panel, Conference, September 2022
- Moore, Z. "Pressure ulcer prevention among individuals with spinal cord injuries" European Pressure Ulcer Advisory Panel, Conference, September 2022
- Moore, Z. "Using SEM measurement to drive treatment of early pressure ulcer development" European Pressure Ulcer Advisory Panel, Conference, September 2022
- O'Connor, T. "Clinical pressure ulcer research: Challenges and opportunities" 4th European Pressure Ulcer Prevention and Treatment Masterclass Porto, Portugal 25-27th April 2022
- O'Connor, T. "Developing Postgraduate Nursing Education and Training; Creating the Specialists of the Future" The Scientific Conference of the Obstetrics and Gynaecology Society of Sudan (OGSS) February 24<sup>th</sup> 2023
- O'Connor, T. "Evaluating education for pressure ulcer care and prevention: are we measuring the right outcomes?" EPUAP Annual Conference, Prague September 14-16<sup>th</sup> 2022
- O'Connor, T. "International Collaboration in Postgraduate Training".4th SDUI Annual Symposium/ Sudan International Medical Symposium SAS4/SIMS February 24th 2023
- Patton, D. "Diabetic foot research at the SWaT Research Centre" Diabetes Collaborative Clinical Trial Network Launch, 2023
- Patton, D. "Unlocking the potential for early PU Prevention" UCD Charles Seminar Series, 2023
- Strapp, H. "Wound Assessment UAE Lecture GP on General Wound Management" Dubai November 2022
- Strapp, H. "Wound Assessment: Workshop", European Pressure Ulcer Advisory Panel, Conference, September 2022
- Renjith, V. "Risk of Bias Assessment and Practical on Cochrane RoB-1" Certificate Course on Systematic Review and Meta-analysis, Expert session at Public Health Evidence South Asia, Manipal Academy of Higher Education, Karnataka, India, November 2022
- Renjith, V. "Systematic Review and Metanalysis (Workshop)", Expert session at Amrita College of Nursing, Kerala, India, March 2023
- Renjith, V. "Exploring horizons of Nursing Research: The learning curve" Invited lecture at Manipal College of Nursing, Karnataka, India, February 2023

## **Grants**

- Derwin, R. Research summer School RCSI University of Medicine and Health Sciences, April 2023, €2,000
- Nugent, L. Nursing assessment of nutritional needs in the care if non-healing wound, 23014, Industry, December 2022, €11,000
- O'Connor, T., Patton, D., Moore, Z. & Watson, C., Development of a BSc Programme in Sudan Esther Ireland Education development, 2021, €8,000

Patton, D. Development of a Publication with Warwick University, 22550, University of Warwick, November 2022, €21,250

Patton, D., Moore, Z. (2022) Wound Assessment Using Spectral Imaging (WAUSI), 23056, Industry Grant, €438,000

Patton, D. The Development, Implementation and Evaluation of a eHealth support tool to enhance QoL and survivorship in head and neck cancer patients, 22360, Irish Research Council, Sept 2022, €120,000

# **OBSTETRICS & GYNAECOLOGY**

## Overview

#### **Patient Services**

The RCSI Fetal Medicine Centre continues to provide advanced fetal medicine services for patients of the Rotunda Hospital, as well as those referred from throughout Ireland. During the current academic year a large number of fetal ultrasound examinations were performed at the Centre, together with screening tests for fetal aneuploidy, including the latest non-invasive prenatal testing (NIPT).

## Teaching

Three hundred and seventy two students participated in the RCSI Obstetrics & Gynaecology and Neonatology clinical rotations. The RCSI Department of Obstetrics and Gynaecology has a leadership role in providing teaching and assessment for undergraduates at the Rotunda Hospital, National Maternity Hospital, Our Lady of Lourdes Hospital Drogheda, Midland Regional Hospital Mullingar, Coombe Women and Infants University hospital, St. Luke's Hospital Kilkenny, Waterford Regional Hospital and Cavan General Hospital.

These students participated as sub-interns on the hospital wards and in clinics, contributing significantly to the mission and function of the hospital, while providing increasingly positive feedback on their learning experiences.

## **Staff List**

Professor and Chairman
Fergal D Malone MD FACOG FRCOG FRCPI

Associate Professor

Fionnuala Breathnach MD MRCOG FRCPI DCH DipGU Med Declan Keane MB DCH FRCPI FRCOG

Honorary Clinical Associate Professor
Etop Akpan MD MRCOG
Michael Gannon MD FRCPI MRCOG
Michael Geary MD FRCOG FRCPI DCH
Sam Thomas MBBS DNB (O&B) FRCPI FRCOG FRCSEd

## Honorary Clinical Professors

Shane Higgins MD MRCOG FRANZCOG MPH (Melb) Dip LQH (RCPI) Michael O'Connell MD MSc FRCPI FRCOG FICOG (Hon) DCH Hon

Senior Lecturers

Naomi Burke MD MRCPI MRCOG Bridgette Byrne MD FRCPI MRCOG Niamh Daly MRCPI MRCOG PhD Karen Flood MD MRCPI MRCOG Edward O' Donnell MD FRCPI MRCOG Carmen Regan MD FRCPI MRCOG Honorary Clinical Senior Lecturers Gerard Agnew MD MRCPI MRCOG Sahar Ahmed MBBS MRCOG

Kushal Chummun MD MSc MRCPI MRCOG

Sharon Cooley MD MRCOG

Sam Coulter Smith MB FRCOG

Conrado Cusnaider MD

Jennifer Donnelly MD MRCOG MRCPI

Murtaza Essajee MD

Maeve Eogan MD MRCOG FRCPI

Rosemary Harkin MB FRCPI MRCOG

Conor Harrity MD

Trevor Hayes MD

Mark Hehir MD MBA BSc MRCPI MRCOG

**Etaoin Kent MD** 

Edgar Mocanu MD DM FRCOG

Sieglinde Mullers MD MRCPI MRCOG

Donal O'Brien MB MRCOG MRCPI

Vicky O'Dywer MD, MRCPI, MRCOG

Neil O'Gorman MD

Hassan Rajab MB MRCOG MRCPI

Meenakshi Ramphul MD

Nandini Ravikumar MD

Rishi Roopnainesingh MD MRCOG FRCPI

Raouf Sallam MD

Azhar Syed MB BS MRCOG

Claire Thompson MD

Maternal Fetal Medicine Subspecialty Fellow David Mackin MBBChBAO FRANZCOG Brendan McDonnell MB PhD MRCPI

#### Lecturers

Hossam Abdelhafez

Rabia Batool

Ronan Daly MB MRCPI

Hala Farhan MB MRCOG MRCPI

Narjes Fhelelboom

Daniel Kane MD MRCPI

Roisin McConnell

Patrice Musah

Sarah Nicholson MB MRCPI

Jayavani Penchala MB

Carmel Sheridan

Midwife Sonographers

Ann Fleming

Claire O'Rourke

Research Sonographers

Fiona O'Donohoe

Fiona Cody MSc

Epidemiologist/Statistician

Patrick Dicker

Research Phlebotomist

Sophie Conheady

Research Staff

Zara Molphy PhD (Head of Research Programmes)
Denisa Ramona Asandei (Clinical Operations Manager)
Sirisha Bellamkonda (Clinical Research Coordinator)
Elisa Belmonte (Communications Project Manager)
Hollie Byrne (Research Assistant)
Sarah Marcu (Research Assistant)
Mark Kerins (Graphic Designer)
Susan Hatt (Clinical Research Coordinator)

Meadhbh Aine O'Flaherty (Research Communications Officer)

Administration
Michelle Creaven
Rose O'Donohoe
Caroline Fagan
Isobel Keeley
Suzanne Kehoe
Suzanne King
Ruth O'Reilly
Miriam Shanley

## **Summary of Key Achievements / Academic Activities**

#### Research Infrastructure

The Department of Obstetrics and Gynaecology research programme, which is jointly managed operationally with the Rotunda Hospital, continued to grow and develop in 2022 and into 2023. This integrated approach alongside the Rotunda with shared staffing and resources has allowed a substantial increase in RCSI's funding streams and portfolio of research studies and clinical trials.

## Portfolio of Clinical Trials and Clinical Research Studies

**IRELAND** – Investigating the role of early low-dose aspirin in diabetes: A phase III multicentre double-blinded placebo-controlled randomised trial of low-dose aspirin initiated in the first trimester of diabetes pregnancy: A multicenter RCT investigating the role of Aspirin in pregnancy outcome of women with pre-gestational diabetes. The project was first launched in December 2019 in the Rotunda Hospital, the Coombe Women and Infants' University Hospital, and the National Maternity Hospital. Since then, the trial expanded to include Galway University Hospital and Cork University Maternity Hospital. The IRELAND trial closed in June 2023. In total, 136 patients were recruited and statistical analysis is now underway.

**HOME-IND** – A randomised open-label trial to assess outpatient induction of labour, and compare efficacy of Propess vs Dilapan-S® for induction of labour at 39 weeks' gestation in normal risk nulliparous women: A single site RCT to assess outpatient induction of labour and compare efficacy of Propess versus Dilapan for induction of labour at 39 weeks' gestation in normal-risk nulliparous women. Recruitment commenced in November 2020 and closed in May 2023 with 327 women recruited. Statistical analysis is now underway.

**ACEDUCT** – Co-administration of Acetaminophen with Ibuprofen to Improve Duct Related Outcomes in Extremely Premature Infants: To evaluate the clinical impact, efficacy and safety of combination regime [Ibuprofen + Acetaminophen] for first treatment course for significant PDA in extremely low gestational age neonates (ELGANs) vs. Ibuprofen alone. The trial has received HPRA and NREC approval and recruitment has received the 'greenlight' at The Rotunda Hospital.

**PIPELLE** – Is pipelle biopsy of benefit in patients with postmenopausal bleeding and atrophic-appearing cavity? A single site RCT which aims to investigate whether the Pipelle endometrial sampling device is of benefit in patients with postmenopausal bleeding and an atrophic-appearing uterine cavity. The main outcomes will be differences in pain scores, cost savings and differences in clinical follow-up. Patient recruitment is on-going.

**PROTECT** - Pentoxifylline to improve long-term outcomes in preterm infants with late-onset sepsis or necrotizing enterocolitis: The aim of PROTECT is to investigate whether intravenous pentoxyfylline (PTX) versus placebo increase survival without disability at 24 months of age in infants born at less than 29 weeks gestation with late onset sepsis or necrotising enterocolitis. The trial has received HPRA and NREC approval and recruitment has received the 'greenlight' at The Rotunda Hospital.

**PARTUM** – Postpartum Aspirin to Reduce Thromboembolism Undue Morbidity: The aim of the pilot RCT was to determine the feasibility of conducting a full trial to ascertain if low-dose aspirin can prevent clotting among post-partum women who have additional risk factors for thrombosis. The pilot study closed at The Rotunda Hospital, Canada and France in Q1 2023 with recruitment continuing at a site in The Netherlands.

**HIGHLOW** – Intermediate-dose versus low-dose low-molecular-weight heparin in pregnant and post-partum women with a history of venous thromboembolism: an open-label, multicentre, randomised, controlled trial: An open label RCT comparing different doses of low-molecular-weight heparin (LMWH) to prevent recurrence of potentially life-threatening blood clots in pregnant women. Recruitment was completed at three Irish sites including the Rotunda Hospital, Coombe Women and Infants' University Hospital and University Hospital Limerick with results published in <a href="https://limerick.nih.gov/">The LANCET</a> in October 2022.

**Al\_PREMie** – Artificial intelligence to prevent preterm birth due to preecampsia while protecting mothers' lives): Al\_PREMie is an SFI Future innovator Al for Societal Good award-winning project launched in late 2020. The Rotunda has partnered with UCD, NMH and The Coombe in this project. Al\_PREMie is a combination of patent bio-marker testing and risk assessment powered by machine learning that not only diagnoses preeclampsia but also predicts patients' outcome.

**DIONYSUS** – International Registry for the Management and Clinical Outcomes in Hemolytic disease of the fetus and newborn): An international multicentre observational cohort study to assess differences in prenatal and postnatal management strategies and clinical outcomes of haemolytic disease of the fetus and newborn (HDFN) in cases with moderate to severe HDFN due to Rhesus, Kell or other types of red blood cell antigen alloimmunization, managed at expert fetal therapy centres worldwide.

**PERIMETER** – Perinatal Outcomes Of Early-Onset Fetal Growth Restriction: A Retrospective Observational Study: Aim of the PERIMETER study is to evaluate perinatal mortality and morbidity associated with early-onset fetal growth restriction in Ireland. There is a pressing need to describe further the perinatal outcomes of early-onset FGR, particularly at peri-viable gestations, to inform clinical decision-making. Tertiary perinatal centres across Dublin have a standardised approach to diagnosis and management of early onset FGR, providing an opportunity to report outcomes of this high-risk population in a local context.

## **Research Communication & Dissemination Projects**

**Science Week 2022**: BIAS is a SFI Science Week festival which aims to encourage national dialogue and debate around biases that still exist in our society and prevent women from pursuing a career in STEM, receiving adequate healthcare, and benefiting from research findings. The first steps to tackle biases is to create safe spaces where people will not feel ashamed to talk about these topics, create female role models that teenagers can refer to when choosing their career path, to move away from the one-size-fits-all way of thinking, and acknowledging each person's specific needs based on their age, civil status, ability, gender, race and ethnicity, religion, sexual orientation and socio-economic status.

Debunking the Myths - The Science behind Women's Health: Department of Obstetrics and Gynaecology in collaboration with colleagues at the Rotunda Hospital developed Debunking the Myths, to provide clear and reliable information in relation to sexual health while also stimulating open discussion and curiosity around the topic. The programme consists of a series of interactive two-hour workshops and online engagement tools. Delivered by RCSI and Rotunda Hospital consultants, junior doctors, community GPs and researchers, the workshops explore a range of topics, including Human Papilloma Virus (HPV) vaccine; contraception, menstruation; sexually transmitted infections (STI) prevention and fertility, to help teenagers learn more about these subjects in a non-biased and non-judgmental way.

## **Education and Outreach Activities**

The first trimester of pregnancy is a particularly important time not only for baby's development, but also for the family adjusting to this big change. With this in mind, the Department launched an online campaign on social media with the aim of increasing accessibility of obstetricians, gynaecologists, midwives, nurses and more to the general public to provide advice and support and to promote health and wellbeing during the first stages of pregnancy.

#### Awards

Early Pregnancy Information Event. Funded by the Health Research Board Conference and Event Sponsorship Scheme. PI: Professor Fergal Malone and Dr Zara Molphy

Research Communication – A Novel Approach. Funded by the Health Research Board Conference and Event Sponsorship Scheme. PI: Professor Fergal Malone and Dr Zara Molphy

BIAS: Inequalities in Women's Health and Research. Funded by Science Foundation Ireland under the Science Week Call. PI: Professor Fergal Malone, Dr Zara Molphy, Elisa Belmonte

Improving the prenatal detection of critical congenital heart defects (CCHD) across Ireland –Investigation of current policies and implementation of a national consensus-based targeted fetal echocardiography screening strategy. Funded by The Rotunda Foundation. PI: Professor Fionnuala Breathnach

PERIMETER: Perinatal Outcomes of Early-Onset Fetal Growth Restriction. Funded by The Rotunda Foundation. PI: Professor Fergal Malone and Dr Rocco Cuzzillia

GRACE: Global Research Consortium of Artificial Intelligence in Cardiotocography (CTG) for Enhanced Maternal-Fetal Outcomes. Funded by The Rotunda Foundation. PI: Professor Fergal Malone

HYPATIA: A prospective randomised controlled trial of hydroxychloroquine to improve pregnancy outcome in women with antiphospholipid Antibodies. Funded by The Rotunda Foundation. PI: Professor Jennifer Donnelly

## **Achievements**

*BIAS: Gender Inequality in Healthcare and Research* shortlisted in the Equality Initiative of the Year category at the Irish Healthcare Awards 2022

Debunking The Myths: The Science Behind Our Sexual Health shortlisted in Best Education Outreach Award category at The Education Awards 2023

#### **Publications**

Ata, B., Vermeulen, N., Mocanu, E., Gianaroli, L., Lundin, K., Rautakallio-Hokkanen, S., Tapanainen, J.S., Veiga, A. SARS-CoV-2, fertility and assisted reproduction. Hum Reprod Update. 2023 Mar 1;29(2):177-196

Barry, R., Houlihan, E., Knowles, S.J., Eogan, M., Drew, R.J. Antenatal pyelonephritis: a three-year retrospective cohort study of two Irish maternity centres. Eur J Clin Microbiol Infect Dis. 2023 May; doi: 10.1007/s10096-023-04609-6

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## **Invited Lectures**

Belmonte, E. Digital Health Outreach, RCSI Digital Health Innovation Forum, January 2023

Malone, F.D. Leadership Lessons from Mastership. Future Health Summit, May 2023

Breathnach, F. Diabetes and Pre-eclampsia. Virtual Diabetes Ireland Conference, October 2022

Breathnach, F. Debate: 'All women with diabetes should be prescribed low-dose aspirin'. International Association for Diabetes in Pregnancy Study Groups/ Australian Diabetes in Pregnancy Annual Congress, Sydney, November 2022

# **OPHTHALMOLOGY**

The research focus of the Department of Ophthalmology is ocular immunology and cornea/ocular surface disease through the Ocular Immunology Research Group. Collaborations within the Department of Pharmacy and Biomolecular Sciences at RCSI and REMEDI at NUIG remain strong across a range of research projects. Our principal research interests are in Sjögren's Syndrome, graft versus host disease, uveitis, and corneal transplantation.

The emphasis on experiential learning in clinical ophthalmology remains the basis for the undergraduate teaching programme in ophthalmology at the Royal Victoria Eye and Ear Hospital and University Hospital Waterford. At post-graduate level, the department delivers the membership and fellowship examinations of RCSI to specialist trainees. Recent changes in the examinations have been crucial to the implementation of the run through training programme in ophthalmic surgery and the new training programme in medical ophthalmology.

Professor Murphy is a member of the board of the RVEEH Research Foundation and the Irish representative of the European University Professors of Ophthalmology Council. He is a member of the Council of the Irish College of Ophthalmologists and the academic representative on the Irish College of Ophthalmologists Training and Advisory Committee. Professor Murphy is a member of the advisory committee of the Disability Access Route to Education (DARE).

## **Staff List**

Professor & Chair of Department
Conor C Murphy MB, BCh, BAO, FRCSI, FRCOphth, MMedSc, PhD

Clinical Lecturer
Marchien Dallinga MD, PhD
Denise Curtin MB, BCh, BAO, FRCSI, FEBO

Honorary Senior Lecturer (University Hospital Waterford) John Stokes MB, BCh, BAO, FRCOphth, MD

Senior Clinical Lecturer (University Hospital Waterford) Emer Henry MB, BCh, BAO, FRCOphth, MD

Clinical Tutors
Nazri Mohamed MB BCh BAO (University Hospital Waterford)
Emily Greenan MB BCh BAO, HDip (LCM) (PhD candidate, RCSI)

Module Coordinator
Cathy Fox

## **Academic Activities**

Conferences and courses organised

Professor Murphy organised and chaired a symposium entitled VISICORT: adverse immune signatures and their prevention in corneal transplantation at the European Vision and Eye Research (EVER) Annual Congress, October 2022

Professor Murphy was the Chair of the Pan-Ireland Uveitis Forum in March 2023.

## **Health Professions Education Activities**

Murphy CC. Organiser of the National e-tutorial series in Cornea and Ocular Surface Disease for ophthalmology trainees, Irish College of Ophthalmologists, 2022-23

## **Higher Degrees**

Greenan E. Investigating the clinical and molecular characteristics of immune-mediated dry eye disease. PhD, RCSI & NUI 2023.

## **Invited Lectures**

Murphy CC. Local anaesthesia for cataract surgery: case presentations and discussion. Annual Periocular Anaesthesia Study Day, October 2022.

Murphy CC. Keratoplasty for keratoconus. Irish College of Ophthalmologists Conference, Dublin, October 2022.

Murphy CC. Profiling systemic immune responses in corneal transplant acute rejection. European Vision and Eye Research (EVER) Annual Congress, October 2022.

Murphy CC. Ocular surface microRNA and cytokine expression in GvHD. European Cornea Conference, Zurich, June 2023.

## **Publications**

Baenninger, P. B., Romano, V., Figueiredo, F. C., Pradhan, S. P., Vohra, V., Jeng, B. H., . . . Bachmann, L. M. (2023). Differences in minimal disease knowledge of keratoconus patients: Results from an international survey. *BMJ Open Ophthalmology*, 8(1). doi:10.1136/bmjophth-2022-001164

Dallinga, M., Murtagh, P., Powell, S., & Murphy, C. C. (2023). Moraxella nonliquefaciens -associated infectious scleritis. *BMJ Case Reports*, *16*(5). doi:10.1136/bcr-2022-254113

Gabhann-Dromgoole, J. N., Murphy, C., Boland, F., Doyle, A., & Pawlikowska, T. (2023). How has medical student learning changed with the pivot to online delivery of ophthalmology in the pandemic? *PLoSOne*. doi:10.1371/journal.pone.0282829

Greenan, E., Pilson, Q., Gabhann-Dromgoole, J. N., & Murphy, C. (2023). Relationship between clinical parameters and quality of life in primary Sjögren's Syndrome: a prospective study. *Eye (Basingstoke)*. doi:10.1038/s41433-023-02386-2

Greenan, E., Vandenberghe, E., Conneally, E., Murphy, C. C., & Ní Gabhann-Dromgoole, J. (2023). Seeing the unseen: Use of a modified OSDI questionnaire to accurately detect chronic ocular GVHD in a hematology clinic. *Ocular Surface*, *27*, 75-76. doi:10.1016/j.jtos.2022.12.001

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Harford, D. A., Greenan, E., Knowles, S. J., Fitzgerald, S., & Murphy, C. C. (2022). The burden of methicillin-resistant Staphylococcus aureus in the delivery of eye care. *Eye (Basingstoke)*, *36*(7), 1368-1372. doi:10.1038/s41433-021-01643-6

Iselin, K. C., Kaufmann, C., Malata, D., Bachmann, L. M., Power, W. J., Quill, B., & Murphy, C. (2022). Telemedicine service for keratoconus monitoring: patient satisfaction and prospects for further expansion. *Telemedicine and e-Health*. doi:10.1089/tmj.2021.0619

Quigley, C., Butler, T., Murphy, C., & Power, W. (2023). Perforation in interstitial keratitis associated with hidradenitis suppurativa: medical and surgical management. *BMJ Case Reports*, *16*(1). doi: 10.1136/bcr-2022-251928

## **Active Grants and Grants Awarded**

Greenan E, Cryan SA, Ní Gabhann–Dromgoole J, Murphy CC. Multiomic characterisation of ocular graft versus host disease from patient tears. Royal Victoria Eye and Ear Hospital Research Foundation Grant September 2021-2024, €15,000.

Greenan E, Cryan SA, Ní Gabhann–Dromgoole J, Murphy CC. Targeting ocular inflammation in dry eye disease with novel microRNA-based therapeutics. Irish College of Ophthalmologists/Novartis Annual Research Award, 2018-2023, €35,000.

Murphy CC. Development and implementation of a National Uveitis Registry, AbbVie, 2018-2023, €84,000.

Murphy CC, Ni Gabhann J. Effect of Ikervis on cytokine and microRNA profile at the ocular surface in severe keratitis due to dry eye disease, Santen, 2018-2023, €45,000

Goodchild C, Ni Gabhann J, Murphy CC. Profiling microRNA in acute anterior uveitis. Royal Victoria Eye and Ear Hospital Research Foundation Grant 2018-23, €15,000.

# **ORTHOPAEDICS**

## Overview

From September to December 2022, THEP Year 1 lectures in Musculoskeletal topics were delivered at RCSI and the delivery was organised by Dr Richard Downey. Simultaneously, he and his colleagues organised SC1 and GEM final med revision lectures of the Musculoskeletal course and delivered same at Connolly Hospital and in RCSI St. Stephen's Green.

September 2022 - Provision of Undergraduate Education for Year T3 students in Musculoskeletal Medicine at Beaumont Hospital, including guest specialty lectures by RCSI Beaumont based orthopaedic surgeons, and small group interactive sessions. The full lecture programme was available to students via MOODLE. However, the lectures were delivered in-person as the College returned to pre-COVID19 conditions.

October 2022. The Education and Research Department moved premises to the newly refurbished top floor of what was Cappagh Convent. Our Lecture Room was refurbished with a state of the art AV system and RCSI assisted with the move by providing some new furnishings for staff and students.

January to May 2023 - RCSI Year 3 students attended for their clinical attachments at the National Orthopaedic Hospital Cappagh. Student groups also returned to pre-COVID19 numbers and the programme was delivered over a two-week period for each set.

Graduate Entry Medical Students attended throughout the month of June 2023. Each set of students attended over the course of one week.

#### Anaesthesia

We accommodated an increased number of Final Med students in the Department of Anaesthesiology over the past 12 months. The students were hosted and supervised by Dr Abdul Hameed Khan and Dr Omar Tajir, Consultants in Anaesthesiology at the National Orthopaedic Hospital Cappagh, who coordinated their attachments and supervised their training.

Active Rehabilitation & Medicine for the Elderly

Dr Marie O'Connor and her team at NOHC's Active Rehabilitation Unit (ARU) hosted Year 3 students in their Department from January until early May 2023. We are very grateful to Dr O'Connor, Ms Joanne Larkin, CNMII and Ms Avril McKeag CNMI, who assisted the students.

COVID19: The Clinical/Infection Control regulations became much easier for students to navigate due to the rescinding of Covid restrictions for hospitals in late March 2023.

## **Staff List**

Professor and Head of Department Professor John O'Byrne

PA/Academic Administrator Ursula Gormally

Lecturers
Dr Richard Downey
Dr Orna A. Glynn
Dr Michael Hanlon
Dr John Scanlon (to Jan 2023)

## **Masters Degrees**

Professor O'Byrne and Dr Niamh Keenan, Consultant Thoracic Surgeon, continued their work directing and coordinating the Modular MCh programme and the MSc in Advanced Clinical Practice at RCSI. 18 students conferred, November 2022 2 students Conferred, May 2023

There are currently 84 students enrolled on the programmes

## Research

Collaborative research continues, particularly with RCSI and Professor Fergal O'Brien, using the most modern tissue engineering techniques to examine cartilage regeneration. This has been collaborative with the National Orthopaedic Hospital as the clinical site providing clinical material and the sophisticated laboratory processes have taken place in RCSI. This has been published and presented extensively.

The Department continues to encourage research in all areas and Mr James Cashman has developed and led a very robust and comprehensive programme ensuring continuity of research projects throughout the year.

Professor O'Byrne delivered the Samuel Haughton Lecture at the Bioengineering Section of the Royal Academy of Medicine Ireland (RAMI) meeting on 28th January 2023.

#### **Publications**

Downey C, John KS, Chatterji J, Cassar-Gheiti A, O'Byrne JM, Kenny P, Cashman JP. Obesity trends over 10 years in primary hip and knee arthroplasty-a study of 12,000 patients. Ir J Med Sci. 2022 Jul 8. doi: 10.1007/s11845-022-03092-w. Online ahead of print. PMID: 35798996 https://pubmed.ncbi.nlm.nih.gov/35798996

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Moore DM, Sheridan GA, Welch-Phillips A, O'Byrne JM, Kenny P. Good mid- to long-term results of the cemented oxford phase 3 unicompartmental knee arthroplasty in a non-designer centre. Knee Surg Sports Traumatol Arthrosc. 2022 Sep;30(9):3215-3219. doi: 10.1007/s00167-021-06665-x. Epub 2021 Jul 12. PMID: 34251470 https://pubmed.ncbi.nlm.nih.gov/34251470

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# OTOLARYNGOLOGY/HEAD & NECK SURGERY

The Department of Otolaryngology in Beaumont Hospital is the largest single provider of otolaryngology surgical primary procedures in the country. We also have a separate National Cochlear Implant Department, which is one of the largest in the British Isles. Through clinical experience, research, and didactic lectures we strive to increase knowledge of otolaryngology disorders and their treatments for students and postgraduate surgeons at all levels of training

The Department of Otolaryngology is a mix of subspecialty ENT interests including lateral and anterior skull base surgery, rhinology, paediatrics, facial plastic and head and neck cancer surgery. We are the national leaders in post graduate ENT education, organising weekly national teaching lectures for our trainees, grand round video conferencing, and ENT surgical skills courses running all year round. There are 300 – 350 undergraduate students taught every year by dedicated surgical and medical lecturers. We offer essential surgical care for many of our allied specialties, both in malignant tumour extirpation and benign disease of the head, neck and skull base. Our departmental colleagues have leadership roles nationally and internationally in their respective fields namely lateral skull base surgery, and head and neck cancer surgery.

We recently appointed Mr Robbie Woods as Consultant Otolaryngology Head and Neck Surgeon to our department. Robbie joins us from Memorial Sloan Kettering Cancer Center and will specialize in Head and Neck oncology and Anterior Skull Base surgery. Mr Adrien Gendre also joined the National Cochlear Implantation Programme. Mr Gendre is an Otolaryngologist with fellowship training in advanced lateral skull surgery from Ireland and France.

Mr Robert Gaffney retired from our department after a stellar career in ENT surgery. A much loved figure in Irish ENT, Robert is an outstanding teacher and mentor. His influence and work ethic made a massive contribution in establishing the Otolaryngology department in Beaumont and James Connolly hospitals.

## Staff

Professor James Paul O'Neill FRCSI, MMSc, MD, MBA, ORL-HNS Chairman of the Medical Executive, Beaumont Hospital Special Interest Head and Neck Surgical Oncology

Professor Rory Mc Conn Walsh FRCSI, MD, ORL-HNS Head of Department. Special Interest Lateral Skull Base Surgery

Mr Peter Lacy FRCSI, MD, ORL-HNS Special Interest Paediatrics, Rhinology & Anterior Skull Base Surgery

Mr Neville Shine FRCS, ORL-HNS Special Interest Head and Neck Surgery / Facial Plastic Surgery Mr Robbie Woods FRCIS, MD, ORL-HNS Special Interest Head and Neck Surgery / Anterior Skull Base Surgery

Mr Sherif Mamdouh FRCSI, ORL-HNS General Otolaryngology / Special Interest Head and Neck Cancer

Ms Anel Naude FRCSI, ORL-HNS General Otolaryngology / Special Interest Otology

Department of Cochlear Implantation Professor Peter Walsh FRCSI, MD, ORL-HNS Special Interest Cochlear Implantation

Mr Fergal Glynn FRCSI, MD, ORL-HNS Special Interest Cochlear Implantation

Mr Adrien Gendre, FRCSI Special Interest Cochlear Implantation

Professor Laura Viani FRCSI, ORL-HNS President, Royal College of Surgeons in Ireland Special Interest Cochlear Implantation

Nursing Team

Head and Neck Cancer Nurse Specialist
Ms Emma Devoy Flood BSc Nursing, MSc Cancer Nursing, MSc Advanced Nursing Practice.

Neuro-Otology & Skull Base Clinical Nurse Specialist Ms Sarah Hogan

Undergraduate & Post Graduate Lecturers
Ms Sarah Prunty
Ms Avril Ni Mharthuna

# **Departmental Academic Activities - Postgraduate Otolaryngology Surgical Teaching**Lateral Skull Dissection Course: – Professor McConn Walsh

Head and Neck Dissection Course: - Professor O'Neill

Facial Plastics Course: - Mr Shine

Otolaryngology National Teaching & Grand Rounds - Friday mornings 7am-8am - Professor O'Neill

## **Publications**

Cleere EF, Davey MG, O'Neill JP. "Age is just a number"; frailty as a marker of peri-operative risk in head and neck surgery: Systematic review and meta-analysis. Head Neck. 2022 Aug;44(8):1927-1939. doi: 10.1002/hed.27110

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Sexton GP, Nae A, Cleere EF, O'Riordan I, O'Neill JP, Lacy PD, Amin M, Colreavy M, Caird J, Crimmins D. Concurrent management of suppurative intracranial complications of sinusitis and acute otitis media in children. Int J Pediatr Otorhinolaryngol. 2022 May;156:111093. doi: 10.1016/j.ijporl.2022

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# **PAEDIATRICS**

#### Overview

The Department of Paediatrics & Child Health at the Royal College of Surgeons in Ireland continues to lead in paediatric education, research and the provision of high quality research-led clinical care to the children of Ireland. Led by Professor Jonathan Hourihane, the department supports undergraduate learning across five of the major teaching sites in Dublin, at CHI@Temple St, CHI@Crumlin and CHI@Connolly, as well as in the Rotunda and Coombe tertiary maternity hospitals. Student clinical exposure is further augmented by the rich educational experiences encountered in our allied regional hospital centres in Cavan, Drogheda, Kilkenny, Mullingar, Waterford and Wexford. Clinical teaching moved back to pre-COVID patterns and end of rotation examinations included live paediatric patients for the first time since OSCEs were introduced in 2021-2022.

We welcome three new Honorary Clinical Associate Professors and one Honorary Clinical Senior Lecturer: Professor John Fitzsimons, Honorary Clinical Associate Professor, Paediatrics, Children's Health Ireland, Temple Street.

Professor Breda Hayes, Honorary Clinical Associate Professor, Neonatology Rotunda Hospital Professor Louise Kyne, Honorary Clinical Associate Professor CHI Temple St Dr Dean Huggard UH Waterford, Honorary Clinical Senior Lecturer. UH Waterford

2022/23 was an extremely successful academic year for the Department of Paediatrics. In addition to the paediatric education provided to over 380 RCSI undergraduate students, the department supervised eight postgraduate research students (MD and PhD candidates). The Department of Paediatrics delivered invited speaker presentations at international meetings and contributed to national and international research and quality improvement initiatives (see below).

## **Staff List**

## **Consultant Academic Staff**

Professor Jonathan Hourihane, Professor of Paediatrics Professor Paul McNally, Associate Professor of Paediatrics

Dr Miranda Crealey, Senior Lecturer, Paediatrics

Dr Michael Riordan, Senior Lecturer, Paediatrics

Dr Susan Byrne, Senior Lecturer, Paediatrics

Professor Naomi McCallion, Associate Professor Neonatology

Professor Martin White, Associate Professor Neonatology

Professor Afif ElKhuffash, Honorary Clinical Professor Neonatology

## **Department Coordination Staff**

Louise Burke, Senior Department Coordinator Grace Kelly, Department Coordinator.

Dr Sadhbh Hurley, Lead Clinical Lecturer, Children's Health Ireland, Temple Street.

Dr Aoife Cassidy, Lead Clinical Lecturer, Children's Health Ireland, Crumlin.

Dr Marguerite Lawler, Clinical Lecturer, Paediatrics, Children's Health Ireland.

Dr Niamh Conlon, Clinical Lecturer, Paediatrics, Children's Health Ireland.

Dr Claire Connellan, Clinical Lecturer, Paediatrics, Children's Health Ireland.

Dr Robert McGrath, Clinical Lecturer, Neonatology, Coombe Hospital.

Dr Áine Fox, Clinical Lecturer, Neonatology, Rotunda Hospital.

Dr Rachel Mullaly, Clinical Lecturer, Neonatology, Rotunda Hospital.

## With Special thanks to Regional Site Leads

Dr David Waldron, Honorary Clinical Senior Lecturer, Paediatrics, Kilkenny Dr Emma Gordon, Honorary Clinical Senior Lecturer, Paediatrics, Drogheda. Professor Muhammed Azam, Honorary Clinical Professor, Paediatrics, Wexford Professor Ireti Farombi, Honorary Clinical Professor, Neonatology, Drogheda Professor Nick Van Der Spek, Honorary Clinical Professor, Paediatrics, Cavan Professor Farhana Sharif, Honorary Clinical Professor, Paediatrics, Mullingar. Dr Norma Goggin, Honorary Clinical Senior Lecturer, Paediatrics, Waterford.

## **Summary of Key Achievements / Academic Activities**

Professor Jonathan Hourihane, Professor of Paediatrics

- RCSI Inaugural Lecture October 2022
- President Clemens Von Pirquet Foundation May 2023
- PhD internal examiner January 2023 RCSI
- EAACI Congress Prague July 2022, invited speaker
- Finnish Allergy Society 50th Anniversary Meeting, August 2022, invited plenary speaker
- Royal Society of Medicine London, Immunology and Allergy Section September and November 2022, invited speaker
- EAACI Allergy School Cork, September 2022, invited speaker.
- Clemens von Pirquet Scientific meeting RCSI October 2022, co-chair
- RCSI-MUB, Manama, October 2022, invited lecture
- NORA Anaphylaxis Registry Berlin November 2022, invited speaker
- Immunotea Podcast RCPI/St James Hospital, January 20023, guest
- EAACI Allergy Schhool, Taormina ,Sicily, March 2023, invited speaker
- University of Virginia, Charlottesville Virginia, USA, Thomas Swineford Meeting April 2023, invited speaker
- SEICAP Annual Congress Palma, Spain, May 2023, invited speaker
- EAACI Annual Congress, Hamburg, Germany, June 2023, invited speaker

## Professor Paul McNally, Associate Professor of Paediatrics

- Appointed to organising committee of European Cystic Fibrosis Conference 2025
- Organised International RECOVER-CF Scientific Meeting RCSI June 2023
- Organised CHI Research & Audit Conference June 2023
- Organised European Paediatric Innovation Seminar, Guinness Enterprise Centre, Dublin, June 2023

## Professor Naomi McCallion, Associate Professor Neonatology

- Irish Discussion Forum 2023 May 10<sup>th</sup>/11<sup>th</sup> Bellinter House, Co Meath, invited speaker.
- RCPI Examination Committee Faculty of Paediatrics

# Professor Afif ElKhuffash, Honorary Clinical Professor Neonatology

- Data safety and Monitoring Board Chair ETAPA Trial: Randomised Placebo-Controlled Trial of Early Targeted Treatment of Patent Ductus Arteriosus with Paracetamol in Extremely Low Birth Weight Infants (ETAPA). 2022 – Present
- Member American Society of Echocardiography (ASE) Special Interest Group of the Neonatal Haemodynamic Targeted Neonatal Echocardiography (NHTS). 2019 Present
- Member of the Editorial Board in The Journal of Perinatology Under the Editor-in-Chief Prof Patrick Gallagher. Tasked with handling paper submissions to under the Neonatal Haemodynamics / Cardiology heading. 2021 – Present
- Data Safety Monitoring Board POPART Trial: Prophylactic Oropharyngeal Surfactant for Preterm Infants

   A Randomised Trial. Sponsored by University College Dublin. EudraCT Number: 2016-004198-41. 2018
   Present
- Regular abstract reviewer for The European Society of Paediatric Research (ESPR) and the European Academy of Paediatric Societies (EAPS). 2014 – Present:
- Regular abstract and workshop reviewer for The Society of Paediatric Research (SPR) and the Paediatric Academic Societies (PAS) meeting. 2014 – Present
- European Inhaled Nitric Oxide Registry Steering Committee. 2016 Present
- Regular Research Presentation Session Chair. Joint European Neonatal Society / ESPR meetings. 2015 Present
- Advisory Committee Member of the Hemodynamic Club at the Paediatric Academic Society / SPR annual Meeting. 2015 – Present

## Dr Susan Byrne, Senior Lecturer, Paediatrics

- Irish Paediatric Association 2022: Update on child development CORAL study. Won best general paediatrics presentation Dec 2022
- EU Best Practice Market place: Child development Chair (Sept 2022)
- RCPI Paediatric Summer Meeting: Update on Stroke in Kids (May 2023)
- European Paediatric Neurology conference: 2 oral presentations (June 2023)
- International collaborations SolveRD, Epi25k, ERN ITHACA

## Professor Séamus Hussey, Paediatrics, Children's Health Ireland at Crumlin

- Invited speaker, Paediatric Inflammatory Bowel Disease Conference, ESPGHAN, Edinburgh, Sept 2022
- Paediatric European Crohn's and Colitis Organisation Committee, Feb 2023
- Internal PhD examiner, 2022
- Co-Chair, Clinical Research Adoptions Group, Children's Health Ireland, 2021-
- Research Ethics Committee Member, Children's Health Ireland, 2021-
- Reviewer Journal of Pediatric Gastroenterology and Nutrition, Gastroenterology, Frontiers in Paediatric Gastroenterology, Journal of Crohn's and Colitis

## Professor Susan O'Connell, Honorary Clinical Associate Professor, Children's Health Ireland at Crumlin

- RCPI Higher Specialist Training Programme and Basic Specialist Training Programme Trainer
- Committee member of NREC-MD 2021-present
- Scientific Committee member of British Paediatric Surveillance Unit (BPSU) ROI representative 2021-present
- Member of RCPI Faculty of Paediatrics Board 2019-2022
- Irish Paediatric Endocrinology lead for ENDO-ERN membership
- Lead for Irish membership of International DSD, Turner syndrome and CAH registries
- Invited speaker British Society of Paediatric Endocrinology and Diabetes (BSPED) ASM Belfast, Nov 2022
- Invited speaker "Fertility preservation in childhood cancer " conference National Maternity Hospital May 2023

## **RCSI Physician Associate Programme**

The Department organised placements in CHI Temple St and CHI Crumlin for the PA programme.

# **Higher Degrees**

S Hussey Epidemiology and outcomes of paediatric inflammatory bowel disease in Ireland', MD by publication, May 2023

L Perrem, The clinical utility of the Lung Clearance Index as a monitoring tool in cystic fibrosis. PhD, RCSI & NUI 2022

C Murphy. Extracellular vesicles in early preterm neonates and thrombin generation (The EVENT trial). PhD. RCSI & NUI November 2022

K Krysiak. Medication safety in neonatal intensive care. PhD, RCSI & NUI November 2022.

#### **Publications**

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#### **Book Chapter**

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## **Active Grants and Grants Awarded**

ElKhuffash, Afif: The Ductus Analysis, PhD Grant, Irish Research Council, June 2023, €28,000

ElKhuffash, Afif: Assessment of Impact of PDA scoring System on Clinical Outcomes Project Grant: Private Donation, June 2022, €39,000

ElKhuffash, Afif (co-applicant): Co-administration of Acetaminophen with Ibuprofen to Improve Duct-Related Outcomes in Extremely Premature Infants - The ACEDUCT Trial, Canadian Institutes of Health Research, July 2022, €430,050(CAD\$ 604,352)

ElKhuffash, Afif (co-applicant): Safeguarding the Brain Of Our Smallest Children – an open-label phase-III randomised trial of cerebral oximetry combined with a treatment guideline versus treatment as usual in premature infants, DIFA-2020, Health Research Board, Jan 2021, €982,646

ElKhuffash, Afif: General Electric Left Ventricular Deformation Assessment in Neonates: A Comparison Between Automated Function Imaging and EchoPAC Clinical Workstation Software, Investigator Sponsored Research, March 2020, €10,000

ElKhuffash, Afif: SafeBoosC-III: <u>Safeguarding the brain of our s</u>mallest <u>c</u>hildren, The Rotunda Foundation, January 2019, €11,904

ElKhuffash, Afif (co-applicant): FIREFLY: Followup of Inflammatory Responses and multiorgan outcomes Following neonatal brain injury, November 2019.

Hourihan, Jonathan: Improved diagnostics in food Allergy. MRC-UK, Research Council, February 2021, €274.000

Hourihan, Jonathan: CORAL study. Temple St Foundation, April 2023, €273,000

McNally, Paul: Sinus and Nasal Disease - RECOVER extension study, GS-Recover-2022, Cystic Fibrosis Ireland, July 2022, €14,800

McNally, Paul: Clinical Research Facility - Children's Health Ireland, CRFC-2021-004, Health Research Board / HRB, January 2022, € 3,249,087

McNally, Paul: CF:INK Research Fund, RCSI-NCRC-2020, National Children's Research Centre Crumlin / NCRC, July 2020, € 359,772

McNally, Paul: RECOVER - Real World Clinical Outcomes with Novel Modulator Therapy Combinations in People with CF, VIA 083, Cystic Fibrosis Trust, January 2020 £97,297

McNally, Paul: RECOVER - Real World Clinical Outcomes of Novel CTFR Modulators, MCNALL19KO, Cystic Fibrosis Foundation, January 2020, €3,188,649

McNally, Paul: RECOVER - Real World Clinical Outcomes of Novel CTFR Modulators, PMCN-CFI, Cystic Fibrosis Ireland, January 2020 € 100,000

McNally, Paul, Funding extension TPN compatibilities project for MD candidate Dr Mahmoud Farhan, Pfizer, €25,000

Hussey S. Co-applicant, Lead Applicant P Walsh, TCD. 2023 : SFI Frontiers for the Future Grant Identifying the mechanism of action of a novel therapeutic target during the earliest phases of IBD onset in childhood. €428,752

Hussey S. Co-applicant, Lead Applicant P Walsh, TCD. 2022. Janssen. Translational Investigation into mechanisms associated with chronic inflammatory disease. €860,000

Hussey S. Lead Applicant. 2022. Children's Health Foundation Accelerator Grant: SUCCEEDS- Science underlying coeliac evolution:explanations, discoveries and solutions. €41,818

# PARAMEDIC PROGRAMME

## Overview

RCSI established a partnership with Dublin Fire Brigade (DFB) for the provision of emergency medical education and training for DFB firefighters. Uniquely in Ireland & UK, DFB personnel are dual qualified as firefighter/paramedics and provide an emergency ambulance service as a Fire-based EMS Service in Dublin. The 2 year programme is an RCSI/NUI accredited education programme to a Level 7 Diploma in Emergency Medical Technology. The programme is provided by DFB educators and invited speakers at the DFB Training Centre and on-site in the RCSI, St Stephen's Green. Programme support and educational oversight are provided by RCSI.

We wish to thank and acknowledge all of the great work that Dr Niamh Collins has done as the medical advisor to the paramedic programme over the last number of years. Niamh is now involved in the Fire Brigade side as their new Medical Director. We wish Niamh every good wish in going forward with whatever endeavour she undertakes. We welcomed Dr Mark Ruddy to the team as our new medical advisor to the programme late in 2022. Marks comes to us with a wealth of knowledge and experience in pre-hospital medicine through his roles in HEMS in the UK and the flying Doctors in Australia.

## **Summary of Highlights**

An event was held in January this year to mark 20 years partnership between RCSI and Dublin Fire Brigade. This successful partnership has seen almost 600 paramedical programme graduates to date, and over 100 in the pipeline, with all DFB tutors on the current programme being RCSI/NUI programme graduates.

## Class 16

The paramedics have now completed all aspects of their programme and their postgraduate internship. Following their success in VIVA interviews, they are looking forward to their conferring at the end of this year.

# Class 17

This class of paramedics have now completed their second academic year and are now undertaking there postgraduate internship. The clinical placements and field internships they undertook has enabled them to complete the programme successfully. They will undertake their VIVA interviews later in the year.

# Class 18

September last saw this class begin their journey and everyone was delighted to see classrooms back to normal. Teamwork and camaraderie are crucial to the firefighter / paramedic role and the relationships built during the programme are key in establishing trust and lifelong professional relationships. Well done on successfully completing the first year of the programme and great credit to the teaching faculty for all of their hard work. Thanks to all the RCSI staff in the Anatomy Room, Library and Simulation Lab and all RCSI lecturers who were involved. Thanks also to the clinical personnel across all of the Dublin hospital departments, who continue to facilitate our paramedic interns.

#### Class 19

This course started in January this year and are now well into their field internship and about to start their clinical placements.

## **Staff List**

Programme Director

Kilian McGrogan MB, BAO, BCh, MA, FRCGP, DCH, DGM, DFPP, DRCOG, Dip Occ Med Cert Trav Med

Medical Advisor to DFB - RCSI Paramedic Programme Mark Ruddy MB, BCh U Dubl

Programme Manager

Patricia FitzPatrick MSc Ed & Training Management, MSc HPE, HDip

Course Co-ordinator Kate Whelan

# **PATHOLOGY**

The Pathology Department's research objective is to drive and support clinical and translational research by providing technical expertise, specialised histopathological and haematopathology knowledge, next generation sequencing and clinical interpretation.

Professor Siobhan Glavey is Head of Department and Pathology Chair at RCSI. She leads the department, which is involved in a wide variety of work including cancer and molecular diagnostics and research, multiple myeloma translational research, teaching of undergraduates and postgraduates in Haematology and Pathology, supervision of scientists in research and clinical roles including PhD and Postdoctoral Fellows. The department is involved in a number of national studies, utilising NGS (next generation sequencing) technology and liquid biopsy. In recent years, the Department of Pathology has evolved to incorporate digital pathology and artificial intelligence research into the department with the addition of specific infrastructure and expertise led by Dr Katherine Sheehan.

In the past academic year, the Molecular Pathology Laboratory has undergone significant change and development. Within Beaumont Hospital, this department has now become an independent laboratory in its own right with its own funding model and is operating as a core facility. This facility is providing sequencing and data science support to clinical and research applications across RCSI and externally. This laboratory is an NCCP accredited laboratory and became INAP accredited in June 2023. This is a significant milestone for the department, and will lead to an increase in translational genomic research, availability of large panel testing for solid tumours and blood cancers and enhanced capabilities to participate in clinical trials.

In 2022/2023, the department was pleased to support the application and successful review of the OECI accreditation process within the Beaumont/RCSI Cancer Centre. The role of genomics and data analysis is central to this accreditation process and the RCSI Molecular Pathology Laboratory was proud to be involved in successfully achieving this milestone.

In 2023, a number of key staff joined the Pathology Department, including a Data Scientist, Sahin Sarihan, who specialises in applications for genomic clinical testing and research.

The Pathology Department was awarded an Aspire Fellowship in Molecular Haematology. This was the first Aspire Fellowship in Molecular Haematology to be awarded in Ireland through the RCPI (Royal College of Physicians of Ireland). The Fellow, Jill Coll, commenced her post in June 2023. The goal of this role is to develop liquid biopsy and large panel testing for a large variety of blood cancers in collaboration with Queens University Belfast.

Professor Glavey is ICAT Associate Director. The Pathology Department was successful in supporting the ICAT training programme with the result that a number of ICAT applicants from RCSI were successful in their applications.

Professor Glavey's research group at RCSI focuses on disease mechanisms in multiple myeloma and personalised medicine approaches. Her laboratory collaborates with national and international academic and industry partners on novel pre-clinical and clinical research in multiple myeloma. In 2022/2023, a number of successful research applications occurred within the group with the addition of Postdoctoral, PhD and masters students through various funding streams including Breakthrough Cancer Research and others.

The Molecular Pathology Laboratory provides clinical NGS services in an accredited setting to 18 clinical and commercial groups in Ireland and also provides technical expertise in genomics to researchers in RCSI and nationally, facilitating collaborative projects and innovation. Active collaborations are ongoing with Trinity College Dublin, Queen's University Belfast as well as industry partners OncoMark and Nuritas.

# **Summary of Key Achievements / Academic Activities**

Professor Siobhan Glavey

- Fellow of the Royal College of Physicians of Ireland, (FRCPI), July 2022.
- Appointed as ICAT Associate Director.
- Fellow of Royal College of Pathologists, United Kingdom.
- Breakthrough Cancer Research Grant for Multiple Myeloma in collaboration with Ann Hopkins.
- Member of European Medicine Agency (EMA).
- Member of European Haematology Associate (EHA).
- · Board member of MMI.
- Member of Advisory Group NCCP plasma cell advisory group for NCCP.
- Member of Molecular Cancer Diagnostic Group NCCP.
- Member of and abstract reviewer for ASH.
- Member of International Kidney Myeloma Working Group.
- Member of International Myeloma Working Group.
- · Member of European Myeloma Network.
- Board member of Haematology Association of Ireland.
- Member of Blood Cancer Network Ireland.
- Member of Cancer Trials Ireland.
- · Member of Irish Haematology Society.
- Member of Irish Hospital Consultants Association.
- Board Member Haematology Association of Ireland.
- Co-supervisor of Breakthrough Cancer PhD and Masters Student grant with Dr Ann Hopkins "Developing a non-rodent xenograft model of multiple myeloma and its use in testing novel antagonists of JAM-A signalling".
- Supervisor of Aspire Fellowship in molecular haematology, 2023/2024.
- Supervisor of PhD candidate in Pharmacy, June 2023.
- Co-supervisor of a nursing PhD student at the National University of Ireland, Galway who was successful in obtaining SPHeRE (Structured Population and Health Services Research Education) Programme.
- HME Haematology Summit, Italy, October 19<sup>th</sup> 22<sup>nd</sup> "Focus on frontline management of patients with multiple myeloma" and "Focus on relapsed/refractory multiple myeloma"
- RCPI Pathology Webinar December 12<sup>th</sup> 2022, "New advances in molecular diagnostic testing and laboratory practices at Beaumont and RCSI Cancer Centre"
- 90th Biological Society Meeting Widdess Lecture, January 30th 2023 "Personalised Medicine in Haematologic Malignancies an evolving paradigm"
- RCSI Charter Meeting February 2<sup>nd</sup> 2023, "The Then, Now and When of Personalised Cancer Medicine"
- Haematology Association of Ireland, ANP Amgen (Athlone), February 23<sup>rd</sup> 24<sup>th</sup> 2023, "Update on Treatment of Multiple Myeloma"
- ESH Conference Berlin, 4th How to Diagnose and Treat Multiple Myeloma April 14th 16th 2023, "Newly diagnosed transplant-ineligible patient"
- Grand Rounds Galway May 12<sup>th</sup> 2023, "Multiple Myeloma; A decade of (r)evolution for incurable malignancies"
- Connolly Hospital Research Day, Annual Lecture, June 14<sup>th</sup> 2023, "Multiple Myeloma; A decade of (r)evolution for incurable malignancies"

# Dr Katherine Sheehan

 KM Sheehan, S Glavey. The use of digital pathology in research and education. RCSI Digital Health Innovation Forum, 25/1/23.

### Dr Clive Kilgallen

- Appointed President of the Irish Medical Organisation (IMO) June 2022 to April 2023.
- Led the Irish delegation to the World Medical Association meeting in Berlin in October 2022.
- Led the Irish delegation to CPME meeting in Prague in October 2022.
- Represented the IMO on the Board of UEMS at the Brussels meeting in April 2023.
- Dr Kilgallen was invited onto the editorial board of the Ukrainian Scientific Journal, "Oral and General Health"

### Professor Brendan Doyle

- Appointed Associate Professor Molecular Pathology in March 2023, which is a new role within the department.
- Member, organising committee "Second Genomic Profiling Symposium", Trinity Centre, St James's Hospital, May 2023.
- Member NCCP Molecular Diagnostics Advisory Group
- "Advances in Genomic testing and Liquid Biopsy in Non-Small Cell Lung Cancer". 10<sup>th</sup> All Ireland Lung Cancer Conference, September 2022.
- Guest Lecturer, UCD MSc in Precision Oncology, February 2023.
- Speaker Histopathology Higher Specialist Trainee Study days, Molecular Pathology and Renal Pathology.

#### Dr Roisin McAvera

- Guest lecture at Technological University Dublin, November 2022
- HAI Novartis Educational Award (€10,000 grant), October 2022 (Title: Investigating Cell Cycle & Mitotic Therapeutic Vulnerabilities for the Treatment of SKY92 High-Risk Multiple Myeloma)
- Oral presentation at Beaumont Translational Research Awards 2022 (Shane O'Neill medal finalist) (Title: Dysregulation of Mitosis Is Associated with High-Risk Multiple Myeloma)

#### Ms Sarah Badar

Oral layman presentation for Breakthrough Cancer Research PPI Panel, Virtual, September 2022 –
 'Finding New Treatments for High-Risk Myeloma'

#### Ms Izabela Drozdz

• RCSI Research Day 2023 – Winner of Best Postgraduate in Year 1 Poster Presentation

#### Sahin Sarihan

- NGS data analysis of Multiple Myeloma in Pathology, Professor Siobhan Glavey
- Irish Kidney Gene Project (IKGP), Professor Peter Conlon
- BESTS program, Gianpiero Cavalleri

### **Staff List**

Professor and Head of Department Siobhan Glavey BSc, MB, BCh, BAO, PhD, FRCPI, FRCPath

### Associate Professors

Brendan Doyle BA, MB, BAO, BCh, PhD, FRCPath, FFPath (RCPI) Michael Farrell FRCPI, FRCPC, FRCPath

# Senior Lecturer

Clive Kilgallen MB. BCh. BAO (NUI), FRCPI, FRCPath, FFPath (RCPI)

### Honorary Senior Lecturers / Hospital Consultants

Katherine Sheehan MB, BCh, BAO, LRCPSI, MD, FRCPath, FFPath

Karl Ewins MB, BAO, BCh, MRCPI, FRCPath

Dawn Swan BM, BCh, FRCPath, RCPI

Heidi Okkers MB, BCH, Dip Forensic Pathology, FRCPath

Helen Barrett MB, BCh (NUI), BMedSc, MSc, FRCPath

Jane Cryan MB, BCh, MRCPI, FRCPath

Jeremy Sargent MB, BCh, BAO, FRCPI, FRCPath

Linda Mulligan MB, BCH NUI, DMJ(Path), DipFMS, FRCPath

Sally Anne Collis BN, MBChB, FRCPath, DMJ (Path)

Odharnaith O'Brien MB, BCH, BAO, BMedSci, FRCPath

Marie Staunton MB, MRCPI, FRCPath, FFPath (RCPI)

Keith Pilson MB, BCH, BAO, LRCPI&SI, MSc, BSc

Honorary Clinical Associate Professor
Patrick Thornton MB, FRCPath.
Philip Murphy MD, MRCPI, MRCP (UK), MRCPath, DCH
Eamon Leen BA, MB, BCh, BAO, FRCPath, FFPath, RCPI
John Quinn MB, BCh, BAO, PhD, FRCPI, FRCPath
Muna Sabah MD, M Med Sc, MRCPath, FFPath, FRCPath, DFMS
Tony Dorman BA (Hons), FFPath (RCPI), FRCPath, MB, BCh, BAO

### Lecturers/Trainee Histopathologists

Three lecturers who rotate on a six-monthly basis and who are participants in the SHO and SpR training schemes accredited by the RCPI

Chief Medical Scientist
Tony O'Grady PhD, MSc, BSc, FACSLM

Postdoctoral Researcher Roisin McAvera BSc, PhD

Senior Medical Scientist Robert Cummins BSc

*Medical Scientist – Biobank* Joanna Fay PhD, BSc

Data Scientist Sahin Sarihan BSc

Research Assistants Elizabeth Walsh BSc Izabela Drozdz BSc

Teaching Co-ordinators
Jenny Young
Helene Duffy MA

Administrators Lisa O'Reilly Belinda Griffin MA

## **Publications**

Comerford C, **Glavey S**, Quinn J, O'Sullivan JM. The role of VWF/FVIII in thrombosis and cancer progression in multiple myeloma and other hematological malignancies. J Thromb Haemost. 2022 Aug;20(8):1766-1777. doi: 10.1111/jth.15773. PMID: 35644028

Comerford C, Dhami SPS, Murphy P, Patmore S, Ward S, Pushkar N, Budde U, Karampini E, O'Donnell JS, **Glavey S**, Quinn J, O'Sullivan JM. Elevated von Willebrand factor levels in multiple myeloma: dysregulated mechanisms of both secretion and clearance. Thromb Res. 2023 Jun;226:136-140. doi: 10.1016/j.thromres.2023.04.014. PMID: 37150027

Duane C, O'Dwyer M, **Glavey S**. Adoptive Immunotherapy and High-Risk Myeloma. Cancers (Basel). 2023 May 6:15(9):2633 doi: 10.3390/cancers15092633. PMID: 37174099

Duggan WP, Salvucci M, Kisakol B, Lindner A U, Reynolds I. S, Dussmann H, **Fay J**, **O'Grady T**. . . . Prehn JHM. Increased Fusobacterium tumoural abundance affects immunogenicity in mucinous colorectal cancer and may be associated with improved clinical outcome 2023;101(7):829-841. Journal of Molecular Medicine (Berlin, Germany). doi:10.1007/s00109-023-02324-5

Duggan W, Kisakol B, O'Connell E, Matveeva A, **O'Grady A**, McDonough E, . . . Prehn J. (2022). Multiplexed immunofluorescence imaging reveals an immune rich tumor microenvironment in mucinous rectal cancer characterized by increased lymphocyte infiltration and enhanced PD-1 expression. Dis Colon Rectum 2023;66(7):914-922 doi:10.1097/dcr.000000000002624

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### **Active Grants and Grants Awarded**

Dr Ann Hopkins/Professor Siobhan Glavey, Developing a non-rodent xenograft model of multiple myeloma and its use in testing novel antagonists of JAM-A signalling: HRB/ HRCI, 30th Nov 22, €262.415

Professor Siobhan Glavey, Professor John Quinn, Molecular pathogenesis of extramedullary disease in multiple myeloma: Beaumont Hospital Foundation, 29<sup>th</sup> May 2023, €22,357

Professor Siobhan Glavey, Snapshot audit of multiple myeloma treatment regimens in Ireland: Amgen,16<sup>th</sup> Dec 2022, €30,619

Professor Siobhan Glavey, Investigating novel therapeutic vulnerabilities to target high-risk multiple myeloma: Breakthrough Cancer Research, 30<sup>th</sup> May 2022, €2,500

Professor Siobhan Glavey, The impact of Genetic Expression Profile on Depth of Response and Survival in Multiple Myeloma: Janssen, 17<sup>th</sup> Dec 2019, €92,149

Professor Siobhan Glavey, The impact of genetic expression profile on depth of response and survival in Myeloma: Celgene, 6<sup>th</sup> Nov 2019, €135,000

Professor Siobhan Glavey, Validation of prognostic gene expression signatures and Minimal Residual Disease (MRD) testing in relapsed refractory multiple myeloma patients in the bone marrow and at extramedullary sited in multiple myeloma in Ireland: RCSI /Amgen Seed Funding, 30<sup>th</sup> Nov 2019, €100,000

Professor Siobhan Glavey/Dr Harmony Black, Elucidating the molecular mechanisms of upregulated NCAPG, ZWINT and NUf2 in the pathogenesis of high-risk multiple myeloma and validating their potential as therapeutic targets for personalised medicine approaches: Multiple Myeloma Ireland, 1st Oct 2021, €10,000

Dr Roisin McAvera, Investigating Cell Cycle & Mitotic Therapeutic Vulnerabilities for the Treatment of SKY92 High-Risk Multiple Myeloma: Haematology Association of Ireland, 1st Nov 2022, €10,000

Dr Roisin McAvera, Educational Grant for conference attendance: Janssen, 10<sup>th</sup> Mar 2023, €2,500

### **Innovation and Commercialisation Activities**

In 2022 Beckman Coulter Life Sciences, a global leader in laboratory workflow automation and innovation released the NGeniuS liquid handling system, a purpose-built liquid handler for Next Generation Sequencing (NGS) library preparation. Tony O'Grady and Robert Cummins were central to the development of this system and worked closely with Beckman from initial hardware and software design and functionality through to final launch. As part of this collaboration, Beckman will install the system in the Pathology department at no cost in 2023. As next generation sequencing becomes a broader focus for research labs globally, this system will greatly enhance the department's capabilities in this area.

# PHARMACY & BIOMOLECULAR SCIENCES

#### Overview

The School of Pharmacy & Biomolecular Sciences (PBS) continues to grow and diversify across both education and research and is currently placed in the 201-250 category in the QS World University Rankings by subject.

In terms of education, the revised MPharm curriculum, underpinned by innovative pedagogical approaches and technology, was launched to 84 students. Sept. 2022.

PBS also officially welcomed the inaugural class of the BSc in Advanced Therapeutic Technologies (ATT) a future focused programme, fusing digital technology with traditional science, to 47 students. Sept. 2022.

The MSc TAPM (Technologies and Analytics in Precision Medicine) is entering its 2<sup>nd</sup> year with a new Micro-credential option; a set of seven bite size modules running over 4-weeks. Sept. 2022.

To accommodate the increased student numbers, renovations were made to our laboratories. A newly refurbished Science Teaching Laboratory opened, to cater to the biological and pharmaceutical sciences across the BSc ATT and MPharm, Sept. 2022. Furthermore, a newly refurbished Kiran Pathak Patient Centred Care Laboratory opened in Oct. 2022

PBS continue to collaborate with Soochow University, China on the development of a Joint Educational Institute, SUDA-RCSI International College of Pharmaceutical Innovation.

In terms of research, PBS has been successful with 43 new grants totaling €6,426,407, 165 publications, 4 patents, and has developed three spin-out companies; Inthelia Therapeutics, co-founder and CSO Steve Kerrigan, OncoLize co-founder and CSO Helena Kelly and ProbMet, co-founder Damir Vareslija.

# **Summary of Key Achievements / Academic Activities**

### Promotions 2022 - effective from October 2022

Marian Brennan promoted to Associate Professor Annie Curtis promoted to Associate Professor Shane Cullinan promoted to Senior Lecturer Joan Ni Gabhann-Dromgoole promoted to Senior Lecturer

Dr Ben Ryan promoted to Deputy Head of School (Programmes Innovation), April 2023 Professor Judith Harmey promoted to Programme Director, BSc ATT programme, April 2023

# 2022 - 2023 new appointments

Chiara De Santi, Lecturer in Immunology, (LOA cover), Aug. 2022

Edmund Gilbert, Lecturer (maternity cover) and SUDA Lecturer, Jul. 2022

Ciaran Kelly, Lecturer in Human Genomics and Computational Biology (maternity cover), Jan 2023

Gemma O'Connor, Lecturer in Regulatory Affairs (Specialist), (part-time), June 2023

Fabian Sweeney, Lecturer (maternity cover), Oct. 2022

Susan Butler, Project Manager for the HCI Programme, May 2023

Ceara Cooper, Project Manager SUDA-RCSI Int. College of Pharmaceutical Innovation, Jan. 2023

Laura Colon-McKenna, Marketing and Recruitment Lead, Jan. 2023

Margaret Donnelly, Teacher Practitioner (part-time), July 2022

Michelle Kirrane Scott, Teacher Practitioner Management, Professionalism and Leadership, Oct. 2022

Emmet McCann, Uniphar Teacher Practitioner, Aug. 2022

Sinead McGonagle, Teacher Practitioners (part-time), July 2022

Sheenagh McCarthy, Senior Pharmacy Technician, (maternity cover), Aug. 2022

Thomas Callanan, Senior Operations Co-ordinator, Oct. 2022

Magdalena Paduch, Operations Co-ordinator, July 2022

Kevin Smith, Operations Co-ordinator, July 2022

John Alexander, Biopharmaceutical Manufacturing Specialist, (part-time) June 2023

Oliver Fay, Biopharmaceutical Manufacturing Specialist, (part-time) June 2023

### **Additional Roles**

Dr Roger Preston, Deputy Head of School (Curriculum Development), School of Postgraduate Studies, Oct. 2022

Dr Sudipto Das, Deputy Head of School (Professional Doctorate and taught MSc programmes), School of Postgraduate Studies, Oct. 2022

Professor Judith Strawbridge, Director of the Masters of Pharmacy (MPharm) Programme: ongoing

Dr Shane Cullinan (Yr 1-3) Deputy Programme Director (MPharm) Sept. 2022 - June 2023

Dr Michelle Flood (Yr 4 & 5) Deputy Programme Director (MPharm) Sept. 2022 - June 2023

Dr Joan Ní Gabhann-Dromgoole, BSc ATT Deputy Programme Director. May 2023

Dr Fiona O'Brien, Deputy Director Erasmus Programme. July 2022

Dr John Hayden, Clinical Liaison lead. July 2022

Professor Judy Harmey and Dr Frank Moriarty have been elected as the Professor/Associate Professor and Lecturer/Senior Lecturer representatives on Academic Council for a two-year term. Oct. 2022 Dr Aisling O'Leary, PBS representative on new Sustainability and Climate Health Committee. March 2023 Dr Michelle Flood, RCSI representative PPI Ignite Lead to May 2023; Lead on PPI Research, July 2022. Professor Judith Strawbridge, Lead for PPI in Education, to May 2023

Dr Michelle Kirrane Scott appointed Lead for PPI in Education and RCSI representative PPI Ignite Lead May 2023

Professor Emeritus John Waddington was interviewed by the Max Planck Institute for the History of Science in relation to the historical development of biological psychiatry and schizophrenia research in post-war Britain. Aug. 2022

### **Teaching Training completed**

HPEC 2022 – 2023: Completed: Edmund Gilbert, Stephen Keely, Christine McAuliffe, Sinead McGonagle. Fabian Sweeney

Michelle Kirwan Scott: Professional Diploma in Clinical Leadership (October 2022 – May 2023)

### **Novel Academic Teaching/ Assessment**

Celebrating Patient and Public Involvement (PPI) in RCSI

PBS welcomed over 100 patients and public partners to RCSI to acknowledge the importance of PPI in education and research. Judith Strawbridge (PBS), RCSI PPI in Education and Michelle Flood RCSI PPI Ignite Lead, welcomed the patients; panel discussion was chaired by Sumi Dunne (Department of General Practice). The students on the panel articulated how patients transform their learning and help them connect on an emotional level. The event launched the PPI Ignite Festival in RCSI. October 2022

#### Race Equality

Marian Brennan lead on the Education and Research workstream for the development and implementation of the RCSI Race Equality Action plan; included faculty training through the HPEC Diploma 2022 – 2023 and inclusion of Race Equity workshop in the BSc ATT programme. 2022 – 2023.

PBS staff have contributed significantly to the implementation of the THEPII Medicine curriculum which involves teaching and assessment delivery to the restructured integrated systems based modules, introduction of Case Based Learning, move to Programmatic Assessment, move from % to GPA scoring, development of a Student Choice Module, contributing to restructured personal tutoring programme, introduction of student Learning Communities. 2022 – 2023.

#### **MPharm**

Michelle Flood was appointed as RCSI representative to a national working group that will plan the implementation of the new Core Competency Framework for Pharmacists in academic programmes and placements. This group will lead the redesign of the existing shared modules and the competence assessment process for pharmacy students on placement. April 2023

The current MPharm degree programme has incorporated aspects of climate change, the environmental threats of delivery of healthcare, medicines use and antimicrobial resistance to global health along with sustainable solutions in Year 4 Global Public Health Module in both the teaching and assessment elements (2022 – 2023). Plans are now in place to introduce a new module on planetary health and sustainability to the revised MPharm programme. May 2023.

Gráinne Cousins introduced a community-engaged learning workshop in MPharm (GPH). This was an interactive workshop with a community advocacy group for people who use drugs, and a person with experience of opioid dependency. The focus of the workshop was to learn, from service users' perspective, the impact of structural, public and personal stigma associated with substance use, and how they can, as members of society and future pharmacists, challenge stigma. As appropriate for community-engaged learning, students were required to reflect on this experience as part of the module assessment. It is now part of the curriculum. Sept 2022.

Shane Cullinan introduced MyDispense to teaching in PBS, a virtual dispensing and patient counselling platform used by institutions around the world. [Oct 2022] RCSI is the only institution in Ireland to use such software. After piloting it on a small scale with very positive feedback from students, it has now been expanded with S. Cullinan and Senior Pharmacy Technicians, working to incorporate it to the entire Pharmacy course. May 2023

The Senior Pharmacy Technicians (Louise Enright, Tara Hayden, Sheenagh McCarthy) initially introduced Optional Dispensing Clinics to MPharm students in 2021. These clinics provide students time to practice their core dispensing skills and have been further developed in 2022 offering near-pear assisted teaching to additionally benefit students learning. The novel optional teaching sessions were shortlisted for the Education Innovation Awards RCSI June 2023.

#### **BScATT**

BScATT Programme Directors and PBS staff including Cristina Ruedell Reschke and Laura Brady, Programme Manager, FutureNeuro, have contributed to the design and inclusion of Public Patient Involvement (PPI) in the new BScATT program. It is envisioned that this program will allow students to explore the practical and ethical considerations of implementing PPI with best practice and scientific rigour. Students will have the unique opportunity to engage with PPI contributors to learn directly from patients who are working in partnership with researchers Sept 2022.

The BScATT includes credit bearing Professional Formation modules focused on the development of power skills. A team building workshop was introduced which also served as an icebreaker where teams of students build tents with some members "blind" and other members without the use of the use of hands due to frostbite. Sept 2022.

A workshop on future careers with staff and guest speakers from the Biopharma Industry outlining their often circuitous career path was provided for the BScATT students. Feb. 2023

#### **MSc TAPM**

The MSc TAPM programme launched 7 x 5 ECTS bearing microcredentials which are bite size modules running over 4-weeks with an aim to enhance knowledge and upskill individuals across a range of topics. These include: Bioinformatics/Biostatistics, Human Genetics/omics, connected healthcare, Al/machine learning in healthcare, Innovation - Translating the concept, Leadership development and contemporary issues in healthcare. Ultimately, as a long term vision these microcredentials once stacked will enable award of Pg-Cert or Diploma. Sept. 2022

#### **Significant Awards**

- James S. O'Donnell elected into the Royal Irish Academy; Ireland's leading body of experts in sciences & humanities. Provides expert advice; manages research projects; publishes books & journals. A tremendous accolade reflecting his hard work & impact in Vascular Biology & Haematology. May 2023
- Inthelia Therapeutics, PBS spin-out company, Co-Founder and CSO Steve Kerrigan, was awarded a
  prestigious award from the BLUE KNIGHT QuickFire Challenge. The company received the award
  based on its ground-breaking work on non-antibiotic therapies for sepsis. Dec. 2022

### Research Day Awards March 2023

- Public Patient Involvement (PPI) in Research: Joan Ni Gabhann-Dromgoole (Academic Staff)
- Public Patient Involvement (PPI): Padraig Carroll, (Postdoc) PI: Michelle Flood
- Vice Chancellor Commercialisation Innovation Award for commercialisation of research through RCSI spin-out company PrOBMet: Damir Vareslija
- Invention Disclosure Award: Ololade Lawal, (PI: Sudipto Das) and German Prozdeev (PI: Steve Kerrigan)
- Patents granted in 2022: Tracy Robson, Steve Kerrigan, Helena Kelly.
- International Graduate Student Conference Winner, Soochow University; Danielle Nader, PhD student, (PI: Steve Kerrigan) Nov. 2022

#### **Academic Awards**

- Roger Preston, ICVB, Best Scientific Presentation, Haematology Association of Ireland Annual Meeting 2022. October 2022
- Sudipto Das, Best Oral presentation award, National Audit and Research Day; Children's Health Ireland. May, 2023

#### **Postdoctoral Awards**

- Dr Aisling Rehill, Postdoctural Researcher PI: Roger Preston, 2022 International Society of Thrombosis and Haemostasis (ISTH) Early Career Travel award. July 2022
- Dr Gemma Leon, Postdoctoral Researcher, PI: Roger Preston, Best Postdoctoral Oral Flash Presentation, Irish Society of Immunology conference. Sept. 2022
- Dr Aisling Rehill, Postdoctoral researcher PI: Roger Preston, Award: Best Scientific talk, Haematology Association Ireland conference. October 2022
- Dr Aisling Rehill, Postdoctoral researcher PI: Roger Preston: 2023 Eberhard F. Mammen Young Investigator Award – awarded by Seminars in Thrombosis and Haemostasis Journal, June 2023

#### **Postgraduate Awards**

- Dr Helen Fogarty, IHS Registrar/HRB ICAT Fellow and PhD student, PI: James O'Donnell, President's Prize, Haematology Association Ireland conference. October 2022
- Dearbhla Doherty, PhD student, PI: James O'Donnell, Best Clinical Talk, Haematology Association Ireland conference. October 2022.
- Ellen Finnegan, PhD student, PI: Sudipto Das, Best Oral presentation, Breakthrough Cancer Research section, Irish Association of Cancer Research Annual meeting. February, 2023
- Ololade Lawal, PhD student, PI: Sudipto Das, Best Oral digital presentation, AASLD Clinical Highlights in Pediatrics and Young Adults category; European Crohn's and Colitis Organisation. (ECCO) Conference. March 2023
- Ellen Finnegan, PhD student, PI: Sudipto Das, Best Oral presentation, All Ireland Chromatin Consortium meeting. June, 2023

### **Undergraduate Awards**

- Anthony Maher MPharm Class 2022, Servier Award for Clinical Research and AstraZeneca Valedictorian Award. Nov.2022
- Delphi Morris 4th year MPharm, Supervisor: J.Dowling, Global Undergraduate Awards Highly Commended Award. September 2022
- Anna Dillon 4th year MPharm, Servier Award for undergraduate research. September 2022
- Woei Shan Ong, Pharmacy Student, NUI Dr HH Stewart Scholarships 2022 Second Prize in Pharmacy, February 2023
- Alainn Wong, 4th Year MPharm student, who received the prestigious Perrigo International Travel Award 2023 to travel to the University of Santiago de Compostela and carry out research in Professor Hipólito Gómez-Couso. May 2023

#### Staff Membership of External Committees 2022 - 2023

### Robert Byrne

- Member Governance Committee for Irish Heart Attack Audit, run by NOCA (2021-2025)
- Committee Member, (HPRA) Advisory Committee on Medical Devices 2021-2025)
- Elected Secretary and Executive Committee Member, European Association for Percutaneous Coronary Intervention (EAPCI) 2022-2024
- Member ESC Regulatory Affairs Committee (2014-2024)
- Chair, European Society of Cardiology (ESC) Task Force on Clinical Practice Guidelines for the Management of Acute Coronary Syndrome (ACS) 2022-2023
- Member, Organising Committee of TCT Connect in New York (TransCatheter Therapeutics) TCT Connect – features live case-based transmissions from around the globe, late-breaking clinical trials and science, virtual training. (2022-2024)
- Member of CORE-MD Consortium and Lead for Work Package One to review evaluation of High-Risk Medical Devices. 2023 - 2024

#### Gráinne Cousins

- National Drug Strategy Research Sub-Committee [reports to the National Oversight Committee] ongoing
- Expert contributor to Council of Europe Project Drug-Prep on how to strengthen Europe's preparedness to respond to drug trends and challenges. October 2022

#### Shane Cullinan

 International Pharmaceutical Federation Policy Committee charged with reviewing and updating the Nanjing Statements which describe the envisioned future for pharmaceutical education needed to enhance professional standards worldwide. Sept 2022

#### Judith Coppinger

Invited Guest Editor- Frontiers in Pharmacology. May 2022 - 2023

#### Dermot Cox

• Irish Association of Pharmacologists, Executive Committee Secretary, Nov. 2022

#### Michelle Flood

 RCSI Representative on NIAC (National Immunisation Advisory Committee) Nov. 2022 – present Steering Group member, PPI Ignite Network, July 2022

### John Hayden

- Member of the National Research Ethics Committee. May 2021 2024
- Transition of Care to Adult Services (Children and Young People) National Clinical Advisory Group Member [since May 2022]

# Brian Kirby

- International editor for Neuroscience Research Notes Ongoing
- Member of the Council of the Pharmaceutical Society of Ireland. 2022 2023

### Helena Kelly

• Appointment to UK & Ireland Controlled Release Society Committee. July 2022

# Michelle Kirrane Scott

- Accredited coach with European Mentoring and Coaching Council (EMCC) Feb. 2023
- Steering Group member, PPI Ignite Network, May, 2023

#### Steve Kerrigan

- Member Royal Irish Academy (RIA) Life and Medical Sciences Multidisciplinary Committee 2022– 2026
- Member European Sepsis Alliance research working group 2019-present

#### Matthew Lynch

RCSI representative on All Ireland Pharmacy Conference (AIPC) Organising Committee. March 2023

#### Christine McAuliffe

 National organising committee All-Ireland Interprofessional Healthcare Challenge (AIPEC) March 2023

#### Maria Morgan

• External Member of Letterkenny IT Ethics Committee 2022-2023

### Frank Moriarty

- Chair, Irish College of General Practitioners Research Ethics Committee, July 2022-present
- Vice-chair, Geriatrics Special Interest Group, International Society for Pharmacoepidemiology, August 2022-July 2023
- Clinical External Expert Panel member, Health Products Regulatory Authority, November 2022present
- Member of Polypharmacy Guidance Development Group, Scottish Government, July 2022-present
- Member of Polypharmacy Training Expert Advisory Group, Irish Institute of Pharmacy, June 2022-February 2023
- Vice-Chair, HRB-CSO Research Dara Governance Board. Ongoing
- Editorial board member of the Journal of Multimorbidity and Comorbidity journal. Ongoing.

#### Darran O'Connor

- Deputy Chair, Breast Cancer Now Grants Committee, 2022 2023
- Chair, Breast Cancer Now Dame Vera Lynn Clinical Fellowships Committee, June 2023

#### James O'Donnell

• Appointed to membership of Royal Irish Academy (MRIA) May 2023

#### Jamie O'Sullivan

- Co-chair of the International Society for Thrombosis and Haemostasis Scientific and Standardization Committee (SSC), Von Willebrand Factor group. 2022-2025
- International Society for Thrombosis and Haemostasis (ISTH) 2023 congress, Committee member for scientific theme on Vascular Biology. 2022-2023

# Cristina Rudell Reschke

- Invited member ILAE Special Scientific Task Force on Chronobiology (part of ILAE Neurobiology Commission. Ongoing to May 2025
- Academic member of the Irish Epilepsy League. Ongoing to October 2025

# Judith Strawbridge

- Member of IPPOSI's Education and Advisory Group. Ongoing
- Member of INHED Executive Committee. Ongoing
- Member of PPI Ignite Working Group on PPI in Undergraduate and Postgraduate Education. Ongoing

# Zeibun Ramtoola

PaedF Working Party of the European Pharmacopoeia under the European Directorate for the Council
of Europe's Quality of Medicines & HealthCare (EDQM); ongoing

#### Tracy Robson

- Member, All-Island Cancer Consortium Implementation Group. Ongoing
- Irish Representative on National EU Cancer Society's Committee. Ongoing
- Secretary of the Scientific Committee, Irish Radiation Research Society. Ongoing
- Member, Organising & Scientific Programme Committee EACR-AACR-IACR. Jan 2023 2024
- Member, Organising Committee IACR 60th Anniversary Special Session. Jan 2023 2024

#### Orna Tighe

ESP Forum (Ending Sexual violence, Supporting survivors & Promoting consent); ongoing

### Damir Vareslija

- Breast Cancer Now Tissue Bank, Tissue Access Committee Member. February 2021 2024
- Breast Cancer Now Grants Committee. May 2023 May 2024

#### John Waddington

- External Member of Clinical Academic Promotions Committee, Trinity College Dublin 2022 2023
- Member of Board of Directors, St. John of God Research Foundation; ongoing

#### **External Examinerships**

- Marian Brennan, External Examiner for Biological Sciences, Queens University Belfast, UK. Oct. 2020
   Oct 2024
- Gianpiero Cavalleri, Phd Extern, University of Oxford, UK. Aug. 2022
- Judith Coppinger, PhD Extern, University of South Hampton, UK. Feb. 2023
- Jennifer Dowling, PhD Extern, TCD. July 2022
- Frank Moriarty, PhD Extern, University of Queensland, Australia. March 2023
- Darran O'Connor, PhD Extern, Queen's University Belfast, UK. March 2023
- Judith Strawbridge, External Examiner, MPharm Programme and MSc in Advanced Pharmacy Practice, Ulster University, UK. 2022 – 2025

#### Seminars, National/International Conferences organised by staff

Gianpiero Cavalleri, Organising Committee, Deliberative Dialogue on Neurogenomics and Research. The event was designed such that recommendations emerging from this dialogue could inform the implementation of the National Strategy for Accelerating Genetic and Genomic Medicine in Ireland. November 2022

Darran O'Connor, Organiser: Research Symposium, Soochow University, May 2023

Tracy Robson, President and Organising Committee, IACR 59th Annual Conference, February 2023 Damir Vareslija, Organised and Chaired the Dublin Steroid Cancer Conference, October 2022

# **Staff List**

Professor and Head of School of Pharmacy and Biomolecular Sciences (PBS) Tracy Robson MIBiol, FRSB, PhD

### Leadership team:

Associate Professor & Deputy Head (Education)

Judith Strawbridge BSc (Pharm), MSc (Hospital Pharmacy), PhD, MPSI

Professor in Pharmacology & Deputy Head (Research) Steve Kerrigan BSc (Hons), MSc, PhD, CBiol, FRSB

Associate Professor & Deputy Dean, SUDA-RCSI International College of Pharmaceutical Innovation, Soochow University, China

Brian Kirby PhD, MSc(LMD), PgDip (HPE), MPSI, PG Dip HPE

Associate Professor in Pharmacy and Deputy Head of Innovations (Mar. 2022 – Apr. 2023) Helena Kelly BSc (Pharm), Dip (Quality Improvement), PhD, MPSI

Senior Lecturer & Deputy Head of Innovations (from April 2023)

Programme Director BSc in Advanced Therapeutic Technologies, (to April 2023)

Ben Ryan BA (Mod), BSc (Pharm), Dip (Quality Imp.), Dip (Stat), MPharm, PhD, MPSI, PG Dip HPE

Professor of Pharmacology & HoS staff nominee on Leadership Team (2021 – 2023) Niamh Moran BSc, PhD, PG Dip HPE

Senior Lecturer & HoS staff nominee on Leadership Team (2021– 2023) Judith Coppinger PhD, PG Dip HPE

Senior Lecturer and Head of Academic Operations Orna Tighe MSc (Dubl) PhD

Head of Laboratory Operations John O'Brien MSc

Academic Quality and Operations Manager Aurea Conroy BA

Academic Staff:

Professor of Cardiovascular Therapeutics, Alice Stanton MB, BCh, BAO, FRCPI, PhD

Professor of Vascular Biology and Director, Irish Centre for Vascular Biology James O'Donnell, PhD, FRCPI, FRCPath

Professor, Director of Cardiology, Mater Private Hospital, RCSI Chair of Cardiovascular Research Robert Byrne MB BCh PhD MRCPI FESC

Professor and Director, Epilepsy Programme, Beaumont Hospital Norman Delanty MB, BCh, BAO, BSc, FRCPI

Professor in Human Genetics

Deputy Director of FutureNeuro and Deputy Head Office of Research and Innovation (ORI) Gianpiero Cavalleri BSc, PhD

Professor of Drug Delivery

Sally-Ann Cryan BSc (Pharm), HDip (Statistics), Cert (Third Level Teaching), PhD, MPSI

Professor of Molecular Oncology & Head of School of Postgraduate Studies Darran O'Connor BA, MSc, PhD

# Professor Emeritus

Joint Professor of Pharmacology, College of Pharmaceutical Sciences, Soochow University, China; Visiting Professor, Department of Pathophysiology and Therapeutics, Hoshi University, Japan. John L. Waddington PhD, DSc, FBPhS, MRIA

Professor Emeritus David Croke MA, PhD, FRCPath Ray Stallings BA, MSc, PhD

Visiting Professors

Shane Desselle BS.(Pharm), PhD (Pharm & Health Care)

Thomas Renné MD. Phd

Derek Stewart PgCert (Tertiary Learning), BSc (Pharm), MSc (Clin Pharm), PhD, FRPharm, FFRPS

Adjunct Professor of Pharmaceutics

John Climax PhD, DSc

Associate Professor in Biochemistry, Deputy Director of Graduate Entry Medicine Programme Marian Brennan MSc, PhD, PG Dip HPE

Associate Professor of Biochemistry, Deputy Programme Director of BSc Advanced Therapeutic Technologies (to April 2023) Programme Director BSc Advanced Therapeutic Technologies Judy Harmey BSc, PhD, PG Dip HPE

Associate Professor in Molecular Medicine, Director of Year 1 Medicine Programme and Academic Director of the Recreation, Education and Community Health Programme
Maria Morgan BSc, PhD, PG Dip HPE

Associate Professor in Pharmacology Dermot Cox BSc, PhD, PG Dip HPE

Associate Professor of Immunology
Annie Curtis PhD, PG Dip HPE

#### Senior Lecturers

Gráinne Cousins BA (Hons), MSc (Health Psychology), Dip (Statistics), PhD, PG Dip HPE Michelle Flood BSc (Pharm), MSc (Healthcare Manag), Cert (UX design), PhD, MPSI, PG Dip HPE John Hayden BPharm, MPharm, Dip (Hosp Clin Pharm), PhD, MPSI, Prod Cert (Gov), PG Dip HPE Sam Maher BSc (Hons), PhD

Claire McCoy BA (Mod), PhD, PG Dip HPE (sabbatical June 2022)

Shane Cullinan BPharm, PhD, MPSI, PG Dip HPE

Frank Moriarty BSc (Pharm), MPharm, PhD, MPSI, PG Dip HPE

Joan Ní Gabhann-Dromgoole BSc, PhD, PG Dip HPE

Fiona O'Brien BSc (Hons), MSc (Medical Genetics), PhD, Cert (Leadership), PG Dip HPE

Aisling O'Leary BSc (Pharm), PhD, MPSI

Sarah O'Neill BSc, DipAppPhys, PhD, PG Dip HPE

Roger Preston BSc, PhD, PG Dip HPE

Zeibun Ramtoola BSc (Pharm), CDip.AF (ACCA), PhD, MPSI, PG Dip HPE

Stephen Keely PhD, PG Dip HPE

Lecturer, Programme Director MSc in Technologies and Analytics in Precision Medicine (TAPM) Sudipto Das B.Tech, M.Res, PhD, PG Dip HPE

Lecturer, Governance role, QEO Office 50/50

Matthew Lynch BSc (Pharm), MSc (Commun Pharm Practice), DGov, Dip (Legal Stud), MPSI, PG Dip HPE

### Lecturers

Stephanie Annett MPharm, PhD, MPSI, PG Dip HPE
Rob Argent BSc (Hons) Physio, PhD, PG Dip HPE
Katherine Benson BSc (Hons) Genetics, PhD, PG Dip HPE
Chiara De Santi BSc, MSc, PhD
Jennifer Dowling PhD, PG Dip HPE
Sarinj Fattah PhD, PG Dip HPE
Edmund Gilbert, PhD, PG Dip HPE
Alice Holton BSc (Pharm), MPharm, MPSI, PG Dip HPE
Ciaran Kelly, BSc (Hons) Human Genetics, PhD
Valeria Limapassos BSc, MPhil, PhD
Gemma O'Connor MPharm, PhD, MPSI
Cian O'Leary BPharm, MPharm, PhD, MPSI, PG Dip HPE
Jamie O'Sullivan PhD, PG Dip HPE
Ingmar Schoen PhD, PG Dip HPE
Fabian Sweeney PhD, PG Dip HPE MPSI

Lecturer & Academic Director for International Citizenship Award
Cristina Ruedell Reschke BSc Pharm, MSc, PhD, Cert (Leadership), PG Dip HPE

Honorary Lecturer and Postdoctoral researchers Gillian Moore PhD

Damir Vareslija PhD, PG Dip HPE

#### Practice Educators

James Horan (APPEL) BSc (Pharm) MPharm, MPSI

Anne Teresa Morgan BSc (Pharm), C.Dip (Comm Pharm), MPSI

### Teacher Practitioner Practice Educators

Margaret Donnelly MSc (Clinical Pharm), BSc (Pharm), MPharm, MPSI

Louise Fitzsimons BSc (Pharm), MPSI, PG Dip HPE

Michelle Kirrane Scott MPharm, MSc Clinical Pharmacy, MPSI

Christine McAuliffe PgDip (Adv. Pharm Practice) MSc (Clin Pharm), PG Dip HPE, MPSI

Sinead McGonagle BSc (Pharm), MPharm, PG Dip HPE, MPSI

#### Boots Teacher Practitioner

Clare O'Neill BSc, MPSI

#### Uniphar Teacher Practitioner

Emmet McCann MB, BCh, BAO MPharm (Hons), MPSI

#### Project Manager for the HEA/HCI Programme

Lone Skoubo Bertelsen MSc, PhD

Susan Butler BA (Mod), MSc. Project Management

# Programme Manager, SUDA-RCSI Int. College of Pharmaceutical Innovation, Jan 2023

Ceara Cooper BSc Mgmt, PG Dip Stats, MPhil, IPMA-D

### Marketing and Recruitment Lead for the HEA/HCI Programme

Jennifer Kirwan BA (Marketing)

Laura Colon-McKenna BComm, MScMDP

### Enterprise Lead for the HEA/HCI Programme

Arun Christin Thariath B. Tech (Biomedical Eng.), M.E (Biomedical Eng.)

### Learning Technologist

Kevin Redmond BEng, BSc, PGCE

# Biopharmaceutical Manufacturing Specialist

John Alexander BSc (Biol), MSc (Bacteriology)

Oliver Fay BE (Hons), Chem Eng, MSc Prod. Design

### Senior Pharmacy Technicians

Louise Enright HCert (Pharm Tech), BA (Psych), MPsychSc.

Tara Hayden BEd (Hons), PgDip (HPE)

Sheenagh McCarthy Cert (Pharm Tech)

## Senior Technicians

Sophie Cassidy BSc

Seamus McDonald MSc

Colin McElduff BA (Hons), Dip (Science Lab Tech)

Jim Slattery Cert, Dip (Science Lab Tech)

# Laboratory Technician

Emma Halpin BSc (Hons)

Sarah Lynch PhD

### Clinical Research Fellows

Einas Elsheikh (iPATH)

Lauran McGovern BComm, MScMDP

# Clinical Geneticist

Marie T. Greally MB, MSc, FACMGG

Honorary Senior Research Fellow

Mary B. Fitzsimons PhD

Honorary Research Fellow Anthony Kinsella MSc, FIS

Phlebotomist
Karen Canning

*iPath/ICVB Programme Manager* Noelle Costelloe BSc

Personal Assistant to Head of School Anne Grady DipBusiness

Coordinator: Teaching and Laboratory Services
Olwen Foley

Senior Operations Coordinator Thomas Callanan, BSc (Hons)

Operations Coordinator

Magdalena Paduch MSc (Economics) Kevin Smith BBS (Hons), MA (Management in Ed.)

Honorary Associate Professor Conor Buckley BA, BAI (Mechanical Eng.), PhD Karen O'Connor BSc (Pharm), PhD (Pharmaceutics), MPSI Stan O'Neill BSc (Pharm), MPSI

Honorary Clinical Associate Professor

Brian Cleary BSc (Pharm), MSc (Clin Pharm Pract), PhD, MPSI

Michael Fitzpatrick Dip (Adv Comp Program), Dip (Inf Sys) BSc (Pharm), MSc (Clin Pharm), MSc (Health Informatics), MPSI

Patricia Ging BPharm, MSc, MPSI

Dolores Keating BSc (Pharm), Dip (PsychPharm), MSc, MPSI,

Catherine Nugent BSc (Pharm), Dip (ClinPharm), MPSI

Gabor Szeplaki MD, PhD, FESC, FEHRA

Honorary Clinical Senior Lecturer

Usama Boles, MB, BCH, MSc, FRCPI, FHRS, FESC, FEHRA, PhD

Jennifer Brown BSc (Pharm), MSc, MPSI

Nuala Doyle BSc, BSc (Pharm), MSc (Hosp Pharm), MPSI

Daniele Giacoppo MD

Keira Hall MPharmS, PgDip Clinical Pharmacy (Second Care), PgCert (Prescrib & Patient Assess), MPSI

Moninne Howlett BSc (Pharm), MPSI

Debbie Murray MPharm, Pg Cert (Prescrib Sci), MPSI

Audrey Purcell BSc (Pharm), PgCert (Psych Pharm), MPSI

Diarmaid Semple BSc (Pharm), MPharm, MPSI

Honorary Clinical Senior Lecturer; Honorary Research Fellow Roisin Colleran MB BCh, MRCPI, FESC

Honorary Clinical Lecturers

Aisling Beakey MSc (Pharm), Dip (Pharm Pract), B.Pharm MPSI

Lelia Cocoman BSc (Pharm), MPSI

Seamus Dunne BSc (Pharm), MPharm

Garreth Dooley MA, MPharm, MSc, MPSI

Elena Fernandez BSc (Pharm), Dip Advanced Studies (DEA), Dip (Patient and Safety), MSc (Reg Affairs), MPSI

Leah Gaughan MSc (Hosp Pharm), MPharm, BSc, MPSI

Dzana Hadzic BSc (Pharm), MSc (Hospital Pharmacy), MPSI

Eavan Higgins Pg Dip (Stats) Pg Dip (Clin Pharm Pract), MSc (Patient Safety), BSc (Pharm), MPSI

Caroline Hynes BSc (Pharm), MSc (Psychiatric Pharm Pract), MCMHP, MPSI

Grainne Johnston BSc (Bochem & Cell-Biology), BSc (Pharm), MPSI

Sinead Keane BSc (Pharm), MPSI

Brian Kearney B Pharm MPSI

Brian Kehoe BSc (Pharm) MSc (Health Inform), MPSI

Brona Kehoe BSc (Pharm), MPharm, MSc, MPSI

Maríosa Kieran BSc (Pharm), MSc (Hosp Pharm), MPSI

Deirdre Lenehan BSc (Pharm), MSc (Hosp Pharm), MPSI

Jennifer Lydon BSc(Pharm), MPharm, MPSI

Dearbhla Murphy BSc (Pharm), MSc (Clin Pharm Practice), MPSI

Mairead O'Connor BSc, MPharm, MSc (Clin Pharm), MPSI

Marie O'Halloran B.Pharm, MSc (Pharm), MPSI

Nuala Scanlon BSc (Pharm), Dip (Clin Pharm), MPSI

Sharon Sutton BSc (Hons), MSc (Pharm) MPSI

Kara Tedford BSc (Pharm), MSc, BSc (Chem), MPSI

Caroline Walsh MSc (Pharm), PhD (Pop. Health), Cert (Leadership) MPSI

Hilary Ward BSc (Pharm), PgDip (Clin Pharmacy, Pharma &Therap)

#### Honorary Senior Lecturer

Mirza Catibusic BSc (Pharm), EMA, PAT, EPC

Barry Heelan PhD (Pharm)

Ronan MacLoughlin BSc, Dip (Q&RA), PhD (Medicine), MBS

Richard Maguire BSc (Anal Sci), PhD, Dip (QI), Dip (Mgmt Studies)

### Honorary Lecturer

Deirdre Corrigan BSc (Pharm), Dip (Stats & QI), PhD, Adv. Dip (Leadership & Coaching) Noel Gaule BSc (Anal Sci), MSc (Indus. Pharm), Exec. Dip (Strategic Growth Biopharma) Fergal O'Shaughnessy BSc (Pharm), MPharm, MSc, MPSI

#### Researchers and students

- 4 Clinical researchers
- 43 Post Docs
- 13 Research Assistants
- 12 MD students
- 77 PhD students (incl. 6 Clement Archer Scholars)
- 9 Co-supervised PhD students
- 4 MSc students
- 8 Visiting Scientist (2 MD, 2 MSc, 3 Phd, 1 PD)

170 sub-total

# Research Project supervision (Jun 2022 – Jul 2023)

- 3 APPEL students, 4th year, Sept Dec 2022
- 5 Student Select Project (SSP) students, Nov Dec 2022
- 18 Student Select Project (SSP) students, Jan May 2023
- 33 MPharm programme students in 4th year, SRS module, 2023 (Lab based)
- 44 MPharm programme students in 5th year, CRS module, 2023 (Desk based)
- 14 Visiting students, March June 2023
- 23 Research Summer School students, June Jul 2023

140 sub total

Total number during period: 310

### **Higher Degrees**

Ahmad Bahlool, Inhalable retinoic acid loaded nanoparticles as host directed immunotherapy for tuberculosis. PhD, RCSI & NUI 2023.

Anna Blümel, Systems based approaches for refining precision medicine in breast cancer. PhD, RCSI & NUI 2023.

Shannon Cox, Regulation of the lung fibroblast immune response by the core clock protein BMAL1. PhD, RCSI & NUI 2023.

Joan Devin, Evaluation of health information technologies with respect to medication safety, workflow, and data usage potential in maternal and newborn care. PhD, RCSI & NUI 2022.

Helen Fogarty, Endotheliopathy in COVID-19 and sickle cell disease. PhD, RCSI & NUI 2023.

Emily Greenan, Investigating the clinical and molecular characteristics of immune-mediated dry eye disease. PhD, RCSI & NUI 2023.

Thomas Guest, Investigating the clearance of FVIII. PhD, RCSI & NUI 2023.

Camille Hurley, The role of immune subpopulations in governing therapeutic response in early HER2+ breast cancer. PhD, RCSI & NUI 2022.

Tehreem Khalid, The development of an implantable bioengineered tracheal scaffold for respiratory tissue regeneration. PhD, RCSI & NUI 2022.

Kamelia Krysiak, Medication safety in neonatal intensive Care. PhD, RCSI & NUI 2022.

Melanie Murphy, Medicines optimisation in older adults with cancer. PhD, RCSI & NUI 2023.

Danielle Nader, Taking Control: Hijacking of endothelial integrin-signalling networks by pathogens. PhD, RCSI & NUI 2022.

Frances Nally, Nanodelivery of microRNA based therapeutics to macrophages. PhD, RCSI & NUI 2023.

James O'Siorain, Circadian inflammazomes. PhD, RCSI & NUI 2023.

Sean Patmore, Disentangling the role of Von Willebrand factor in breast cancer metastasis. PhD, RCSI & NUI 2023.

Patrick Moloney, Epilepsy in the mTORopathies molecular mechanisms and precision medicine opportunities. RCSI & NUI 2023.

### **Active and New Grants Awarded**

Stepanie Annett, Uncovering the role of FKBPL in psoriasis, National Psoriasis Foundation Grant and Fellowships Program, 7/6/2021 [US\$ 49,967] €43,248

Stephanie Annett, Evaluation of the functional effects FKBPL mutation, rs28732176, and implications for psoriasis, National Psoriasis Foundation, Summer Student Research Grants; 7/01/2022, €4,588

Stephanie Annett, The Dramatic Effects of FKBPL on Adiposity via Gene Therapy (DEFLATE), Higher Education Authority, North-South Research Programme, 9/1/2022, €166,818

Rob Argent, A qualitative exploration of the experience of caregivers who care for children prescribed VOXZOGO, a first to market treatment for achondroplasia, Industry – Cash, 4/28/2022 € 1,000

Rob Argent, EPIVIEWS - Exploring Patient Impact & Value In Epilepsy Wearables for Seizure Monitoring, Irish Research Council (IRC), Enterprise Partnership Scheme Postgraduate Scholarship, 9/1/2022, €83.000

Katherine Benson, Modifying Mendel's Paradigm: Genetic modifiers of monogenic renal disease, Enterprise Ireland H2020 Support ERC support programme, 8/4/2021, €15,999

Ciara Byrne, Defining the role of von Willebrand factor in inflammatory disease, Haematology Association of Ireland, Novartis Fellowship Award, 11/1/2022, €7,500

Robert Byrne Coordination of Research and Evidence for Medical Devices (CORE-MD), EU Horizon 2020, Societal Challenge 1 Health, demographic change and wellbeing 1/12/2021, €109,900

Robert Byrne, e-Yukon Registry, Industry, Strategic Partnership, 9/22/2022, €70,000

Gianpiero Cavalleri, CSSO Report, Industry, Service Contract, 6/24/2019 €836

Gianpiero Cavalleri, SFI Centre for Research Training in Genomics Data Science, Science Foundation Ireland (SFI),Research Centres, 11/14/2019, €117,155

Gianpiero Cavalleri, Centre for Research Training in Genomics Data Science - Cohort 2, Beaumont Hospital Foundation, Research Project, 7/2/2020, €20,000

Gianpiero Cavalleri, Centre for Research Training in Genomics Data Science - Cohort 2, Science Foundation Ireland (SFI), Research Centres, 7/2/2020, €664,419

Gianpiero Cavalleri, Blockchain and Al-Enabled Stratified Trial System, Enterprise Ireland, Disruptive Technologies Innovation Fund (DTIF), 9/11/2020, €927,653

Gianpiero Cavalleri, NEURO-GENSEQ Informatics interrogation for Epileptic Encephalopathy trios Using Published Data, Industry – Cash 1, 11/19/2020, €9,555

Gianpiero Cavalleri, Improving the diagnostic rate and prognostic value of genomic testing in polycystic kidney disease, Health Research Board, HRB/ HRCI Joint Funding Scheme, 11/29/2020, €244,641

Gianpiero Cavalleri, National PPI Network Award, Health Research Board / HRB, PPI Ignite awards, 2/8/2021, €376,360

Gianpiero Cavalleri, Advanced skills for data analytics in neurological diseases, EU Horizon 2020, Marie Sklodowska-Curie actions CoFund, 4/1/2021, €2,230,200

Gianpiero Cavalleri, Research Collaboration with Sequence Bioinformatics Inc., IndustryStrategic Partnership, 5/24/2021, €11,350

Gianpiero Cavalleri, The value of a diagnosis of monogenic epilepsy in response to AEDs in patients with refractory focal epilepsy Industry – Cash, 9/16/2021, €99,924

Gianpiero Cavalleri, Exome sequencing to identify modifiers of polycystic kidney disease Beaumont Hospital Foundation, Research Project, 9/29/2021 €20,000

Gianpiero Cavalleri, Exome sequencing to identify modifiers of polycystic kidney disease Science Foundation Ireland (SFI), Research Centres - targeted projects 9/29/2021 € 63,816

Gianpiero Cavalleri, Centre for Research Training in Genomics Data Science - Cohort 3 Science Foundation Ireland (SFI),Research Centres, 11/10/2021 €220,501

Gianpiero Cavalleri, National Covid-19 Biobank, Health Research Board, COVID19 Funding Call, 9/7/2022, €88,618

Gianpiero Cavalleri, GDI: Federated Genomics Infrastructure, European Union, Digital Europe Programme, 10/5/2022, €128,668

Gianpiero Cavalleri, GDI: Federated Genomics Infrastructure, Health Research Board, Clinical Trial Feasibility Award, 10/5/2022, €202,655

Gianpiero Cavalleri, REVAMP: REdefining phenotype VAriability and genetic Modifers in PKD, Industry Strategic Partnership, 10/27/2022, €137,800

Gianpiero Cavalleri, Centre for Research Training in Genomics Data Science - Cohort 4, Science Foundation Ireland (SFI), Research Centres, 11/28/2022, €399,060

Gianpiero Cavalleri, Characterisation of diverse ancestries and stratification of common and rare variation within the UK Biobank Science Foundation Ireland (SFI), Research Centres -- targeted projects, 12/2/2022, €127,611

Gianpiero Cavalleri, CRT Data Generation Fund 2023, Science Foundation Ireland (SFI), Research Centres -- targeted projects, 3/22/2023, €25,453

Judith Coppinger, Investigating the role of bronchial EVs in activating neutrophils in early Cystic Fibrosis. Cystic Fibrosis Foundation, Research Awards, 10/13/2021, US\$157,316

Judith Coppinger, Characterising a role for BAG3 in NSCLC, Trinity College Dublin, Research Project 3/14/2023, €2,000

Grainne Cousins, Prescription drugs with potential for misuse: A multi-indicator analysis of supply, patterns of use and the associated health burden in Ireland over the past ten years. Health Research Board, Secondary Data Analysis Projects (SDAP), 11/17/2021, €249,856

Dermot Cox, Investigation of the haemostatic and thrombotic potential of stored platelets Industry, Strategic Partnership, 1/29/2021, €41,400

Dermot Cox, Study of rolE of PlateletS In Sepsis (SEPSIS), Health Research Board / HRB Investigator-Led Projects (ILP), 10/20/2022, €368,566

Sally-Ann Cryan, Star-MAT Technologies,Enterprise Ireland, Commercialisation Fund Project Support , 8/7/2020, €401,727

Sally-Ann Cryan, CURAM Phase II P1-06: Development of an advanced tubular scaffold prototype for tracheal regeneration, Science Foundation Ireland (SFI), Research Centres - targeted projects, 11/20/2020, €236,650

Sally-Ann Cryan, Optimisation and evaluation of a novel vibrating mesh nebuliser with combination aerosol validation studies in advanced simulated and ex vivo lung perfusion models, Industry – Cash, 4/29/2021 €14,700

Sally-Ann Cryan, Development of inhalable ATRA-loaded nanoparticles as targeted host-directed immunotherapy for tuberculosis. Aerosol Society UK, 7/4/2022, €6,000

Sally Anne Cryan, Development & characterisation of a pre-vascularised tubular scaffold for tracheal regeneration that supports the formation of an iPSC-derived epithelium, Marie Skłodowska-Curie, MSCA Postdoctoral Fellowship, 01/03/2023, €398,425

Shane Cullinan, HRB Postdoctoral Internship Programme 2021, Health Research Board / HRB, HRB Internship Programme, 9/5/2022, €138,526

Annie Curtis, MacroCLOCK - Circadian Control of Macrophage Mitochondria: A New Approach in the treatment of Chronic Inflammatory Disease, Science Foundation Ireland (SFI), Career Development Award (CDA), 12/12/2017, €607,934

Annie Curtis, Molecular Clock control of the pro-inflammatory cytokine IL-1B. A Mechanistic Link between Circadian Disruption and Cardiovascular Disease, Irish Research Council (IRC), Consolidator Laureate Award, 3/22/2018, €599,988

Annie Curtis, Lab Safari 2018, UNESCO (United Nations Educational, Scientific and Cultural Organization), L'Oreal UK and Ireland Women in Science Fellowships, 3/27/2018, €5,646

Annie Curtis, Programming macrophages to suppress inflammation and promote healing after knee injury. A novel microparticle based therapeutic strategy against Post-Traumatic Osteoarthritis, Irish Research Council (IRC), Government of Ireland Postgraduate Scholarship, 4/17/2018, €112,125

Annie Curtis, Timed to Perfection: Development of a novel circadian drug delivery platform and its application in osteoarthritis, Science Foundation Ireland (SFI), Research Centres - targeted projects, 7/4/2018, €193,375

Annie Curtis, Cardiovascular Rhythms: Does the macrophage molecular clock regulate thrombogenesis to impact on the daily variation in cardiovascular disease incidence? Irish Research Council (IRC), Government of Ireland Postgraduate Scholarship, 5/26/2021, €110,500

Annie Curtis, ChronoVac - Harnessing the power of the circadian clock to enhance vaccine efficacy, Science Foundation Ireland (SFI), Frontiers for the Future Projects, 10/1/2021, €545,597

Annie Curtis, METABOLATE: METABOLic immuno-engineered biomATErials, EU Horizon 2020, Marie Sklodowska-Curie actions CoFund, 10/13/2022, €65,760

Annie Curtis, METABOLATE: METABOLic immuno-engineered biomATErials, Science Foundation Ireland (SFI), Research Centres, 10/13/2022, €117,792

Annie Curtis, METABOLic immuno-engineered biomATErials, EU Horizon Europe, MSCA – Postdoctoral Fellow, 3/9/2023, €242,476

Sudipto Das, Examining the diagnostic and functional role of a novel DNA meThylation signaturE in predicting ColoRectAl Cancer meTastasis – INTERACT, Health Research Board / HRB, Investigator-Led Projects (ILP), 7/5/2022, €369,787

Sudipto Das, DETECT - DNA Methylation Signatures for Personalising Ulcerative Colitis Treatment, Science Foundation Ireland (SFI), Starting Investigator Research Grant (SIRG), 11/19/2018, €552,185

Sudipto Das, Role of DNA methYlation and geNe expression alterations in development of eArly-onset priMary sclerosIng cholangitis in ulCerative colitis, European Crohns and Colitis Organisation (ECCO), Research Grant, 11/10/2020, €79,569

Sudipto Das, Application and functional validation of a Machine-leArninG based approach for identification of Novel therapEutic Targets in Colorectal cancer – MAGNET, Irish Research Council (IRC), Enterprise Partnership Scheme Postgraduate Scholarship, 6/24/2021, €110,500

Sudipto Das, Examining the diagnostic and functional role of a novel DNA meThylation signaturE in predicting ColoRectAl Cancer meTastasis – INTERACT, Health Research Board / HRB, Investigator-Led Projects (ILP), 7/5/2022, €369,787

Chiara De Santi, Genetics in a loop: study of the role of circular RNAs in cystic fibrosis, Industry, Strategic Partnership, 5/12/2021, US\$125,000

Chiara DeSanti, Optimisation of delivery of small RNA molecules to in vitro models of human type II alveolar epithelial cells. Health Research Board, HRB Summer Student Scholarships, 01/04/2023, €2,400

Michelle Flood, Understanding and Enhancing Medication Safety During COVID-19: The CONNECTS (COVID-Nineteen Medication Safety) Toolkit, Health Research Board / HRB, Research Collaborative for Quality and Patient Safety (RCQPS), 11/18/2020, €139,954

Michelle Flood, HealthEIR Project, Health Service Executive, Project Grants, 1/1/2022, €293,850

Edmund Gilbert, Footprints of Irish demographic history revealed with whole-genome-sequencing, National University of Ireland / NUI, Post-Doctoral Fellowship in the Sciences, 7/30/2021, €105,892

Judith Harmey, Characterisation of a novel model of metastatic breast cancer, Breast Cancer Ireland Project Grant, 11/15/2018, €8,000

Syed Muhammad Ali Hasnain, Dementia and Technology (DaTe): Understanding technology use and need for dementia care at home, Irish Research Council (IRC), New Foundations 10/26/2021, €10,870

John Hayden, A framework for assigning shelf-lives for aseptically manipulated small molecule preparations in unlicensed hospital compounding units Children's Health Foundation, Research Project, 3/2/2021, €4,900

John Hayden, Incorporation of pharmacy technicians into the medication administration process in a national paediatric cancer in-patient service, Children's Health Foundation, Research Project, 3/2/2021, €4,900

John Hayden, Use of Semi/Fully automated systems in the preparation of products in the Aseptic Compounding Unit at Children's Health Ireland at Crumlin: a feasibility study, Children's Health Foundation, Research Project, 11/3/2022, €4,900

Ellie Karampini, Terminal Sialylation as a novel regulator of VWF biosynthesis and intracellular trafficking in endothelial cells bio, CSL Behring, Professor Heimburger Award, 3/15/2022, €25,000

Stephen Keely, Travel Grants, Physiological Society, Departmental Seminar Scheme, 5/20/2014 €3,842

Stephen Keely, Pharmaceutical and nutraceutical targeting of the farnesoid X receptor for treatment of chroinc intestinal diseases, Science Foundation Ireland (SFI), Investigators programme, 9/4/2017, €1,019,556

Stephen Keely, Unlocking the therapeutic potential of quinoa for treatment of intestinal inflammation, Industry – Cash, 6/18/2021, €24,000

Stephen Keely, Unlocking the therapeutic potential of quinoa for treatment of intestinal inflammation, Irish Research Council (IRC), Enterprise Partnership Scheme Postgraduate Scholarship, 6/18/2021 €110,166

Helena Kelly, OncoLize pre-clinical seed round Industry Strategic Partnership, 1/19/2023, € 301,374.00 Steven Kerrigan, Defining a novel strategy of adhesion to host carbohydrates employed by Streptococcus oralis, National Institute for Health (NIH) US Project Grants, 6/9/2020, US\$ 71,138

Steven Kerrigan, Repurposing drugs for the treatment of covid-19, Industry, Strategic Partnership, 7/8/2020, US\$174,400

Steven Kerrigan, Case Feasibility Study for investigating Host-Directed Barrier Function-Oriented Therapeutics for the Treatment/Prevention of Gastrointestinal Infection & Related Disorders, Enterprise Ireland Commercial Case Feasibility Fund, 12/21/2022, €14,938

Steven Kerrigan, Utility of multivalent carbohydrate binding module (CBM) proteins in in vitro models of cell attachment/permeabilization by Sepsis-causing bacteria, Industry, Strategic Partnership, 2/5/2018, €33,619.

Michelle Lavin, A Novel Approach to Stratification of Pregnant Women at Risk of Postpartum Haemorrhage (PPH) - the PPH Prevention (PPHP) study, AXA Research Fund, Postdoctoral Fellowships, 11/28/2018, €125,000

Claire McCoy, MicroRNA-155 as a master regulator of macrophage plasticity in Multiple Sclerosis, Science Foundation Ireland (SFI), Future Research Leaders, 7/4/2017, €1,549,814

Claire McCoy, Investigating the impact of miR-155 transport via macrophage extracellular vehicles in neuroinflammation and remyelination, and the implications in a mouse model of multiple sclerosis, Irish Research Council (IRC), Government of Ireland Postgraduate Scholarship, 4/17/2018, €112,125

Claire McCoy, MiRNAs as therapeutics for neurorepair in Multiple Sclerosis, EU Horizon 2020, Marie Sklodowska-Curie actions IF- Individual Fellowships, 2/22/2021, €184,590

Claire McCoy, Unraveling the role of miRNAs, in particular miR-448 in the demyelination process and its potential as a novel therapeutic in primary progressive MS. International Progressive MS Alliance, Challenges in Progressive MS Awards, 6/25/2021, €74,992

Claire McCoy, Identifying Novel MicroRNA-Target Relationships in Neuroinflammation and MS, All Ireland MS Research Network AlMS-RN, Summer Scholarship, 7/6/2022, €2,400

Niamh Moran, The Role Of vitamin D And O3FA In Platelet Function and Histology within the Cardiovascular system, Embassy (Saudi Arabia), PhD Studentship, 4/24/2018 €51,955

Niamh Moran, Non-thrombotic Functions of Platelets: an examination of the Platelet Secretome and its impact on Wound-Healing and Angiogenesis. University of Baghdad, Iraq, Research Project, 6/7/2021, €58,328

MARIA Morgan, Working scientifically; white coat not needed, Biochemical Society, Scientific Outreach Grants, 5/16/2019, GB£ 863

Frank Moriarty, Sláintemedicines – a roadmap to essential medicines entitlement for universal healthcoverage, Health Research Board / HRB, Investigator-Led Projects (ILP), 8/26/2019, €282,871

Frank Moriarty, Data CDRx project: Data analysis of policies and practices for safe, appropriate controlled drug prescribing, Health Research Board / HRB, Secondary Data Analysis Projects (SDAP), 3/23/2021, €249,993

Joan Ni Gabhann-Dromgoole, Targeting dry eye disease (DED) and ocular graft-versus-host disease (GVHD) with novel microRNA-based therapeutics, Irish College of Opthalmologists - ICO Novartis RESEARCH Award, 10/16/2018, €35,000

Joan Ni Gabhann-Dromgoole, Targeting ocular inflammation in dry eye disease with novel microRNA-based therapeutics, Royal Victoria Eye & Ear Hospital Research Foundation, Research Awards, 11/1/2018, €15,000

Joan Ni Gabhann-Dromgoole, Multiomic profiling of ocular inflammation in dry eye disease relating to ocular graft versus host disease, Royal Victoria Eye & Ear Hospital Research Foundation, Research Awards, 2/20/2020, €10,000

Joan Ni Gabhann-Dromgoole, Establishing a 2D and three-dimensional model of inflammatory dry eye disease to test novel therapeutics using primary human conjunctival epithelial cells', Irish College of Opthalmologists – ICO, Novartis RESEARCH Award, 9/15/2020, €17,500

Joan Ni Gabhann-Dromgoole, Establishing a two dimensional and three-dimensional model of inflammatory dry eye disease to test novel therapeutics using primary human conjunctival epithelial cells, Royal Victoria Eye & Ear Hospital Research Foundation, Research Awards, 11/16/2020, €7,200

Joan Ni Gabhann-Dromgoole, Multiomic characterization of ocular graft versus host disease from patient tears, Royal Victoria Eye & Ear Hospital Research Foundation, Research Awards, 1/24/2022, €15,000

Joan Ni Gabhann-Dromgoole, Profiling emerging immune signatures associated with developing inflammatory ocular graft versus host disease and adverse outcomes from corneal transplantation (PREDICT), Enterprise Ireland, Horizon Europe Support, 9/15/2022, €7,995

Joan Ni Gabhann-Dromgoole, Conference Support Funds, Industry, Strategic Partnership, 5/10/2023, €4,546

Fiona O'Brien, Identification/Development of TPN Standardised Media for Compatibility Assessment with Paediatric Injectable Products, Industry, Strategic Partnership, 3/16/2021, €30,000

Fiona O'Brien, Developing a validated risk assessment tool for compatibility of TPNs with intravenous medications used in neonates and children, Industry, Strategic Partnership, 7/1/2022, €43,875

Darran O'Connor, BET inhibition as a therapeutic strategy for invasive lobular breast cancer, Susan G Komen, Career Catalyst Research Grants,8/31/2018, €407,990

Darran O'Connor, Examining the functional and diagnostic potential of methylation sensitive enhancers in metastatic colorectal cancer, Irish Research Council (IRC), Government of Ireland Postgraduate Scholarship, 4/24/2019, €105,666

Darran O'Connor, Refining the OncoMasTR multi-gene prognostic signature using tumour mircoenvironment data, 20296, Industry – Cash, 03/2020, €88,868

Darran O'Connor, Rational Treatment for Invasive Lobular Breast Cancer, 19583, Irish Research Council (IRC) - GOI Postdoctoral Fellowship, 07/2020, €109,568

Darran O'Connor, Combination treatment for invasive lobular breast cancer, Worldwide Cancer Research (formerly AICR), 10/2020, GB £199,324

Darran O'Connor, The European Invasive Lobular Breast Cancer Training Network to Advance Precision Therapy – INVOLVE, Enterprise Ireland, Horizon 2020 Support, 9/15/2021, €12,388

Darran O'Connor, Spatial transcriptomics of early-stage ER+/Her2- breast cancer, Science Foundation Ireland (SFI), SFI CRT Data Generation Fund, 11/30/2022, €126,877

James O'Donnell, iPATH, Industry - Cash, 2/14/2017, €1,266,249

James O'Donnell, iPATH, Science Foundation Ireland (SFI), Strategic Partnerships Programme, 2/14/2017, €1,586,587

James O'Donnell, The Low Von Willebrand factor Ireland Cohort of Kids (LoVIC-K) study, (ILP-POR-2017-008), Health Research Board / HRB,Investigator-Led Projects (ILP), 9/27/2017, €369,360

James O'Donnell, Irish Centre for Vascular Biology PhD Studentship Training Programme, Institute of Cardiovascular Science, TCD at St James Hospital, PhD Studentship Training Programme (1), 9/24/2018, €68,800

JamesO'Donnell, Irish Centre for Vascular Biology PhD Studentship Training Programme, Irish Blood Transfusion Service, PhD Studentship Training Programme (2), 9/24/2018, €68,800

James O'Donnell, The Sickle Vascular Ireland Consortium (SiVIC) project, National Children's Research Centre Crumlin / NCRC Paediatric Research Project Grants, 7/29/2019 €297,202

James O'Donnell, ICAT Fellowship Helen Fogarty, Wellcome Trust, ICAT Programme, 10/18/2019, €,348,312

James O'Donnell, Zimmerman Program on the Biology of VWD, National Institute for Health (NIH) USA, Project Grant, 01/01/2020, US\$1,053,000

James O'Donnell ICAT Fellowship Dearbhla Doherty (Year 2-4), 20259, Wellcome Trust, 01/06/2020, €321,416

James O'Donnell/ Jamie O'Sullivan Investigating coagulopathy and vasculopathy in covid-19 pathogenesis research, Strategic Partnership, Industry, 07/01/ 2020, US\$313,700

James O'Donnell, Defining the role of terminal sialylation in modulating the increased half-life of recombinant VWF (Vonvendi) compared to plasma-derived VWF, Industry Strategic Partnership, 10/1/2021, €164,826

James O'Donnell, Von Willebrand disease pathogenesis - defining the role of gylcan structures, Science Foundation Ireland (SFI), Frontiers for the Future Awards, 10/1/2021, €1,257,285

James O'Donnell, TOLERATE - An integrated approach to restore tolerance in autoimmune disease, EU Horizon Europe, Marie Skłodowska-Curie, MSCA – Doctoral Network, 10/1/2022, €262,728

James O'Donnell, The role of von Willebrand factor glycans in regulating its physiological and pathological clearance, ZonMw Rubicon, 4/24/2023, €172,820

Cian O'Leary, The Development of an Implantable Bioengineered Tracheal Scaffold for Respiratory Tissue Regeneration, Science Foundation Ireland (SFI), Research Centres -- targeted projects, 3/23/2018, €94,900

Cian O'Leary, Bioengineered 3D in vitro platforms of the primary tumour microenvironment and targeted metastasis tissue as a model for stromal-mediated regulation of the pre-metastatic niche in lung cancer, Irish Research Council (IRC), Government of Ireland Postgraduate Scholarship, 6/2/2021, €110,500

Cian O'Leary, Renovate Pharma: A Pharma Spin-Out for Novel Inhaled Reformulation, Enterprise Ireland, Commercialisation Fund8/16/2021, €522,504

Jamie O'Sullivan, Defining the role of tinzaparin-VWF axis in modulating breast cancer metastasis, Industry – Cash, 8/2/2019, €110,000

Jamie O'Sullivan, Defining the role of Tinzaparin-VWF axis in breast cancer metastasis, Industry Service Contract, 4/16/2020, €632

Jamie O'Sullivan/Claire Comerford, Elucidating the Role of Von Willebrand Factor in Multiple Myeloma Biology, 20215, Multiple Myeloma Ireland Education grant, 04/18/ 2020, €10,000

JAMIE O'Sullivan, Coagulation-Cancer crosstalk; understanding the role of low molecular weight heparin in breast cancer metastasis, Irish Research Council (IRC), Enterprise Partnership Scheme Postdoctoral Fellowship, 6/18/2021, €96,417

Jamie O'Sullivan, Novartis Fellowship; understanding the role of von-Willebrand Factor (vWF) in pancreatic cancer thrombosis and metastasis, Haematology Association of Ireland, Novartis Fellowship Award, 1/27/2022, €10,000

Jamie O'Sullivan, Defining the role VWF-ADAMTS13 axis in haematological cancer associated thrombosis, Irish Research Council (IRC), Starting Laureate Award, 6/7/2022, €399,038

Jamie O'Sullivan, Examining the role of von Willebrand Factor as a potential therapeutic target in triple negative breast cancer, Science Foundation Ireland (SFI), Frontiers for the Future Projects, 11/24/2022, €614,341

Roger Preston New Approaches to Understanding Blood Vessel Dysfunction in COVID-19 Patients, Science Foundation Ireland (SFI), COVID19 Funding Call, 11/13/2020, € 277,101

Roger Preston, Novel therapeutic approach to counter vaso-occlusive crisis in sickle cell disease using engineered activated protein C, 19391, NCRC/ National Children's Research Centre Crumlin, 12/01/2020 €247,192

Roger Preston, New approaches to exploit coagulation protease-receptor signalling for therapeutic benefit, Science Foundation Ireland (SFI), Frontiers for the Future Awards,3/10/2022, €950,091

Roger Preston, Understanding Increased Thrombotic Risk in Patients with Myeloproliferative Neoplasms: Linking Inflammation, Metabolism and Hypercoagulable, State Health Research Board (HRB), Investigator-Led Projects (ILP), 9/5/2022, €369,819

Zebunnissa Ramtoola, Research consultancy to private industries,Industry, Strategic Partnership, 1/1/2007, €15,825

Zebunnissa Ramtoola, Non-invasive delivery and targeting of protein therapeutics and vaccines: understanding the multi-factorial relationships between materials, formulation and process on biological interaction and in vi, Embassy (Saudi Arabia) PhD Studentship, 12/1/2013, €29,955

Zebunnissa Ramtoola, Understanding the multi-factorial relationships between materials, formulation and process on nanoparticles quality, biological activity and toxicity, Embassy (Saudi Arabia) PhD Studentship, 6/5/2014, €44,000

Thomas Renne Rudolf Marx Travel Award, Society for Thrombosis and Haemostasis Research eV GTH, Rudolf Marx Scholarship, 5/11/2022, €22,920

Cristina Ruedell Reschke, Restoration of circadian function as a novel therapy for epilepsy, Citizens United for Research in Epilepsy (CURE), The Taking Flight Award, 8/6/2020, US\$ 99,900

Cristina Ruedell Reschke, Training Activity in Epilepsy Research: the next steps towards precision medicine in epilepsy, Enterprise Ireland, Horizon Europe Support, 9/15/2022, €12,500

Cristina Ruedell Reschke, The impact of microglial circadian disruption in epilepsy development, Irish Research Council (IRC), Government of Ireland, Postgraduate Scholarship, 9/1/2022 €83,000

Cristina Ruedell Reschke Circadian biomarkers in pre-clinical and clinical Dravet Syndrome Irish Research Council (IRC), Enterprise Partnership Scheme Postdoctoral Fellowship, 9/1/2022, €106,365

Tracy Robson, Unravelling the role of FKBPL in Childhood Obesity, National Children's Research Centre Crumlin / NCRCPaediatric Research Project Grants, 6/26/2018, € 261,871

Tracy Robson, Realising FKBPL's therapeutic potential in ovarian cancer Industry - Cash 1, 7/10/2020, €129,124

Tracy Robson, Enabling Future Pharma: Beyond the Pill Higher Education Authority, Human Capital Initiative (HCI), 10/7/2020, €7,835,028

Tracy Robson, Targeting obesity induced metastasis though FKBPL-based therapeutics, Irish Research Council (IRC), Government of Ireland Postgraduate Scholarship, 05/18/2021, €110,500

Tracy Robson, Breaking the Obesity-Cancer Link; a Theranostic Role for FKBPL in Modulating Immunometabolism Across Disease Progression in Oesophageal Adenocarcinoma (OAC), Science Foundation Ireland (SFI), Frontiers for the Future Awards, 9/30/2021, €711,043

Ingmar Schoen, Validation of a new reference method for measuring mean platelet volume (MPV) International Council for Standardization in Haematology, Project Grant, 9/30/2020, €5,000

Ingmar Schoen, Mechanobiology of platelet contractility and secretion during thrombosis Science Foundation Ireland (SFI), Frontiers for the Future Projects, 8/13/2020, €332,216

Ingmar Schoen, Improved Transfusion Therapies for Major Haemorrhage, Irish Blood Transfusion Service, Project Grant, 12/20/2022, €300,000

Ingmar Schoen, Investigating the interactions between platelets and FVIII and non-factor products, Industry – Cash, 3/21/2023, €116,832

Ingmar Schoen, Investigating the interactions between platelets and factor VIII or non-factor products, Industry, Octapharma AG, 01/04/2023, €273,665

Ingmar Schoen, Platelet Biology at Fridge Temperatures Platelet Society Summer Studentship, 5/26/2023, €583

Judith Strawbridge, Adaptation and Evaluation of the Mental Health First Aid educational intervention for tertiary healthcare students, Saint John of God Hospital Project Grant, 8/2/2022, €120,000

Damir Vareslija Exploiting the Epigenome to Control Cancer-Promoting Gene-Expression Programs in Breast Cancer Brain Metastasis, Breast Cancer Now Scientific Fellowship, 8/5/2019, GB £664,304

Damir Vareslija Epigenetic and microenvironmental regulation of brain metastases, Science Foundation Ireland (SFI), Frontiers for the Future Projects, 9/21/2021, €487,500

#### **Innovation and Commercialization Activities**

Innovation / Patent / Invention Disclosures filed

- S. Das: Submitted Invention disclosure application to RCSI TTO (IDF-2022-07) A novel gene expression-based signature to predict disease progression in adult ulcerative colitis patients. Inventors: Sudipto Das, Ololade Lawal and Glen Doherty. July 2022
- S. Das: Enterprise Ireland Innovation Partnership (IPP), Title: Development of a diagnostic assay using a novel modality to early predict disease progression in Ulcerative Colitis patients; Principal Investigator Sudipto Das, IP20231045 (2023-2025) 2023
- S. Kerrigan: Submitted Invention Disclosure application to RCSI TTO Therapeutic strategy to treat elevated suPAR levels during microbial bloodstream infection. Inventors: Steve Kerrigan, Danielle Nader November 2022
- S. Kerrigan: Submitted Invention Disclosure application to RCSI TTO Novel therapeutic for the prevention and treatment of Clostridiodes difficile infection (CDI). Inventors: Steve Kerrigan, German Pozdeev September 2022
- S. Kerrigan; Patent Granted 07<sup>th</sup> October, 2022; Patent number JP7154585 (JAPAN) Title: A Method of Treating or Preventing Sepsis. Inventors: Steve Kerrigan
- H. Kelly; Patent granted Dec 27, 2022; Patent no. US 11,534,401 B2 Title Thermoresponsive hydrogel for intratumoral administration as a treatment in solid tumour cancers; Inventors Helena Kelly, Garry Duffy, Seona Rossi, Conn Hastings. Dec. 2022.
- H. Kelly PBS-RCSI Spin-out company OncoLize co-founder and CSO H. Kelly; licenced ChemoGel technology (March 2023) and secured initial VC seed investment of \$1.7m led by cornerstone investors Libertas Ergo Holdings (LEH) and Tailored Solutions. April 2023.
- T. Robson; Patent granted July, 5<sup>th</sup>, 2022; Patent no. US11376308B2. Title: Use of FKBP-L polypeptides and nucleic acids for the treatment of obesity (WO/2018/073591), US, EP; Inventors: Tracy Robson, A. Yakkundi, R. Bennett, et al. July 2022.

### **Publications**

Adenan, M.H., Khalil, M., Loh, K.S. incl. **Delanty, N**. et al. (2022). A retrospective study of the correlation between duration of monitoring in the epilepsy monitoring unit and diagnostic yield. Epilepsy and Behavior,136. doi: 10.1016/j.yebeh.2022.108919

Ahangari, M., Gentry, A.E., Riley, B.P. incl. **Waddington, J.L.** et al. (2022). Evaluating the role of common risk variation in the recurrence risk of schizophrenia in multiplex schizophrenia families. Translational Psychiatry,12(1). doi: 10.1038/s41398-022-02060-3

Aledo-Serrano, A., Battaglia, G., Blenkinsop, S., **Delanty, N**., et al. (2023). Taking action on climate change: Testimonials and position statement from the International League Against Epilepsy Climate Change Commission. Seizure, 10668-75. doi: 10.1016/j.seizure.2023.02.003

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- **Bahlool, A.Z., Fattah, S.**, **O'Sullivan, A.**, et al incl. **Cryan, S.-A** (2022). Development of Inhalable ATRA-Loaded PLGA Nanoparticles as Host-Directed Immunotherapy against Tuberculosis. Pharmaceutics,14(8). Doi: 10.3390/pharmaceutics14081745
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- **Bhandari, S.**, Dolma, P., Mukerji, M. incl. **Gilbert, E., Cavalleri, G.L.** et al. (2022). Population history and genome wide association studies of birth weight in a native high altitude Ladakhi population. PLoS ONE,17(9). doi: 10.1371/journal.pone.0269671
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- Blokland, G.A.M., Grove, J., **Chen, C.-Y.** incl. **Waddington, J.L**. et al. (2022). Sex-Dependent shared and nonshared genetic Architecture Across Mood and Psychotic Disorders. Biological Psychiatry,91(1) 102-117. doi: 10.1016/j.biopsych.2021.02.972
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## PHYSICIAN ASSOCIATES

### Overview

Eleven students in the sixth cohort completed the MSc in Physician Associate Studies in December 2022, had degrees conferred in May 2023. Currently, there are 30 students enrolled in the programme, with the ninth cohort expected to commence in January 2024. This cohort of students will include many who reside outside of Dublin County and will follow the pilot group of students (2022) in the remote/hybrid programme pilot. This education and workforce development innovation allows students to join the course from anywhere in the country. This will help to expand the footprint of PAs across the Republic and address critical workforce needs.

Following the Minister for Health's public acknowledgment of the profession, in recent months, faculty at RCSI have been working closely with the Department of Health and the HSE to progress recognition and some funding support of Physician Associates as part of the HSE workforce, in their workforce plans. The employment outlook continues to be strong, with demand for graduates exceeding the supply. 92% of graduates of the most recent cohort secured employment before completing their degree requirements. In January 2023, all 11 graduates completed the Irish National PA Examination, with a pass rate of 100%.

Finally, the programme continues to generate original research that forms the foundation of our evidence-based advocacy, helping to influence government policy and promote the progression of this role within the Irish health service.

#### **Summary of Key Achievements/Academic Activities**

In January 2023, we successfully launched the pilot of our remote/hybrid programme. Six students from Cork, Galway, Limerick, Kilkenny, and Drogheda began the course along with eight on-campus students.

In 2022, a steering committee was formed to conduct a feasibility study which progressed to the design and implementation of the pilot. The committee included various stakeholders including students, faculty, alumni, administrators, employers, and members of the programme's External Advisory Board. Recommendations included enhancing the on-campus classroom technology to conform with evidence-based design for distance learning, marketing and recruitment, enhancing the student experience, and ongoing programme evaluation. Formal feedback from students is collected every two months through surveys administered through the RCSI Quality Enhancement Office. After 7 months, the students have consistently rated the experience as very positive. Often the qualitative data echoes this student's statement "I could never have attended this programme if it were not for the remote/hybrid option". The programme is dedicated to workforce development and the expansion of the PA profession across the country. This innovation will help us to achieve this goal.

**Fulbright Scholar:** Successfully on-boarded Dr Kris Himmerick (USA) for a 3 month engagement with RCSI. Facilitated Ethics approval for research by Physician Associates and how they are incorporated into their respective "teams" across all sectors of the Irish health service.

#### **Academic Activities**

Lisa Alexander

- Professor Emeritus, The George Washington University, Washington DC.
- Peer Reviewer, Journal of Physician Assistant Education (USA).
- Past-President's Commission, Physician Assistant Education Association (USA)
- Member, PA Schools Council (UK)

#### Pauline Joyce

• External Examiner, PhD, Trinity College Dublin.

#### Sean Robinson

• OSCE Proctor, Faculty of Physician Associates (UK)

#### **Invited Lectures**

Lisa Alexander: *Physician Associates: Educational Innovation and Updates.* RCSI International Education Forum June 2022. Dublin, Ireland.

Lisa Alexander: *PA Pioneers and Champions*. The George Washington University School of Medicine and Health Sciences PA Program 50<sup>th</sup> Anniversary Celebration. October 2022. Washington DC.

Lisa Alexander: *Meeting the Accreditation Standard for Diversity*. Physician Assistant Education Association (PAEA) Annual Education Forum October 2022 San Diego, CA

Lisa Alexander: *PAs as Force Multipliers*. RCSI Meeting of Waterford University Hospital faculty. February 2023.

Lisa Alexander: *Opportunities for Training PAs as a Workforce Development Strategy.* Medical and Surgical Staff, Kerry University Hospital. February 2023.

Lisa Alexander: *Physician Associates in Ireland*. WHO's Fifth Global Forum on Human Resources for Health (Geneva and Virtual) April 2023.

Lisa Alexander: *Role of the Physician Associates in Surgical Hubs.* Creating the Workforce for New Surgical Hubs (RCSI/DOH) May 2023.

Pauline Joyce: Physician Associate Programme Update. Grand Rounds, Mullingar Hospital May 2022

Sean Robinson: *Physician Associates in Ireland.* The Physician Associate Podcast (James Catton). October 2022. <a href="https://podcasts.apple.com/ie/podcast/physician-associates-in-ireland/id1557378084?i=1000583649680">https://podcasts.apple.com/ie/podcast/physician-associates-in-ireland/id1557378084?i=1000583649680</a>

# **Staff List**

Programme Sponsor
Arnold DK Hill MCh, FRCSI

Programme Director and Professor Lisa Mustone Alexander EdD, MPH, PA-C

Medical Director

James Paul O'Neill FRCSI, MMSc, MD, MBA, ORL-HNS

Director of Education Sean T. Robinson DHSc, PA-C

Director of Quality and Clinical Engagement Pauline Joyce Ed.D, MSc, FFNMRCSI

Programme Coordinator Robyn Mullen

Emeritus Professor Denni Woodmansee

### **Publications**

Joyce P, Robinson S, Alexander L (2023) PAs in the Republic of Ireland, JAAPA 36(3): 1-5.

Joyce P, Alexander L (2023) A survey exploring factors affecting employment of physician associates in Ireland. Irish Journal of Medical Science https://doi.org/10.1007/s11845-022-03255-9

Joyce P (2022): Quality improvement in healthcare: an action learning approach, Action Learning: Research and Practice, DOI: 10.1080/14767333.2022.209151

Snyder, Jennifer PhD, PA-C; Hills, Karen MS, PA-C; Alexander, Lisa EdD, MPH, PA-C; Statler, Michel MLA, PA-C; Straker, Howard EdD, MPH, PA-C; Bowser, Jonathan MS, PA-C; Alesbury, Elizabeth BA. Meeting the Accreditation Standard for Diversity. The Journal of Physician Assistant Education 34(1):p 46-53, March 2023. | DOI: 10.1097/JPA.0000000000000488

#### **Posters**

Quality improvement in healthcare: an action learning approach. Poster presented at the National Patient Safety Office Conference, Printworks, Dublin Castle, October 2022.

Contributions of RCSI Physician Associate Graduates to the Healthcare System in Ireland. Hew Ja Jet, Dr Pauline Joyce, Professor Lisa Alexander. RCSI Charter Day Poster Presentation, February 2023.

### **Active Grants and Grants Awarded**

Alexander LM. 2022-23 Grant Cycle. Irish American Partnership (USA) December 2021. €45,000 (over 3 years) for student scholarships.

Joyce P & Brennan M 2022-23 Grant Cycle. INHED RIME. Exploring attitudes towards interprofessional teams and the team approach to care, from the perspectives of graduate entry medical students and physician associate students. €5,000.

# PHYSIOLOGY & MEDICAL PHYSICS

### Overview

The Department of Physiology and Medical Physics delivers teaching in the Schools of Medicine, Pharmacy and Biomolecular Sciences, and Physiotherapy, and has an active education and research programme. At Postgraduate level, we are involved in training PhD, MD, and Masters students. Our postgraduates are taught to interrogate research questions at the molecular level, while focusing on the importance of translating findings to clinical settings.

The Department hosts the FutureNeuro SFI Research Centre (neurological diseases), directed by Professor David Henshall, and several members are principal and funded FutureNeuro investigators.

The Centre for Systems Medicine (CSM) – directed by Professor Jochen Prehn – provides translational, multidisciplinary infrastructure and utilises computational tools to identify genes, proteins and metabolites implicated in human disease, develop new biomarkers and test novel targeted therapies for patients. The CSM hosts and collaborates in multiple European and national consortia (COLOSSUS, GlioResolve, PRECISION ALS, PRIME, NeuroInsight, InterTau, SFI NasPro, SFI-CRT-GDS, AICRI, PANIWATER, SURG-Water, COST Action PRESTO), focussing on cancer, neurological and metabolic disorders and waterborne diseases.

In addition to teaching commitments, our department is active in education and outreach nationally and internationally. Our researchers visit both primary and secondary schools, facilitating on-site visits and host the annual Mini Science Transition Year Programme.

# Summary of Key Achievements / Academic Activities

Key staff appointments to Department/School Professor Alexander Kel – Visiting Professor (01/06/2023)

National/international accreditation awards
My Green Lab Platinum Certificate (December 2022)

## Fulbright scholars

• Carmen Jeanette Stepek (PhD student); Supervisor: Niamh Connolly

#### Novel academic teaching/assessment strategies

- Dr Orlaith Brennan, IMCP Introduction to General Physics 1 and Introduction to General Physics 2 Module coordinator
- Dr Marc Sturrock, Erasmus Coordinator
- Dr Shona Pfeiffer, Development of a novel digitally-enhanced auscultation skills resource. This
  resource has been implemented across various schools within Medicine, Pharmacy and
  Physiotherapy. This resource has also been implemented in the College of Health Sciences,
  CQUniversity Australia and circulated to the Heads of Physiotherapy across Australia and New
  Zealand by the President of the Council of Physiotherapy Deans Australia and New Zealand.
- Dr Simon Furney, USMLE Programme Director
- Dr Tobias Engel, Module Lead Physiology for Physiotherapy
- Dr Triona Ni Chonghaile, Academic Lead for the Personal Tutor Programme and Module Lead for Renal Endocrine Biology module in GEM

#### Professor Annette Byrne

- Coordinator GLIORESOLVE (Horizon Europe Doctoral Network) and COLOSSUS Projects (H2020 Societal Challenge, Health) Director of the National Preclinical Imaging Centre (NPIC)
- Steering Committee Member for the Pan-European EuroPDX Consortium
- Reviewer for: Nature Communications, Theranostics, Molecular Cancer Therapeutics, Annals of Oncology, Clinical Cancer Research
- Member: American, Association for Cancer Research
- · Member: American Society of Clinical Oncology
- Member: Society for Neuro-Oncology
- Member: World Molecular Imaging Society

- Expert Grant Evaluator and Rapporteur for EC Horizon Europe funding programmes
- Mid-Term Programme Reviewer for EC Horizon Europe Awards
- Grant Reviewer: INSERM. France
- · Grant Reviewer: AIRC, Italy
- Grant Reviewer: La Caixa, Spain

### Professor Brona Murphy

- Academic Lead for ICHAMS
- Teaching hero award 2021
- Commercialization fund award from Enterprise Ireland Round 2
- Project award from Science Foundation Ireland Frontiers for the Future
- · Commercialization fund award from Enterprise Ireland Round 1
- Grant Reviewer, National Science Foundation
- Grant Reviewer, Czech Science Foundation
- Grant Reviewer, The French National Cancer Institute

### Professor Christopher Torrens

- Fellow of The Physiological Society
- Member & Ambassador of British Pharmacological Society
- · Academic Editor PLOS one
- Editorial Board Member Physiology News
- Reviewer for J Physiol, Adv Physiol. Ed, Scientific Reports, Hypertension
- Grant Reviewer for British Heart Foundation, Wellcome Trust

#### Professor David C Henshall

- Chair, Neurobiology Commission of the International League Against Epilepsy
- Co-chair, ILAE Climate Change Commission Task Force on Sustainability
- Coordinator, EPICLUSTER
- 2022 Irish Pharma Industry Awards Winner, Research & Development Achievement Award; FutureNeuro

#### Dr Helena Bonner

• (Trustee) Midlands Science Advisory and Board Member, 2022-2024

### Professor Jochen Prehn

• Reviewer, Norwegian Cancer Society

## Professor Kevin McGuigan

- Member of Editorial Panel for J Environ Chem Eng
- Fellow of the Institute of Physics
- · Fellow of the Royal Society of Chemistry

### Dr Marc Sturrock

- Peer Reviewer for: IET Systems Biology, PLOS Computational Biology, Frontiers in Applied Mathematics and Statistics
- Member: European Haematology Association

## Dr Niamh Connolly

- Grant reviewer: College of Experts, Parkinson's UK; National Science Centre, Poland
- Peer Reviewer: Cell Death and Disease
- Editor Special issue "Mitochondrial signaling in disease: from cancer to neurodegeneration": Frontiers in Cell and Developmental Biology
- RCSI Research Day Awards 2023: Highly Cited RCSI Senior Authored paper with Industry Collaboration 2017-2021
- FAI Women's Football Strategic Committee, member

#### Dr Orlaith Brennan

- European Commission, Marie Skłodowska-Curie Actions, Research and Innovation Staff Exchange (RISE) grant review committee
- European Commission, External expert assisting in the evaluation of grant applications and projects (2018– Present)

### Dr Shona Pfeiffer

- RCSI Student Partnership Champion Award awarded to Dr Shona Pfeiffer
- RCSI Student Innovation Challenge, co-lead and organised; listed as finalist for 'Innovation and Entrepreneurship Programme of the Year' in the ACEEU European Triple E Awards in Entrepreneurship and Engagement in Higher Education (2022).
- Reviewer: PLOS ONE (1932-6203); Frontiers in Cell and Developmental Biology (ISSN: 2296-634X);
   Cell Death & Disease (ISSN: 2041-4889); European Journal of Neuroscience (ISSN: 1460-9568);
   Frontiers in Neuroscience (ISSN: 1662-453X); BMC Cardiovascular Disorders (ISSN: 1471-2261);
   Annals of Medicine (ISSN: 1365-2060).
- Irish Clinical Academic Training (ICAT) Programme Supervisor.
- Editorial Board, Frontiers in Stroke Review Editor for Acute Stroke and Interventional Therapies.
- Reviewer, British Pharmacological Society

### Dr Simon Furney

- HRCDC member
- Science Council Irish Centre for High End Computing
- 2 PhD students awards SFI CRT in Genomics Data Science
- SFI CRT in Genomics Data Science Data Generation Fund Award
- Grant Reviewer Research Council of Lithuania, Israeli Ministry of Innovation
- · Associate Editor Frontiers in Genetics, Frontiers in Oncology

## Dr Triona Ni Chonghaile

- Irish Research Council Laureate Consolidator Award
- Ranked in Top 100 Medical Professionals in Ireland by Hospital Professional Magazines
- External Examiner for the BSc in Biomedical Science at University of Limerick
- · Grant Reviewer for Austrian Science Fund
- Ad hoc reviewer: Blood, Leukaemia, Leukaemia Research, Cell Death and Differentiation, Molecular Cancer Therapeutics, Cancers Journal, Blood Reviews, Hematologica Cancer Research, Cell Reports and Clinical Cancer Research.
- Associate Editor: Cancer Medicine
- · Elected to the editorial advisory board of FEBS Journal

### Dr Tobias Engel

- Grant reviewer: ERC, Swiss National Science Foundation
- Editorial Board, Purinergic signalling
- Associate Editor for Frontiers in Molecular Neuroscience, BMC Neurology

## **External Examinerships**

Professor Brona Murphy

PhD, University of Stuttgart, July 2022

### Professor Christopher Torrens

PhD, Kings' College London, November 2021

PhD, University of Birmingham, March 2022

Year 1 Medicine, Brighton & Sussex Medical School

MSc Clinical Physiology, University of Newcastle

### Professor David Henshall

PhD, University of Eastern Finland, 2021

## Dr Niamh Connolly

PhD, Ulster University, Derry, March 2022

Dr Simon Furney
Annual Review Panel SFI CRT in Genomics Data Science Cohort 3

Dr Tríona Ní Chonghaile Biomedical Science BSc, University Limerick BSc, Harvard University, Boston, April 2023.

*Dr Tobias Engel*Universidad Autonoma de Madrid, Spain

### Exceptional Events - Seminars, National/International Conferences organised by staff:

Professor Annette Byrne: "Research, clinical practice and rehabilitation: an evening to review and discuss ongoing advancements in brain tumour studies in Ireland", Public event, November 2022, Chair/Organiser.

Dr Helena Bonner: School Visits: 8 x Visits, (Laois, Offaly, Westmeath and Dublin).

Dr Helena Bonner: Talks on STEM Career Awareness for Science week November 2022 and throughout the Academic Year

Dr Helena Bonner & Dr Isabela Aparicio: Physiology Mini-Rounds Seminar Series (quarterly; started on June 23<sup>rd</sup>, 2022)

Dr Helena Bonner & Professor Jochen Prehn: RCSI Feb 2023 Mini Science TY Programme - 25 students. 2023 Mini Science TY programme – Dr Helena Bonner and Professor Jochen Prehn and the staff and students of the Physiology Department, Feb 2023

Dr Helena Bonner & Dr Triona Ní Chonghaile: The Research Seminars Series are co-ordinated by Dr Triona Ni Chonghaile and Dr Helena Bonner in conjunction with the Office of Research and Innovation Dr Christopher Byrne

Professor Kevin McGuigan: Podcast Episode 2: Water – running dry, or drowning? August 10<sup>th</sup>, 2022, <a href="https://shows.acast.com/looking-glass/episodes/episode-2-water-running-dry-or-drowning">https://shows.acast.com/looking-glass/episodes/episode-2-water-running-dry-or-drowning</a>

Dr Niamh Connolly: Green Lab Lunchtime Talks - October 20th, 2022, Bouchier-Hayes LT, RCSI

Dr Tríona Ní Chonghaile: RCSI Research Day 2023 organised by Dr Tríona Ní Chonghaile with invited speaker Prof. Douglas Green from St. Jude's Children's Hospital, Memphis, TN, USA.

Dr Tríona Ní Chonghaile Documentary sponsored by Breakthrough cancer on TG4 "Biseach ón Ailse" showcasing our research RCSI June 22<sup>nd</sup>, 2023.

(https://www.tg4.ie/en/player/play/?pid=6329408186112&title=Biseach%20%C3%B3n%20Ailse&series=Biseach%20%C3%B3n%20Ailse&genre=Faisneis&pcode=665244)

### Staff List

Professor and Head of Department; Director, Centre for Systems Medicine; Deputy Dean for International Scholarship

Jochen H M Prehn, Dr rer nat

Professor and Director, National Preclinical Imaging Centre Annette T Byrne PhD, Cert. Med. Ed (AMEE)

Professor and Director of FutureNeuro Centre David C Henshall BSc, PhD

Professor of Medical Physics and Academic Director of Community and Public Engagement Kevin G McGuigan BSc, PhD, DSc, FInstP, FRSC

Emeritus Professors Jim Docherty PhD, DSc Aidan Bradford MSc, PhD, DSc

Head of Medical Physics and Academic Director of Admissions and Senior Lecturer (Medical Physics) Kenny Winser BSc, PhD

Associate Professor and Co-Director Year 3 Medicine Brona Murphy MSc, PhD, Co-Director Year 3

Associate Professor in Physiology Education Christopher Torrens BSc, PhD, PG Cert AP, PG Dip HPE, FTPS

Associate Professor
Triona Ni Chonghaile PhD, PG Dip HPE

Senior Lecturers Tobias Engel PhD, PG Dip. HPE Simon Furney PhD, PhD, PG Dip HPE

Lecturers
Emir Bozkurt PhD
Marc Sturrock PhD
Niamh M Connolly BE, MSc, PhD, PG Dip HPE
Shona Pfeiffer BSc (Hons), PhD, PG Dip HPE

Lecturer, International Medicine and Pharmacy Commencement Programme Orlaith Brennan BA, MSc, PhD, PG Dip. HPE

StAR Research Lecturers
Susan Byrne MD

Director of Molecular Imaging Heiko Dussmann Dr rer nat

Administrative and Operations Manager Isabela Aparicio BSc, MSc, PhD, Dip in Digital Marketing

Laboratory Manager Ina Woods

Scientific Liaison Officer, Senior Technician & Honorary Lecturer Helena Bonner BSc, PhD, Dip in LHPE, Dip in Digital Marketing

Senior Research Fellow / MRTF manager Gang Chen MB, MCh, PhD, MD

Technician Luise Halang Anna Perkowska

Honorary Lecturers Ian S Miller BSc, PhD Kate Connor PhD Omar Mamad PhD

Postdoctoral Fellows Aisling Coughlan PhD Albert Sanfeliu PhD Anna Matveeva BSc, MSc, PhD Beatriz Gil-Avila PhD

Daniel Alencar PhD

Éanna B. Ryan PhD

Graeme Sullivan PhD

Hesham Gibriel PhD

Jaideep Charakka Kesavan PhD

Katja Rybakova PhD

Kieron White PhD

Ludovica Di Martino PhD

Mohammadreza Azimi PhD

Mohsen Setayeshmehr PhD (based in MTU)

Ngoc Hanghn Guyen PhD

Nicola Cosgrove PhD

Petra Bencurova PhD

Rachel Power PhD (based in TERG)

Sean Quinlan PhD

Valentina Thomas PhD

# Research Programme Managers

Alice O' Farrell PhD

Monika Jarzabek PhD

## International Engagement Manager

Rosamund O'Halloran

## Research Technicians, Research Associates and Research Assistants

Antonio Tejada BSc MSc

Anna Perkowska, MSc

Cliona Farrell MSc

Colum Connolly, BSc

Elena Langa BSc

Elena Perez Morrisey MSc

Liam Shiels MSc

Meghma Mitra

Nadia Sawar, MSc

Nico Ka Tiu Ng BSc

Sandeep Chenna BSc, MSc

Sean Kerrane BSc

# Future Neuro Centre Operations

Bridget Doyle BA, Business Development and Centre Manager

Karina Carey BSc, Funding and Reporting Officer

Susan Crawford, Education and Public Engagement (EPE) Lead

### Laboratory Manager Future Neuro

Amaya Sanz Rodriguez PhD

# Postgraduate Students

PhD Students: 29 (4 graduated in Nov/'22 and 2 graduated in May/'23) MD Students: 5 (1 graduated in Nov/'22 and 1 graduated in May/'23)

MSc Students: 2

### Visiting Scientists

Joly Ghanawi, visiting scientist, collaborating with Professor Brona Murphy on the Enterprise Ireland commercialisation grant award.

Souhail Maazioui, visiting scientist, collaborating with Professor Brona Murphy on the Enterprise Ireland commercialisation grant award.

Diane de Bazelaire, ESIEE Paris - Université Gustave Eiffel, joining the research team of Dr Shona Pfeiffer

Dr Maria Jesus Abeledo-Lameiro from CIEMAT-PSA, Spain, collaborating with Professor Kevin McGuigan on micro-encapsulation of advanced oxidative products for water disinfection.

Professor Maria Cano, University Autonoma of Madrid (2022) - Dr Tobias Engel

PhD student Valentina Salari, University of Verona (2023) - Dr Tobias Engel

### **Higher Degrees**

Bejleri Jorin, MicroRNAs as novel diagnostic targets in acute Ischaemic stroke. MD, RCSI & NUI 2023.

Gerbatin Rogério, Identification of new features and evaluation of antimir-based seizure therapies in the Scn1a(+/-)tm1Kea mouse model of Dravet syndrome. PhD, RCSI & NUI 2022.

Jirström Elisabeth, Functional Analysis of novel small non-coding RNAs derived from transfer RNAs in neuronal stress responses: Relevance as biomarkers and therapeutics for neurodegeneration. PhD, RCSI & NUI 2023.

Lau E-How Kelvin, MicroRNA editing re-shapes target selection and regulated pathways in human temporal lobe epilepsy. PhD, RCSI & NUI 2022.

White Kieron, Identifying new tumour microenvironment contexts of vulnerability in glioblastoma. PhD, RCSI & NUI 2023.

#### **Publications**

**Alves M**, **de Diego-Garcia L** & **Engel T** (2022) Analyzing the Role of the P2X7 Receptor in Epilepsy. *Methods Mol Biol* 2510:367-387.

Bianchi C, Alvarez-Castelao B, Sebastián-Serrano Á, Di Lauro C, Soria-Tobar L, Nicke A, **Engel T** & Díaz-Hernández M (2023) P2X7 receptor inhibition ameliorates ubiquitin-proteasome system dysfunction associated with Alzheimer's disease. *Alzheimers Res Ther* 15(1): 105.

**Biswas A, Salvucci M, Connor K, Düssmann H, Carberry S, Fichtner M**, King E, **Murphy B, O'Farrell AC**, Cryan J, Beausang A, Heffernan J, Cremona M, Hennessy BT, **Clerkin J, Sweeney KJ**, MacNally S, Brett F, O'Halloran P, **Bacon O, Furney S**, Verreault M, Quissac E, Bielle F, Ahmed MH, Idbaih A, Leenstra S, Ntafoulis I, Fabro F, Lamfers M, Golebiewska A, Hertel F, Niclou SP, Yen RTC, Kremer A, Dilcan G, Lodi F, Arijs I, Lambrechts D, Purushothama MK, Kel A, **Byrne AT & Prehn JHM** (2023) Comparative analysis of deeply phenotyped GBM cohorts of 'short-term' and 'long-term' survivors. *J Neurooncol* doi: 10.1007/s11060-023-04341-3. Epub ahead of print. PMID: 37237151.

Bodaar K, Yamagata N, Barthe A, Landrigan J, **Chonghaile TN**, Burns M, Stevenson KE, Devidas M, Loh ML, Hunger SP, Wood B, Silverman LB, Teachey DT, Meijerink JP, Letai A & Gutierrez A (2022) JAK3 mutations and mitochondrial apoptosis resistance in T-cell acute lymphoblastic leukemia. *Leukemia* 36(6):1499-1507.

**Bozkurt E, Düssmann H & Prehn JHM** (2022) Fluorescence Time-lapse Imaging of Entosis Using Tetramethylrhodamine Methyl Ester Staining. *Bio Protoc.* 2022 12(23): e4564.

Caulfield C, Wu D, **Miller IS, Byrne AT**, Mac Aonghusa P, Zhuk S, Cinelli L, Bannone E, Marescaux J, Gioux S, Diana M, March TL, Vahrmeijer AL, Cahill R & O'Shea DF (2023) BF2-Azadipyrromethene Fluorophores for Intraoperative Vital Structure Identification. *Molecules* 28(5): 2167.

**Chenna S**, Koopman WJH, **Prehn JHM & Connolly NMC** (2022) Mechanisms and mathematical modeling of ROS production by the mitochondrial electron transport chain. *Am J Physiol Cell Physiol* 323(1): C69-C83.

Ciechonska M, **Sturrock M**, Grob A, Larrouy-Maumus G, Shahrezaei V & Isalan M (2022) Emergent expression of fitness-conferring genes by phenotypic selection. *PNAS Nexus* 1(3): pgac069.

Cleary F, Srisa-An W, Gil B, Kesavan J, **Engel T**, Henshall DC & Balasubramaniam S (2022) Wearable Fabric µ Brain Enabling On-Garment Edge-Based Sensor Data Processing *IEEE Sensors Journal* 22(21): 20839–20854.

Coulier A, Singh P, **Sturrock M** & Hellander A (2022) Systematic comparison of modeling fidelity levels and parameter inference settings applied to negative feedback gene regulation. *PLoS Comput Biol* 18(12): e1010683.

**Duggan WP, Salvucci M, Kisakol B, Lindner AU, Reynolds IS, Dussmann H**, Fay J, O'Grady T, Longley DB, Ginty F, McDonough E, Slade DJ, Burke JP & **Prehn JHM** (2023) Increased *Fusobacterium* tumoural abundance affects immunogenicity in mucinous colorectal cancer and may be associated with improved clinical outcome. *J Mol Med (Berl)* 101(7): 829-841.

**Engel T**, Jiménez-Mateos EM & Diaz-Hernandez M (2022) Purinergic Signalling and Inflammation-Related Diseases. *Cells* 11(23): 3748.

**Engel T**, Brennan GP & Soreq H (2022) Editorial: The molecular mechanisms of epilepsy and potential therapeutics. *Front Mol Neurosci* 15: 1064121.

Engel T (2023) The P2X7 Receptor as a Mechanistic Biomarker for Epilepsy. Int J Mol Sci 24(6): 5410.

Fashina IA, McCoy CE & **Furney SJ** (2023) In silico prioritisation of microRNA-associated common variants in multiple sclerosis. *Hum Genomics* 17(1):31.

García-Gil A, García-Muñoz RA, Martínez A, Polo-López MI, Araya GW, Mekonen T, Tsehaye A, Conroy RM,. **McGuigan KG** & Marugán J (2022) Solar water disinfection in high-volume containers: From the laboratory to the field. A case study in Tigray, Ethiopia. *Scientific Reports* 12: 1893.

Jørgensen ACS, Ghosh A, **Sturrock M** & Shahrezaei V (2022) Efficient Bayesian inference for stochastic agent-based models. *PLoS Comput Biol* 18(10): e1009508.

Jørgensen ACS, Hill CS, **Sturrock M**, Tang W, Karamched SR, Gorup D, Lythgoe MF, Parrinello S, Marguerat S & Shahrezaei V (2023) Data-driven spatio-temporal modelling of glioblastoma. *R Soc Open Sci* 10(3): 221444.

Lasri A, Shahrezaei V & **Sturrock M** (2022) Benchmarking imputation methods for network inference using a novel method of synthetic scRNA-seq data generation. *BMC Bioinformatics* 23(1):236.

**Miller IS**, Khan S, **Shiels LP**, Das S, **O' Farrell AC**, **Connor K**, Lafferty A, Moran B, Isella C, Loadman P, Conroy E, Cohrs S, Schibli R, Kerbel RS, Gallagher WM, Marangoni E, Bennett K, O' Connor DP, Dwyer RM & **Byrne AT** (2022) Implementing subtype-specific pre-clinical models of breast cancer to study pre-treatment aspirin effects. *Cancer Med* 11(20): 3820-3836.

**Morgan J**, Moreno O, **Alves M**, Baz Z, **Menéndez Méndez A**, Leister H, Melia C, Smith J, Visekruna A, Nicke A, Bhattacharya A, Ceusters M, **Henshall DC**, Gómez-Vallejo V, Llop J & **Engel T** (2023) Increased uptake of the P2X7 receptor radiotracer <sup>18</sup>F-JNJ-64413739 in the brain and peripheral organs according to the severity of status epilepticus in male mice. *Epilepsia* 64(2):511-523.

Nair SS, Marasini R, Buck L, Dhodapkar R, Marugan J, Lakshmi KV & **McGuigan KG** (2023) Life cycle assessment comparison of point-of-use water treatment technologies: solar water disinfection (SODIS), boiling water, and chlorination. *J Environ Chem Eng.* 11(3):110015.

Netufo O, Connor K, Shiels LP, Sweeney KJ, Wu D, O'Shea DF, Byrne AT & Miller IS (2022) Refining Glioblastoma Surgery through the Use of Intra-Operative Fluorescence Imaging Agents. *Pharmaceuticals* (*Basel*) 15(5): 550.

- **O'Connell E, Reynolds IS, Lindner AU, Salvucci M**, O'Grady T, **Bacon O**, Cho S, McDonough E, Longley D, Ginty F, McNamara DA, Burke JP & **Prehn JHM** (2022) Apoptotic and Necroptotic Mediators are Differentially Expressed in Mucinous and Non-Mucinous Colorectal Cancer. *Front Oncol.* 12: 815001.
- O'Dowd K, Polo-López MI, Oller I, García-Gil A, Marugan J, **McGuigan KG** & Pillai S (2023) Polypropylene based transparent jerry cans for solar disinfection (SODIS): An investigation into its effectiveness, water sample toxicity and suitability. *J Environ Chem Eng* 11: 109787.
- Pichot F, **Hogg MC**, Marchand V, Bourguignon V, **Jirström E**, Farrell C, **Gibriel HA**, **Prehn JHM**, Motorin Y & Helm M (2022) Quantification of substoichiometric modification reveals global tsRNA hypomodification, preferences for angiogenin-mediated tRNA cleavage, and idiosyncratic epitranscriptomes of human neuronal cell-lines. *Comput Struct Biotechnol J* 21:401-417.
- **Rodrigues DA, Roe A**, Griffith D & **Chonghaile TN** (2022) Advances in the Design and Development of PROTAC-mediated HDAC Degradation. *Curr Top Med Chem* 22(5): 408-424.
- Ryan AL, Northcote-Smith J, McKeon A, **Roe A**, O'Dowd P, Twamley B, **Ní Chonghaile T**, Suntharalingam K & Griffith DM (2022) A trans-Pt(II) hedgehog pathway inhibitor complex with cytotoxicity towards breast cancer stem cells and triple negative breast cancer cells. *Dalton Trans* 51(47): 18127-18135.
- **Sawant B**, Abeledo-Lameiro MJ, García Gil Á, Couso-Pérez S, Sharma S, Sethia U, Marasini R, Buck L, Polo-López MI, Oller Alberola I, Marugán J, Gómez-Couso H, Ares-Mazás E, Vijaya Lakshmi K, Pal S, Dhodapkar R & **McGuigan KG** (2023) Good optical transparency is not an essential requirement for effective solar water disinfection (SODIS) containers. J Environ Chem Eng 11 (3): 110314.
- **Smith J, Menéndez Méndez A, Alves M**, Parras A, **Conte G**, Bhattacharya A, Ceusters M, Nicke A, **Henshall DC**, Jimenez-Mateos EM & **Engel T** (2023) The P2X7 receptor contributes to seizures and inflammation-driven long-lasting brain hyperexcitability following hypoxia in neonatal mice. *Br J Pharmacol.* 180(13):1710-1729.
- **Smith J, Lopez-Avila BG, Engel T**, Mateos EMJ & **Alves M** (2023) Differently expression of the metabotropic P2Y receptor family after hypoxia-induced seizures in neonates and seizure suppression via P2Y1 receptor agonism. *Purinergic Signal* doi: 10.1007/s11302-023-09923-4. Epub ahead of print. PMID: 36792817.
- **Sullivan GP, Flanagan L, Rodrigues DA & Ní Chonghaile T** (2022) The path to venetoclax resistance is paved with mutations, metabolism, and more. *Sci Transl Med* 14(674): eabo6891.
- Varn FS, Johnson KC, Martinek J, Huse JT, Nasrallah MP, Wesseling P, Cooper LAD, Malta TM, Wade TE, Sabedot TS, Brat D, Gould PV, Wöehrer A, Aldape K, Ismail A, Sivajothi SK, Barthel FP, Kim H, Kocakavuk E, Ahmed N, **White K**, Datta I, Moon HE, Pollock S, Goldfarb C, Lee GH, Garofano L, Anderson KJ, Nehar-Belaid D, Barnholtz-Sloan JS, Bakas S, **Byrne AT**, D'Angelo F, Gan HK, Khasraw M, Migliozzi S, Ormond DR, Paek SH, Van Meir EG, Walenkamp AME, Watts C, Weiss T, Weller M, Palucka K, Stead LF, Poisson LM, Noushmehr H, Iavarone A, Verhaak RGW & GLASS Consortium (2022) Glioma progression is shaped by genetic evolution and microenvironment interactions. *Cell* 185(12): 2184-2199.e16.
- Walter F, D'Orsi B, Jagannathan A, Dussmann H & Prehn JHM (2022) BOK controls ER proteostasis and physiological ER stress responses in neurons. *Front Cell Dev Biol* 10: 915065.
- White K, Connor K, Meylan M, Bougoüin A, Salvucci M, Bielle F, O'Farrell AC, Sweeney K, Weng L, Bergers G, Dicker P, Ashley DM, Lipp ES, Low JT, Zhao J, Wen P, Prins R, Verreault M, Idbaih A, Biswas A, Prehn JHM, Lambrechts D, Arijs I, Lodi F, Dilcan G, Lamfers M, Leenstra S, Fabro F, Ntafoulis I, Kros JM, Cryan J, Brett F, Quissac E, Beausang A, MacNally S, O'Halloran P, Clerkin J, Bacon O, Kremer A, Chi Yen RT, Varn FS, Verhaak RGW, Sautès-Fridman C, Fridman WH & Byrne AT (2023) Identification, validation and biological characterisation of novel glioblastoma tumour microenvironment subtypes: implications for precision immunotherapy. *Ann Oncol* 34(3): 300-314.

Witchell HJ, Guy R, **Torrens C**, Langlands K & Doggrell SA (2022). Lecture Capture, Attendance, and Exam Performance in the Biosciences: Exploring Rare Exceptions to the Link Between Attendance and Performance in the Era of Online Teaching. Technologies in Biomedical and Life Sciences Education, 2022 ISBN: 978-3-030-95632-5.

Wong ZW & **Engel T** (2023) More than a drug target: Purinergic signalling as a source for diagnostic tools in epilepsy. *Neuropharmacology* 222: 109303.

Zhang H, Nabel CS, Li D, O'Connor RÍ, Crosby CR, Chang SM, Hao Y, Stanley R, Sahu S, Levin DS, Chen T, Tang S, Huang HY, Meynardie M, Stephens J, Sherman F, Chafitz A, Costelloe N, **Rodrigues DA**, Fogarty H, Kiernan MG, Cronin F, Papadopoulos E, Ploszaj M, Weerasekara V, Deng J, Kiely P, Bardeesy N, Vander Heiden MG, **Chonghaile TN**, Dowling CM & Wong KK (2023) Histone Deacetylase 6 Inhibition Exploits Selective Metabolic Vulnerabilities in LKB1 Mutant, KRAS Driven NSCLC. *J Thorac Oncol* 18(7): 882-895

Zhu X, Ni P, **Sturrock M**, Wang Y, Ding J, Chang Y, Hu J & Bao Z (2022) Fine-mapping and association analysis of candidate genes for papilla number in sea cucumber, *Apostichopus japonicus*. *Mar Life Sci Technol* 4(3): 343-355.

### **Active Grants and Grants Awarded**

Annette Byrne, Brain Tumour Ireland - GBM Research Support, BTI-RCSI-2023, Brain Tumour Ireland, May 2023, €40,000.

Annette Byrne (Co-PI), Advancing Novel Treatments for Primary Brain Tumours, KS-AB-Private2023, Private Donor, March 2023, €250,000.

Annette Byrne, Advancing a novel therapeutic strategy for a newly identified subtype (TME-Low) of Glioblastoma, AB-BHCRT-2023, Beaumont Hospital Cancer Research Trust, March 2023, €69,925.

Annette Byrne, Interrogation of novel Glioblastoma Subtypes towards an improved Precision Medicine Approach for Brain Tumour Patients, ILP-POR-2022-007, Health Research Board / HRB, November 2022, €369,998 (total to ATB: €294,286).

Annette Byrne, GLIORESOLVE: Training the next-generation of European GLIOblastoma (translational) researchers, to RESOLVE precision targeting of the brain tumour microenvironment, Grant Agreement No. 101073386, EU Horizon Europe, July 2022, €2,687,400 (to ATB: €640,260)

Annette Byrne, RadCOL: Development and validation of a CT-based radiomics signature for early detection of colorectal cancer liver metastasis and post-treatment disease recurrence, AB-RCSI-QUB-2022, Higher Education Authority, May 2022, €198,627 (to ATB: €126,175).

Annette Byrne, GBM Research Funding, AB-PL-GBM-2022, Private Donor, January 2022, €1,480.

Annette Byrne (Co-PI), Gene Therapy approaches for Brain Tumour related Epilepsy, 20/FFP-P/8613, Science Foundation Ireland (SFI), December 2021, €161,241 (to ATB).

Annette Byrne, Leveraging chromosomal instability for improved diagnosis and treatment in bevacizumab resistant metastatic colorectal cancer, 20/FFP-P/8884, Science Foundation Ireland (SFI), September 2021, €614,248 (to ATB: €471,695).

Annette Byrne, Manipulation of cell cycle and immune response in GBM and development of novel fluorophores to aid resection of these tumours, 15018R, Beaumont Hospital Foundation, September 2021, €3,000.

Annette Byrne, National Preclinical Imaging Centre, 18/RI/5759, Science Foundation Ireland (SFI), December 2019, €3,431,166 (to ATB: €666,141).

Annette Byrne, A new cell free DNA liquid biopsy assay to predict bevacizumab outcome in metastatic colorectal cancer patients, ILP-POR-2019-066, Health Research Board / HRB, September 2019, €368,715 (to ATB: €238,927).

Annette Byrne, COLOSSUS: Advancing a Precision Medicine Paradigm in metastatic Colorectal Cancer: Systems based patient stratification solutions, Grant Agreement No 754923, EU Horizon 2020, July 2017, €5,996,360 (to RCSI: €1,509,100).

Annette Byrne, EDIReX: EurOPDX Distributed Infrastructure for Research on patient-derived cancer Xenografts, 731105, EU Horizon 2020, August 2017, GBP 200,375.

Brona Murphy, Improving and personalising chemotherapy treatment options for paediatric brain tumour patients, National Children's Research Centre Crumlin / NCRC, September 2017, € 251,780.

Brona Murphy, GLIOTREAT-Novel treatments for Glioblastoma Patients, 20/FFP-P/8866, Science Foundation Ireland, Frontiers for the Future Project Award, September 2021, €556,161.

Brona Murphy. Digital twins of cell signalling networks for purposes of cancer drug discovery, CF-2021-1649-P, Enterprise Ireland, Commercialisation Fund, July 2021, €648,000.

David Henshall, Single cell molecular landscape of a disease-modifying treatment for epilepsy, Science Foundation Ireland, Mar 2023, €49,625.

David Henshall, 16/RC/3948 Supplement, Science Foundation Ireland, Mar 2023, €23,350.

David Henshall, 16/RC/3948 Supplement, Science Foundation Ireland, Mar 2023, €40,405.

David Henshall, A core medium throughput facility with multi-parametric readouts for the assessment of functional alterations in single cells and brain networks in health and disease states, Science Foundation Ireland, December 2022, €1,558,000.

David Henshall, 16/RC/3948 Supplement, Science Foundation Ireland, December 2022, €16,906.

David Henshall, Functional significance of METTL3 in epilepsy - Therapeutics Stage 2, Science Foundation Ireland, November 2022, €14,443.

David Henshall, Safety and efficacy of a novel microRNA-based therapy for epilepsy in a large animal (canine) model, Citizens United for Research in Epilepsy (CURE), July 2022, €31,470.

David Henshall, AAV9-anti-miR-134 (AVanti-134): Translating an effective anti-epilepsy microRNA inhibition approach from pre-clinical proof-of-principle to a clinic-ready, virally-delivered treatment, Wellcome Trust, June 2022, €369,068 (€256,706).

David Henshall, miRNA regulation of developmental sodium channel isoform transition and its implications for Dravet syndrome, EU Horizon Europe, June 2022, €215,534.

David Henshall, SeeDeepER: StereoEEG depth electrode sourced RNA and epigenetic landscape of epileptiform activity in the human brain, Higher Education Authority, May 2022, €92,720.

David Henshall, miR-CDD: Molecular mechanisms, therapeutic targets and biomarkers for CDKL5 Deficiency Disorder (CDD), Irish Research Council, May 2022, €110,000.

David Henshall, The Inflammasome: a novel therapeutic target for the treatment of Hypoxic Brain Injury in Neonates, EU Horizon 2020, April 2022, € 184,590.72

David Henshall, EMPOWER - Citizens and Organisation to Control, Share, and Extract Value from their Data, Science Foundation Ireland (SFI), January 2022, €360,580.

David Henshall, Temporal, cell-type and stage-dependent expression of murine SCN1A and its regulators in a Dravet Syndrome mouse model (ROADS II), Industry – Cash, January 2022, €144,871.

David Henshall, In vivo testing of Neumirna ASOs targeting ADK isoform on seizures and antiepileptogenesis, Industry, March 2021, €237,488. David Henshall, Determine the in vivo effects of Neumirna's antimir targeting miR-134 and miR-27b in mice, Industry, March 2021, €237,488.

David Henshall, A Personalised Living Cell Synthetic Computing Circuit for Sensing and Treating Neurodegenerative Disorders, EU Horizon 2020, December 2020, € 781,835.

David Henshall, An examination of the impact of perampanel (Fycompa) on experimental models of cortical rhythmsin vitro, Industry, April 2020, € 115,348.58.

David Henshall, Functional significance of METTL3 in epilepsy, Industry, April 2020, €25,650.

David Henshall, A Multidisciplinary Study of Cognition in Multiple Sclerosis, Industry, October 2019, €190.000.

David Henshall, EpiCluster, European Brain Research Area, September 2019, €30,000.

David Henshall, Using human tissue to translate microRNA-based therapies for epilepsy, EU Horizon 2020, February 2019, € 184,590.72 (Applicant share: € 182,340.72).

David Henshall, FutureNeuro, Science Foundation Ireland (SFI), March 2018, €10,401,942.71(Applicant share: €8,273,608).

Gareth Morris, Epilepsy in English Workshops, Science Foundation Ireland (SFI), December 2020, €40,210.00, (Applicant share: €33,400).

Gary Brennan, Molecular mechanisms of epileptogenesis and epilepsy-induced cognitive impairments; a dual role for m6A, Science Foundation Ireland (SFI), December 2020, €71,018.09.

Jochen Prehn, The Role of Lingo1 and BK Channels in tremor, January 2023, Science Foundation Ireland, €602,252.

Jochen Prehn, Single cell analysis of tsRNAs as novel regulators of the cellular transcriptome and proteome in the nervous system, December 2022, Science Foundation Ireland, €127,680.

Jochen Prehn, Patient Data Platform enabling a Definitive Precision Medicine approach to New Drug Development in Neurodegeneration (PRECISION ALS), September 2022, Science Foundation Ireland, €399,929.

Jochen Prehn, AICRIstart: A Foundation Stone for the All-Island Cancer Research Institute (AICRI): Building Critical Mass in Precision Cancer Medicine, May 2022, Higher Education Authority, €309,586.

Jochen Prehn, National Spatial Tissue Profiling (NaSPro) Platform for Precision Medicine: Integration of Chemical, Brightfield and Fluorescence Imaging of Tissues Combined with Single Cell Molecular Profiling, Science Foundation Ireland (SFI), December 2021, € 601,568.

Jochen Prehn, Next generation single cell analysis platform combining high throughput super-resolution imaging, laser capture and robotic preparation for single cell sequencing ('LSM-LCMRobo'), Science Foundation Ireland (SFI), December 2020, €1,176,465.38.

Jochen Prehn, Spatial Single Cell Transcriptomics Analysis in Colorectal Cancer, Science Foundation Ireland (SFI), September 2021, € 42,607.

Jochen Prehn, National Brain Tumour Research and Resource, Irish Institute of Clinical Neuroscience (IICN), October 2019, €20,000.

Jochen Prehn, InterTAU - Integrative structural biology of pathological tau protein, an appealing therapeutic target for Alzheimer ´s disease modifying drugs, EU Horizon 2020, July 2019, €79,200.

Jochen Prehn, PD-MitoQUANT – A quantitative approach towards the characterisation of mitochondrial dysfunction in Parkinson's disease, European Union/EU, October 2018, €4,497,935 (Applicant share: €1,088,108).

Jochen Prehn, Generation of glioblastoma (GBM) patient sample biobank and patient-derived cells for the testing of novel therapies, Brain Tumour Ireland, January 2018, €190,000.

Jochen Prehn, Systems modelling of tumor heterogeneity & therapy response in colorectal cancer, Health Research Board/HRB, September 2017, €787,839.

Jochen Prehn, Targeting multidrug resistance in glioblastoma multiforme, Private Donor, July 2015, €2.000.

Jochen Prehn, Colorectal Cancer Research, Private Donor, October 2009, €40,000.

Jochen Prehn, Dimebon and AMPK signalling, Industry, September 2009, €357,963.

Kevin McGuigan, SURG-Water Project "Supporting climate-resilient health facilities in Malawi through sustainable access to water using solar disinfection of harvested rainwater." (SFI Grant no. 22/FIP/SDG/10720), Feb 2023. €223,903.

Kevin McGuigan, PANI WATER: Photolytic and Adsorption based Novel Innovations for India, EU Horizon 2020, June 2018, €3,576,532.50 (Applicant share: €445,110).

Kevin McGuigan, Princess Haya SODIS Primary School Project, Private Donor, March 2014, €226,182.

Mary Fitzsimons, EPI-DIVE2: Data Driven Individualised Care in Epilepsy - A collaborative project between FutureNeuro and UCB, Industry, November 2020, €135,000.

Nicola Cosgrove, Translational Cancer Research Networking Award, November 2022, Irish Cancer Society, €1,225.

Niamh Connolly, Molecular landscape of brain-immune system interaction in epilepsy assembled from single cell sequencing data SFI CRT scholar, Science Foundation Ireland (SFI), January 2021, €117,155.

Niamh Connolly, Fulbright/StAR International PhD Programme, Fulbright Commission/RCSI PhD Scholarship, July 2020, €146,780.

Orlaith Brennan, Vascularity affinity precursor (VAP) structure for musculoskeletal tissue healing, Enterprise Ireland, March 2022, €202,278.

Simon Furney, NECRET Research Account, Private Donor, December 2022, €70,000.

Simon Furney, NoCoSMiCC: Non-coding somatic mutations in Colorectal cancer, Science Foundation Ireland Frontiers for the Future Project, December 2022, €302,246.

Simon Furney, Characterisation of KMT2C and KMT2D mutations in breast cancer, Science Foundation Ireland CRT in Genomics Data Science Data Generation Fund, November 2022, €101,536.

Simon Furney, Science Foundation Ireland CRT in Genomics Data Science / NECRET co-funded PhD award, September 2022, €107,800.

Simon Furney, Science Foundation Ireland CRT in Genomics Data Science PhD award, September 2022, €117,740.

Simon Furney, Can tumour genome data be used to predict patient prognosis?, Wellcome Trust, June 2018, €112,243.

Tobias Engel, Developing An Injectable Hyaluronic Acid Based Hydrogel Containing P2X7 Receptor siRNA Nanoparticles For The Treatment Of Temporal Lobe Epilepsy, Government of Ireland Postgraduate Scholarship Programme (GOIPG/2023/3485), June 2023, €15,000.

Tobias Engel, L-Aspartate signalling in the brain, Medical Research Council, December 2022, €78,956.

Tobias Engel, 17/CDA/4708 Supplement, Science Foundation Ireland, December 2022, €20,268.

Tobias Engel, Purinergic signalling in brain diseases: Novel avenues for diagnostics and therapeutics, Enterprise Ireland, July 2022, €6,255.

Tobias Engel, Targeting the purinergic system for disease-modification in epilepsy, EU Horizon 2020, March 2021, €257,561.28 (Applicant share: €228,761).

Tobias Engel, Pharmacological evaluation of P2X7 inhibitor AFC5128, Industry, March 2021, €285,117.

Tobias Engel, Pre-clinical evaluation of P2X7 antagonism to suppress TBI-induced brain pathology and the development of epilepsy, Industry, November 2020, €129,578.

Tobias Engel, Targeting mRNA polyadenylation to treat drug refractory epilepsy, Irish Research Council (IRC), July 2020, €109,568.

Tríona Ní Chonghaile, MM\_BH3\_CutTag, EU Horizon Europe, August 2022, €251,534.

Tríona Ní Chonghaile, "Parallel epigenomic and apoptotic profiling to identify targetable sensitivities in Multiple Myeloma", Supervisor on Marie-Skłodowska-Curie Action Postdoctoral Fellowship, Aug 2022, €215,534.

Tríona Ní Chonghaile, "Medicinal chemistry approaches to make atypical HDAC6 inhibitors and PROTACs to treat Multiple Myeloma", Supervisor on Irish Research Council Postdoctoral Fellowship, Aug 2022, €106,365.

Tríona Ní Chonghaile, Dynamics of ageing and cancer: a multi-functional study into apoptosis, metabolism and the microenvironment - Ageing-MM, Irish Research Council, June 2022, €599,917.

Tríona Ní Chonghaile, Medicinal chemistry approaches to make atypical HDAC6 inhibitors and PROTACs to treat Multiple Myeloma, Irish Research Council, April 2022, €106,365.

Tríona Ní Chonghaile, "Understanding the binding mode of a novel HDAC6 inhibitor and determining the role of HDAC6 in natural killer cells", StAR PhD Programme with Soochow University in Suzhou China, October 2021, €142,000.

Tríona Ní Chonghaile, "Defining the pro-survival signalling of the bone marrow microenvironment of multiple myeloma", Supervisor on Irish Cancer Society Postdoctoral Fellowship, October 2021, €234,000.

Tríona Ní Chonghaile, Defining the pro-survival signalling of the bone marrow microenvironment of multiple myeloma, Irish Cancer Society, September 2021, € 235,000.

Tríona Ní Chonghaile, Targeting anti-apoptotic BCL-2 dependence in Multiple Myeloma, Breakthrough Cancer Research, July 2020, €133,600.

Tríona Ní Chonghaile, HDAC6i: Understanding and targeting the function of histone deacetylase 6 in triple negative breast cancer, Science Foundation Ireland (SFI), May 2020, €618,921.

### **Innovation and Commercialisation Activities**

Henshall D, Exclusive license for Mir-134 IP portfolio related to the project; Determine the in vivo effects of Neumirna's antimir targeting miR-134 and miR-27b in mice.

Ni Chonghaile T, Alencar D, Letai A. No. 63/125,759 submitted to USA on a novel HDAC6 inhibitor for RCSI in December 2020.

Murphy B, New Invention Disclosures IDF2022-14 "Digital Twin of cancer signalling networks technology".

Prehn JH, Method of treating neurodegenerative disease (amyotrophic lateral sclerosis). Patent No. PCT IE 2005/000131 – Licensed to Athena Neurosciences/Thermo Fisher for diagnostic use (Royalties).

# **PHYSIOTHERAPY**

#### Overview

The School of Physiotherapy offers one undergraduate programme (3 or 4 year BSc Physiotherapy (Honours)), and taught postgraduate offerings. There is a longstanding postgraduate Diploma/MSc in Neurology and Gerontology and two more recent modules. One *Physical Activity and Health Behaviour Change in Clinical Populations* (10 ECTs), is both an optional module on the MSc and a micro credential standalone module, whilst the second, *Musculoskeletal injection Therapy* (5ECTs), is delivered under CPD. The School offers a level 9 (Masters by Research), and two level 10 (PhD and Professional Doctorate) research programmes. Over the last couple of years the School has focused on expanding the numbers of Irish School leavers (CAO entry) and international students onto its undergraduate programme. There is also a programme of expansion of its postgraduate taught and research provision; for example at level 9 the module titled *Physical Activity and Health Behaviour Change in Clinical Populations* was offered for the first time in 2023 and 13 learners completed the course; six students successfully applied to be supervised by staff in the School under the Professional Doctorate (Prof Doc) Programme.

The School has 22 staff (15.2 FTE), including 13 academic staff,1 quality and operations manager,1 learning technologist (0.5 FTE), a clinical practice education team (1.5FTE) who work with 4 RCSI clinical tutors (2.65 FTE), and a wider network of HSE funded clinical tutor posts. The School has5 honorary/visiting lecturers, 3 visiting Professors, and a number of experienced clinical physiotherapists (n=15 honorary clinical lecturers) who support research activities, clinical education, and/or contribute to the teaching and content delivery in specialist areas of the programme. Professor Suzanne McDonough is the Head of the School and Professor Frances Horgan is the Deputy Head of School. Nearly all the academic staff in the School are research active (8 PIs), working with up to 9 research staff and 15 PhD/Prof Doc students.

## **Summary of Key Achievements / Academic Activities**

Successful bid to host WHO Europe Network on Health Enhancing Physical Activity Promotion (HEPA) Annual Conference August 2024.

Professor Suzanne McDonough and Dr Grace O'Malley

RCSI Grand Rounds, School of Physiotherapy

Head of School, Professor Suzanne McDonough delivered the School of Physiotherapy Grand Rounds presentation in February 2023, alongside Professor Frances Horgan, Professor Helen French, Dr Ailish Malone and Mr Yaisir Choudray.

National Irish Coordinator for the AVERT-DOSE international Stroke Trial

Professor Horgan led co-ordination of seven Irish clinical sites, recruiting for the largest international stroke rehabilitation trial AVERT-DOSE (Trial Sponsor Professor Julie Bernhardt, Florey Institute, Australia).

Childhood Obesity Education for Health Professionals

Dr Grace O'Malley is leading on this project funded by the Dept of Health and the HSE. To date 1534 health professionals have registered for training to date with 1244 hours of training delivered. From June 1 2022-

June 30 2023, there were 367 new registrations with 470 hours of education completed during that time. Funding renewed for 2023 (218K)

### **Fulbright Scholars**

Dr Grace O'Malley and Professor Walter Eppich hosted Professor James Marcin, Professor of Padiatrics and Director for the Centre for Health and Technology at UC Davis California, USA.

Dr Grace O'Malley collaborated with the School of Population Health Sciences (Dr Samira Jabakhanji, Professor Ed Gregg and Prof Jan Sorenson) to host an international workshop supported by the RCSI Collaborate Initiative entitled: *How do we measure success of obesity interventions? Identification, interpretation, evaluation and evidence translation of effects.* Attendees were international experts in economic modelling, obesity treatment, obesity policy and obesity advocacy and the team aim to submit a COST application.

International Education Forum June 2023 Presentation - Universal Design for Learning by Dr Ailish Malone (Lecturer, School of Physiotherapy), Mr Noel O'Callaghan (Head of Student Development and wellbeing, CoMPPAS) and Ms Jacinta Burke (Academic Development, CoMPPAS).

International Education Forum June 2023 Presentation – Healthy Campus by Professor Suzanne McDonough.

International Education Forum June 2023 Discussion Panel - Student Engagement and Attendance with Professor Helen French representing School of Physiotherapy, with other School representatives.

### **Novel Academic Teaching / assessment strategies**

Physiotherapy StEP Project: Transition from Theory to Practice: Exploring the Physiotherapy Student Journey at Transition Points within the Programme, culminating in Entry Level to Practice, to inform Curriculum Review. Project Lead, Louise Keating, StEP Partner, Tara Gaughran (Physiotherapy student).

Practice Education Seminar Series in Collaboration with Health Professions Education Centre (HPEC) Practice Education Team ran a highly successful seminar series (n=5 sessions) with HPEC support for clinical educators and tutors (n=100 attended per session).

#### **Awards**

2022 NUI HH Stewart Scholarships and Prizes; second prize awarded to Eabha Ni Bhradaigh Marie Guidon Medal 2023 awarded to Sara Finnie (Physiotherapy Class of 2023).

The Anne O'Brien and National ISCP Student Research Prize awarded to Jack Nolan (Physiotherapy Class of 2023).

The National ISCP Student Research Prize was awarded to William Mulcahy (Physiotherapy Class of 2023)

## Appointment to national/international committees or advisory groups Professor Suzanne McDonough

- Member of the International Science Advisory Panel for Ageing Well National Science Challenge Research Awards, New Zealand.
- Appointment as an external reviewer to Swiss National Science Foundation Health & Wellbeing Call
- Invited member of the National Physical Activity Pathways in Healthcare Model (PAPHM) Advisory
- Co-Lead of WHO Europe Network Working Group on Health Enhancing Physical Activity Promotion in clinical conditions

# Professor Frances Horgan

- National Coordinators, Stroke Action Plan for Europe (SAP-E) Working Group
- Member of the Guideline Development Group (GDG) for the 6<sup>th</sup> Edition of the National Clinical Guideline for Stroke for the UK & Ireland published in April 2023.

## Dr Grace O'Malley

- Member of the WHO Train the Trainer Team for Childhood Obesity Management. Dr O'Malley trained health professionals from WHO European Region on the assessment and Management of Obesity in Children and Adolescents in Skopje, North Macedonia; Bishkek, Kyrgyzstan.
- Member of the Clinical Guideline Group for Adult Obesity Management in Ireland. Dr O'Malley co-led on the chapter addressing physical activity and rehabilitation in adult obesity management
- Member of the National Clinical Programme for Obesity in Ireland. Dr O'Malley participated in the Implementation Working Group for Child and Adolescent Obesity
- Nomination to Expert Guideline Development Committee, NICE (Define NICE National Institute for Clinical Excellence) Obesity Clinical Guidelines, UK
- Chair of European Congress on Obesity 2023 (Scientific and Organising Committees)
- Nomination as Co-Chair Physical Activity, Fitness and Function Working Group of European Association for the Study of Obesity

## Professor Helen French

- Member of the Osteoarthritis Research International (OARSI) Research and Training Committee-
- Member of the Osteoarthritis Research International (OARSI) Engagement Committee
- Member of the European Union (EU) COST-Action 'Building an open European Network on OsteoArthritis research (NetwOArk)', Working Group 1- 'Patient engagement & information programme on OA' and Working group 4 'Building the European Society for Osteoarthritis (ESOA)

#### Dr Ailish Malone

Irish Society of Chartered Physiotherapists (ISCP) Research Network, committee member.

### Dr Orlagh O'Shea

• Irish Society of Chartered Physiotherapists (ISCP) Research Network, committee member.

## Louise Keating

 National representative to the International Federation of Sports Physical Therapists, on behalf of Chartered Physiotherapists in Sports & Exercise Medicine (ISCP)

## International Conferences organised by staff

Dr Grace O'Malley chaired the organisation of the 2023 European Obesity Congress in Dublin May 17<sup>th</sup>-May 20<sup>th</sup>. The meeting was hosted by the Association for the Study of Obesity on the Island of Ireland and the European Association for the Study of Obesity. Over 2200 delegates from 74 counties attended the world-class scientific programme which included collaborative sessions with WHO, World Obesity Federation, ASOI and EU MEPs were held. Day 1 training workshops for Irish health professionals were a great success with over 170 health professionals attending from across primary, secondary and tertiary care in Ireland. The event attracted widespread media coverage from International and national media (Bloomberg, Reuters Medscape, UK Times, UK Telegraph, UK Guardian, UK Daily Mail, Sun and Mirror, Irish Independent, Irish Times and Examiner. In 2023 the Nova Nordisk Foundation launched Research Grants programme for EASO.

#### Staff List

## Professor & Head of School

Suzanne McDonough BPhysio (UCD), HDip Healthcare (Acupuncture) (UCD), PhD (Newcastle University)

## Professor & Deputy Head of School

Frances Horgan BSc Physio (TCD), Dip Statistics (TCD), MSc Research (TCD), PhD (TCD), MSc (Leadership & Management Development) (RCSI NUI), Dip Health Economics (NUI), PGDip Health Professions Education (RCSI)

#### Professor

Michael Thacker PhD, MSc, Grad Dip Phys, Grad Dip Man NMSD, FCSP

## Associate Professor

Helen French BPhysio (UCD), DipStat (TCD), MSc (Physio) (TCD), PhD (NUI, RCSI), PGDip Health Professions Education, MISCP

#### Senior Lecturer

Grace O'Malley PhD (Med) (UCC), MSc (Research) (TCD), BSc Hons (TCD) PGDip Health Professions Education (RCSI)

### Lecturers

Mary Boyd Dip Physio (TCD), MMedSc, MEd, MSc (Leadership in Health Profession Education) (RCSI), MISCP

Louise Keating BPhysio, MPhtySt (Manip)

Ailish Malone BSc (Physio) (UCD), PhD (RCSI), PGDip Health Professions Education (RCSI), MISCP, CORU Registered Physiotherapist PT032780

Orlagh O'Shea BSc (Physio) (UCD), MSc Exercise Physiology (Loughborough University), PhD (Ulster University)

Emma Kelly (Part-time Maternity Cover) MISCP, CORU Registered Physiotherapist PT030712)

#### Teacher Practitioners

Rachel Broe Jennifer Ashton Judith O'Connell

## Practice Education Coordinators

Helen Heery BSc (Physio) (TCD), MSc Change Management and Leadership (RCSI) Fiona Daly BSc (Physio), MSc (Leadership and Management Development), MISCP Rebecca Sweeney BSc (Hons) Physiotherapy, MSc, CORU Registered

### RCSI Practice Education Tutors

Roseanne Freeman Anthea Seagar Sharon Cullen Mary Loughnane

# Quality and Operations Manager

Eimear McDonnell

### Learning Technologist

Kevin Redmond

# Honorary Professors and Lecturers

Charlie Foster Maria Stokes David Baxter

### Honorary Lecturers

Rose Galvin Mary Walsh Aine Ryan Sarah Rand Aoife Stephenson

# Honorary Clinical Lecturers

David Richards Anthea Seagar Deirdre English Jenny Ashton Cinny Cusack Aileen Flynn Sarah Slattery Darren Rodgers Laura Byrne Ruth Fewer Mary Mc Callan

Marian Glynn

Fiona Campbell

Grainne O Hara

Catherine Devaney

Kari Christiansen

Michelle Fitzgerald

Kalpana Sivakumar

Alison Kearon

Eilis Keogh

Alison Brennan

Aifric MacDiarmada

Emma Kelly

Caroline Treanor

Roisin Vance

Claire Egan

Fiona Kinsella

Chiara Reddin

Cathy Quinn

Ivan Clancy

Colm Daly

### Postdoctoral Researchers

Sania Almousa, PhD, PGCert, MSc, BSc

Farzana Ferdous PhD MSc BSc

Maeve O'Brien PhD. MA

Joice Cunningham PhD, BSc Physio

Sarah Murphy MSc (Strength & Conditioning), BSc Physio, PG Dip, BSc (Rehab Science)

#### Senior Postdoctoral Fellow

Aoife Stephenson PhD

#### Research Assistants

Brian Doyle, MSc (Sports & Exercise), BSc (Sports Science & Health)

Niamh Arthurs MSc, BSc

Karen Brady, MSc

8 PhD Students

6 Professional Doctorate Students

2 MSc (Research) Students

8 MSc Neurology and Gerontology taught programme students

## **Publications**

Bernhardt, J., Churilov, L., Dewey, H., Donnan, G., Ellery, F., English, C.K., Gao, L., Hayward, K.S., **Horgan, F.**, Indredavik, B., Johns, H., Langhorne, P., Lindley, R., Martins, S., Mohd Ali, K., Middleton, S., Moodie, M., Pandian, J.D., Parsons, B., Robinson, T., Srikanth, V., Thijs, V. A Phase III, Multi-Arm Multi-Stage Covariate-Adjusted Response-Adaptive Randomised Trial to Determine Optimal Early Mobility Training after Stroke (AVERT DOSE). Int J Stroke. 2022::17474930221142207. doi: 10.1177/17474930221142207. PMID: 36398582.

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- Conroy, B., Murphy, N., Romero-Ortuno, R., Cunningham, C., **Horgan, F**. Examining the Factors Associated with Community Ambulation in an Older Adult Day Hospital Population. Eur Geriatr Med 2022. https://doi.org/10.1007/s41999-022-00666-w
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- **Cunningham, J.**, Doyle, F., Ryan, J. M., Clyne, B., Cadogan, C., Cottrell, E., Murphy, P., Smith, S. M., **French, H.P.** Primary care-based models of care for osteoarthritis; a scoping review. Seminars in arthritis and rheumatism, 2023:61;152221. Advance online publication. https://doi.org/10.1016/j.semarthrit.2023.152221
- Dow, M., Murrin, C., **O'Malley, G**., Brinkley, A., Bel-Serrat, S. A qualitative study exploring the perceptions of health among pre-teen girls from disadvantaged communities in Dublin. Children and Society, 2023:37(2);579-597. doi:10.1111/chso.12614
- **French, H.P.**, Abbott, J.H., Galvin, R. Adjunctive therapies in addition to land-based exercise therapy for osteoarthritis of the hip or knee. The Cochrane database of systematic reviews, 2022:10(10): CD011915. <a href="https://doi.org/10.1002/14651858.CD011915.pub2">https://doi.org/10.1002/14651858.CD011915.pub2</a>
- **Horgan, F.**, Cummins, V., Skelton, D.A., Doyle, F., O'Sullivan, M., Galvin, R., Burton, E., Sorensen, J., Jabakhanji, S.B., Townley, B., Rooney, D., Jackson, G., Murphy, L., Swan, L., O'Neill, M., Warters, A. Enhancing Existing Formal Home Care to Improve and Maintain Functional Status in Older Adults: Results of a Feasibility Study on the Implementation of Care to Move (CTM) in an Irish Healthcare Setting. Int J Environ Res Public Health. 2022;19(18):11148. doi: 10.3390/ijerph191811148. PMID: 36141422; PMCID: PMC9517683.
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### **Active Grants and Grants Awarded**

Ailish Malone (PI), Participation in physical activity: what really matters to adolescents with physical disability? Health Research Charities Ireland – Health Research Board Joint Funding Scheme (Nov 2022 – Feb 2024). €114,816 to RCSI

Ailish Malone (Co-PI), Ciaran Bolger. Feasibility of Positron Emission Tomography in Degenerative Cervical Myelopathy. European Spine Society Taskforce Research (May 2023 – April 2025). €10,000 to RCSI.

Frances Horgan (PI), David Williams, PASTAR-Pathway for Acute STroke And Rehabilitation, Health Research Board / HRB, Collaborative Doctoral Awards (CDA), (Jun 2020) – (May 2025), total award to all institutions €1499996, to RCSI €1137573

Frances Horgan (PI), Improving quality of life (QOL) for palliative care patients (PCPs) and their caregivers with an early and ongoing personalised rehabilitative physiotherapy programme in a primary care setting, Irish Research Council (IRC), Employment-Based Postgraduate Programme, (Sep 2021) – (Aug 2024), €82,500 to RCSI

Frances Horgan (PI), The emerging role of the stroke clinical nurse specialist in early supported discharge. Irish Research Council (IRC), Employment-Based Postgraduate Programme, (Sep 2022) – (Aug 2025), €82,500 to RCSI

Frances Horgan (PI), Enhancing existing formal home support to improve and maintain functional status in older adults. Health Research Board, Conference Event Scheme, (Sept. 2022) – (Sept. 2023), €4,912 to RCSI

Frances Horgan (PI), Pathfinder a health economic and qualitative evaluation. National Ambulance Service, (Aug. 2022) – (Aug. 2023), €25,000 to RCSI

Frances Horgan (PI), Codesigning Life after Stroke Support Pathways (CLASP) Health Research Board, Applied Partnership Award Programme, (May. 2023) – (April 2025), €239,998 to RCSI

Grace O'Malley (PI), 30<sup>th</sup> European Obesity COngress, Failte Ireland, Conference Grant, (Jan 2023-Aug 2023) €31,700 to RCSI

Grace O'Malley (PI), Childhood Obesity Communication Toolkit for Primary Healthcare Professionals, European Association for the Study of Obesity, Research Grant, (Jul 2021-Aug 2023) €121,874 to RCSI

Grace O'Malley (PI), Meeting the Challenge of Childhood Obesity Treatment in Irish Healthcare: Generating Data to Facilitate Action, Health Research Board / HRB Applied Partnership Awards, (Jan 2021-Dec 2023), €239,808 to RCSI

Grace O'Malley (PI), Online Childhood Obesity Education for Health Professionals, HSE, Service Level Agreement, (Jan 2022-Dec 2023), €74,210 to RCSI

Grace O'Malley (PI), Childhood Obesity Education for Health Professionals, Department of Health, Service Level Agreement, (Jan 2022-Dec 2023), €368,000 to RCSI

Grace O'Malley (PI), StAR Research Lecturer Fellowship (June 2017-Dec 2023), €148,000 to RCSI

Grace O'Malley (co-PI), RCSI COllaborate Initiative (April 2023-August 2023) €5,000 RCSI

Helen French (PI), Better Osteoarthritis Care: Delivering education and training for primary care health professionals in Ireland, Health Research Board, Knowledge Translation Award (2022-2023), €36,510 to RCSI

Helen French (co-PI)/Louise Keating (co-PI), Injury Surveillance of Schoolboys' Level Rugby in Leinster – the SCRUm study Phase 2, IRFU Charitable Trust (IRFUCT), Research Project Grant, (July 2022 – August 2023), €80,000 to RCSI

Helen French (PI), An EDucation and eXercise intervention (EDX-Ireland) for gluteal tendinopathy in an Irish setting: a feasibility randomised controlled trial (LEAP-Ireland trial), HRB DIFA award 2021-2024 €329, 661 to RCSI

Helen French (PI), Development of a Model of Care for Osteoarthritis in Primary Care in Ireland- A mixed methods study, HRB Investigator-Led Project award. 2020-2024. €365,886 to RCSI

Helen French (PI),Musculoskeletal physiotherapy triage in Ireland: investigating prognostic factors, healthcare utilisation and clinical outcomes in people presenting with musculoskeletal pain in secondary care €82,500 to RCSI

Suzanne McDonough (PI), Sustaining activity with arthritis (SAWA) following an Arthritis Ireland Be active with arthritis (BAWA) exercise programme, Health Research Charities Ireland – Health Research Board Joint Funding Scheme Arthritis Ireland, funding to RCSI €232,570, April 23 to Sept 2025

Suzanne McDonough (Co-I), Effectiveness and cost-effectiveness of a peer-led walking programme to increase physical activity in inactive older adults: Walk With Me Study NIHR (NIHR131550) £1,115,754, £8,500 to RCSI, March 22-Feb 25

Suzanne McDonough (Co-PI), Non-digital support for maintaining physical activity in people with long-term conditions – within Maintenance Of physical acTivity beHaviour (MOTH) programme NIHR Allied Research Collaboration (ARC) Wessex, £68,348, £15,000 to RCSI Oct 2021-Sept 23

Suzanne McDonough (PI), Healthy Campus Charter and Framework, Higher Education Authority, Tender, (Dec 2021) – (Sep 2024), €10,000 to RCSI

Suzanne McDonough (PI), Prioritised support for Practice Education, Health Service Executive, Project Grants, (Sep 2021) – (Sep 2023), €28,401 to RCSI

# POPULATION HEALTH

#### **School and Units Overview**

Officially launched in October 2022, the School of Population Health works to enhance human health by understanding, safeguarding and improving the health of populations through research, education and synergistic collaborations.

The School comprises the Department of Public Health and Epidemiology, Department of Health Psychology, Data Science Centre, Healthcare Outcomes Research Centre, Institute of Global Surgery, Converge and SPHeRE. It includes some 70 academic, research and professional staff, as well as 16 PhD scholars.

The School is engaged in an exciting programme of growth, underpinned by the Cameron Scholars programme, and with the establishment of Converge: Centre for Chronic Disease and Population Health Research. The Cameron Scholars is a strategic initiative that will fund academic, technical and administrative posts to build and consolidate a comprehensive programme of education and research growth, with a significant impact, nationally and internationally. Converge is led by Professor Edward Gregg as part of an SFI-funded Research Professorship Grant and promises to be a significant and exciting development in population health research.

In the SPH, we recognise the importance of a diverse, inclusive and supportive environment for our team of academics, researchers, scholars and support staff, all of whom are committed to fostering a culture of excellence, innovation and collaboration.

# **Department of Health Psychology**

The Department of Health Psychology provides undergraduate education to medical, physiotherapy and pharmacy students in RCSI, and postgraduate teaching to PhD students undertaking the HRB-funded SPHeRE (Structured Population Health and health-services Research Education) programme, students undertaking the Masters in Surgery (MCh), Masters (MSc) in Neurology & Gerontology, the Physician Associate programme and a new module run by the School of Physiotherapy on Physical Activity and Health Behaviour Change in Clinical Populations.

The Department delivers taught content to students that enables them to develop an awareness of the importance of psychological principles and skills for patient communication and health outcomes, as well as providing specific workshops for students to develop skills of resilience and of reflection. Our ongoing collaboration with the University of Pennsylvania Positive Psychology Centre involves delivery of small group teaching on nine core skills of resilience. Delivery of the RCSI/UPenn resilience programme commenced in September 2022, with two skills delivered in the first year of the THEP programme.

In addition, the department delivers the fully online optional Certificate in Lifestyle Medicine. This interdisciplinary, inter-departmental certificate involves approximately 50 hours of student activity, including 22 hours of online content and reflective assignments, with a substantive assignment for completion over the summer. The third annual intake to the certificate in October 2022 involved 250 students registering for the certificate, which will be awarded at the end of 2023. The optional certificate will continue to be open to students annually each September.

Members of the department are leading a range of research grants, research successes included grant awards from the HRB, EU, Enterprise Ireland and the IRC. Ongoing research collaborations are internal, national and international, spanning a variety of health-related disciplines.

## **Department of Public Health and Epidemiology**

RCSI has been teaching public health to medical students since 1841, a time when infectious diseases, child mortality and low life expectancy were affecting the population globally. Since this time, there has been a marked increase in life expectancy in European and North American populations, because of many factors including improved sanitation, better working conditions, improved management of infectious disease, and better access to healthcare. However, these improvements have not impacted population health in low-income countries to the same extent. In most low-income countries, poverty and infectious disease still have a major impact on population health and poor access to healthcare means that many people do not have access to basic primary care services, as well as tertiary health care such

as life-saving surgery. In tandem with this, the rise of non-communicable disease has brought new challenges to the public health work force in both high- and low-income countries, and requires new sets of skills among the health workforce. Finally, climate change has led to an increasing global health burden with the World Health Organization naming climate change as the biggest threat to human health in the 21st Century. In particular, it is recognised that climate change will not affect everyone equally, but it will be the most vulnerable and marginalised who will suffer most.

The health workforce therefore needs to have a thorough understanding of these different influences on population health and illness, as well as an understanding of the health professional advocate role in addressing the challenges that we will need to face in the coming years. At the Department of Public Health and Epidemiology, we therefore bring a broad perspective to both our teaching and research, and, over the last two years, we have sought to introduce the concepts of planetary health and inequalities in public health into the curriculum, including an introduction to the important topic of sustainable healthcare.

Since April 2022, the Department of Public Health and Epidemiology sits within the new School of Population Health.

#### **Data Science Centre**

The mission of the RCSI Data Science Centre (DSC) is to improve human health and quality of life through rigorous and innovative design, analysis and reporting of health research studies. The DSC aims to enhance the quality of quantitative and qualitative research at RCSI, by informing and supporting study design, analysis and reporting of health research. The DSC aims to build the capacity of RCSI research teams and consolidate our position as an integral part of the research infrastructure and environment at RCSI.

We collaborate with RCSI researchers on high-impact substantive research projects and lead cutting-edge methodological research advancing knowledge in biostatistics and bioinformatics. The DSC supports researchers through provision of consultation and analysis services across the spectrum of RCSI research and learning and development in research methods, biostatistics, bioinformatics and statistical software among staff and researchers. This is achieved through a range of activities, including delivering modules across several programmes, including the SPHeRE PhD programme, School of Postgraduate Studies, Masters in Technologies and Analytics in Precision Medicine and Masters in Surgery programmes, as well as contributing to a one-week diploma course.

#### **EMeRGe**

The EMeRGe Epidemiology & Modelling Research Group within the Data Science Centre consists of a team of postgraduate and postdoctoral researchers with a focus on cancer epidemiology, chronic diseases, pharmacoepidemiology and secondary use of data. There are currently three senior postdoctoral researchers, two postdoctoral researchers, a senior research fellow (HRB Emerging Investigator) and four PhD students within the EMeRGe group.

### **Healthcare Outcomes Research Centre (HORC)**

Established in 2016, the Healthcare Outcome Research Centre (HORC) is a research centre dedicated to the development and dissemination of evidence-based research on healthcare outcomes that inform healthcare policy and improves patient outcomes.

The healthcare outcomes research led by HORC examines the end results of healthcare services with a focus on patients' experiences, preferences and values, in addition to cost-effectiveness of service delivery. HORC considers healthcare outcomes as the effects of health interventions on the health status of the patient and population. These effects could be expressed as changes in the patient's knowledge and behaviour, health-related quality of life (HRQoL) or mortality.

HORC aims to inform decision-making at each level of the healthcare system, including those who receive, provide, organise and pay for healthcare.

HORC contributes to manuscripts for scientific publications and national reports in healthcare and audit, and sits on a number of national working groups using data from the national hospital inpatient enquiry system (HIPE), CSO and clinical trials.

### Institute of Global Surgery

The RCSI Institute of Global Surgery (IGS) aims to improve access to high-quality, essential surgical care for underserved populations, working in partnership with communities of surgery, anaesthesia and nursing providers, together addressing the gaps in surgical care provision in resource-poor settings. Our projects are based on growing the evidence-base in this field, building capacity and contributing to implementing long-term and sustainable research and training interventions.

The staff of the IGS is a multidisciplinary team led by the O'Brien Chair of Global Surgery, Professor Juan Carlos Puyana. The team includes surgeons, doctors, researchers, programme managers, educationalists, and communications specialists. We draw on experts in all aspects of health, medicine and surgery from across RCSI to support our work. The immediate outline of the IGS is to dwell and leverage on the successful and well-developed educational and research projects within our long-term partnerships, while we seek new collaborations and identify new opportunities to expand and diversify our participation in innovative and sustainable solutions for advancing surgical care in global health.

#### **SPHeRE**

The School of Population Health is home to SPHeRE, the national, inter-institutional, structured doctoral programme, funded by the HRB. This programme is expanding Ireland's capacity to conduct population health and health services research and maximise its translation into policy and practice.

The SPHeRE programme provides a comprehensive set of capacity building and training activities to scholars. These activities are organised around expert-led, independent and peer-led learning processes. These core approaches to teaching and learning underpin the different stages of the PhD journey.

SPHeRE involves eight universities across Ireland: RCSI, TCD, UCC, DCU, Maynooth University, University of Galway, UCD and the UL. Professor Mary Clarke, Department of Health Psychology is SPHeRE Programme Co-Director.

### Converge

Converge: Centre for Chronic Disease and Population Health Research was established in 2023. Led by Professor Edward Gregg as part of a €4.3 million Science Foundation Ireland-funded Research Professorship grant; it promises to be a significant and exciting development in population health research. Researchers in this new centre will work with a national and international team of partners and collaborators to deliver outputs and impact to policy makers worldwide, with essential data to prioritise specific interventions to specific populations to reduce the burden of chronic diseases.

Converge will serve as the coordinating hub for three integrated streams of research:

- An epidemiology and disease burden stream that will develop a novel data ecosystem and execute a series of epidemiologic studies to prioritise the current emerging, and future health priorities in chronic disease and morbidity in Ireland and globally
- A population implementation and effectiveness stream will develop and use new population registries
  and integrated data sources to quantify the impact of care and prevention in the real world, taking
  both an Irish and global perspective
- A health impact and economic modelling platform will develop novel disease progression models and health impact models to prioritise intervention and risk stratification options

## **Summary of Key Achievements / Academic Activities**

# School of Population Health

Kev staff appointments

Professor Kathleen Bennett appointed Deputy Head of School – Research, October 2022 Dr Sarah Barry appointed Director of Academic Programmes, January 2023 Professor Juan Carlos Puyana appointed O'Brien Chair of Global Surgery, April 2023 Dr Hilary Murray appointed Cameron Scholars Programme Manager, June 2023

#### **Events**

Official launch of the School of Population Health with Dr Karen DeSalvo, Chief Health Officer, Google, and Professor Philip Nolan, Director General, Science Foundation Ireland – 12 October 2022 Cameron Award for Population Health presented to Professor Andrew Morris, Director, Health Data Research UK – 14 March 2023

### Professor Edward Gregg

- Served as Lead/Chair of the World Health Organization Diabetes Compact Scientific Committee that led to the designation and endorsement of global targets for all WHO member states. Endorsed by 75th World Health Assembly, WHO and member states and published in The Lancet, March 2023.
- Served as President of International Diabetes Epidemiology Group. Completed term as president and chaired/led international conference – 17th international Diabetes Epidemiology Group Congress, in Porto, Portugal.
- Co-founded National Diabetes Registry Consortium with HSE National Clinical Director for Chronic conditions

#### Dr Sarah Barry

- Member of the Health Research Board (HRB) Board
- Member of the Performance and Planning Committee of the HSE Board, for which she carries particular responsibility to support and contribute to Sláintecare implementation.
- Member of the Advanced Care Research Centre Academy Advisory Board at the University of Edinburgh
- Appointed (April 2023) to the HSE National Working Group designing integrated service delivery for the new Regional Health Areas under Sláintecare. Delivered two academic presentations to the working group to ensure national and international scientific evidence on integrated care was accounted in the group's deliberations.
- Teaches integrated care policy and implementation for the International Foundation for Integrated Care's (IFIC) Certificate in Integrated Care accredited through Munster Technological University
- Member of the IFIC Ireland Steering Group

## Keynotes and invited presentations

### Professor Edward Gregg

- Missed Opportunities and Evolving Needs in Diabetes Implementation Research, Diabetes UK Conference on Implementation Science for Diabetes, 27 March 2023
- Problems to Solve and Fields to Transform in the Next Era of Population Health Science. Keynote presentation, 2023 annual SPHERE conference, 24 March 2023, Dublin
- Transitions in the Diabetes Epidemic and their Implications for Population Health, Grand Rounds, University of Limerick, 3 February 2023
- The Changing Character of the Diabetes Epidemic and its Demand for Precision Population Health Science. Special Seminar, Queen's University Belfast, 17 February 2023
- New Directions in Data-Driven Population Health Decision-Making: The Case of Diabetes. NOCA annual meeting, 30 January 2023, Dublin
- Population Health in the post-Covid Era. RCSI Grand Rounds, 19 January 2023
- Debate: Population-based lifestyle interventions can lead to a reduction in incidence of diabetes and its complications. International Diabetes Epidemiology Group, 4 December 2022, Porto, Portugal
- Implications of Alternative Risk Stratification Approaches for Diabetes Prevention. International Diabetes Federation, 6 December 2022, Lisbon, Portugal
- Effectiveness of NHS-based Multi-tiered Lifestyle Interventions to Achieve Type 2 Diabetes Prevention Across Glycaemic Risk Tiers, 11 November 2022, NIHR/ARC Conference, York, UK
- Launching Population Health: Tackling the world's population health challenges through research, education, and collaboration, 12 October 2022, RCSI
- The Changing Character of the Diabetes Epidemic and its Implications for Public Health. Beaumont Hospital Grand Rounds, 9 October 2022
- Epidemiology as the Basis for Clinical and Public Health Decision-Making, Novartis Chronic Disease International Workshop, 1 July 2022 Istanbul, Turkey
- How has Covid-19 changed diabetes? 2022 Royal Society of Medicine, Diabetes in 2022 Conference, 10 July 2022, London

## Dr Sarah Barry

- Educating for Population Health: Towards a new MSc for a Challenging World, RCSI International Education Forum, 19 June 2023
- Sláintecare Policy Implementation: The devil is in the detail: National Healthcare Outcomes Conference, 25 April 2023
- Sláintecare implementation and related topics, HSE Learning and Development Seminar Series, 23
  January 2023

## **Department of Health Psychology**

### Professor Anne Hickey

- European Stroke Organisation/European Academy of Neurology invited expert for guideline development
- TILDA Steering committee member
- Irish Research Council DOROTHY-COFUND Programme Steering Committee member

### Professor Karen Morgan

- · Asis eUniversity PhD Proposal Defense Reader
- External Advisory Committee for the Department of Psychology, Sunway University

#### Professor Mary Clarke

- External Examiner, School of Medicine, Trinity College Dublin
- External Examiner, Royal College of Physicians, Public Health Faculty
- Public Health Examinations Committee, Faculty of Public Health Medicine, Royal College of Physicians Ireland

## Professor Frank Doyle

- Made an Honorary Fellow of the European Health Psychology Society
- Irish Association of Cardiac Rehabilitation: Council Member, invited expert for guideline development
- All-Ireland Physical Activity and Ageing Group (AIPAAG): Committee member
- Member of the St Patrick's University Hospital Research Ethics Committee
- Psychological Society of Ireland nominee to the European Federation of Psychological Associations Standing Committee on Psychology and Health
- Associate Editor, Journal of Behavioral and Cognitive Therapy

#### Dr Lisa Mellon

- Co-Chair, Irish Society of Lifestyle Medicine
- Research lead, Irish Kidney Association

### Dr Catherine Nora Moran

 Awarded the President's Prize for best poster presentation at the Irish Gerontological Society meeting (Nov 2022)

### Exceptional events - seminars, conferences organised by staff

### Professor Mary Clarke

• SPHeRE 9<sup>th</sup> annual conference 'Population Health – future directions and challenges' hosted in RCSI, 23 March 2023, funded by HRB grant SPHeRE-2022-001

#### Professor Frank Doyle

 Hosted the ESCAPE (Evaluation of a patient-centred biopsychosocial blended collaborative care pathway for the treatment of multi-morbid elderly patients; EU H2020 SC1-BHC-24-2020 RIA, funded consortium) Annual Meeting on 20-21 April 2023

# Dr Lisa Mellon

• Irish Society of Lifestyle Medicine Inaugural Conference, RCSI, 17 June 2023

#### **Invited Lectures**

Hickey A (2023, April): Certificate in Lifestyle Medicine. HEA Conference – 'Supporting Success through Wellbeing in Higher Education'.

Hickey A, Gilroy J (2023, January): Framing Assessment within a Positive Education Environment. QQI Conference – Rethinking Assessment.

Doyle F, (2023, Jun): Stress Management tips for patients. Irish Society of Lifestyle Medicine Inaugural Conference, RCSI.

Doyle F, (2023, Jan): Anticipatory Care Planning for Older People. South Belfast Federation of Family Practices, Belfast.

Doyle F, (2023, Apr): Tips for Stress and Coping. Alpha-1 Foundation Global Research Conference and Patient Congress, Dublin.

Doyle F, (2023, Feb): Effective maNagement of depression among patients with cANCEr (ENHANCE): Hybrid systematic review and network meta-analysis of interventions for depressive symptoms. Research on cancer screening in Ireland: Exploring an Integrated approach across cancer types. University of Galway.

Doyle F, (2022, Sep): Quality of Life and Psychosocial Management. Cardiac Rehabilitation: The Mayo Clinic Model, Beaumont Hospital.

Kelleher C, (2022, Dec) Invited Chair for Panel Discussion (Chair): Targeted interventions, Evidence to Action: Ending Sexual Violence and Harassment in Higher Education Institutions Conference, Higher Education Authority, Croke Park, Dublin.

Kelleher C (2023, March): Invited panel discussant for launch of national We Consent Campaign, Dublin Rape Crisis Centre, Royal Irish Academy, Dublin.

Mellon L (June, 2023). Invited keynote speaker. 18th Congress of the Intestinal Rehabilitation and Transplant Association, Chicago. Medication management and Adherence strategies. Engaging the patient for success

Mellon L (June 2023). Getting from Knowing to Doing: Top tips for living well with CVD. Croí patient awareness seminar, Castlebar

Moran CN (2023, June) Invited symposium speaker: Secondary stroke prevention: Targeting psychological and information provision symposium, Leeds Beckett University

Moran CN (2023, May) Invited presentation at the Translational Neuropsychology Group, Dept. Experimental Psychology, University of Oxford

## Department of Public Health and Epidemiology

Professor Debbi Stanistreet

- Reviewer IJERPH
- Board member Irish Forum for Global Health
- Member of working group on career structures and career development for the multidisciplinary Public Health & Health Promotion workforce in Ireland
- Lead of Climate Health in Medical Education Ireland (CHIME)
- Member of Net Zero Carbon Surgery Commission Project

## Professor Emeritus Ruairí Brugha

- Board member Irish Forum for Global Health
- Editorial Board International Journal Health Policy and Management
- Reviewer Health Policy; International Journal Health Policy and Management

## Professor Emeritus Ronán Conroy

- Associate Editor: European Journal of Preventive Cardiology & Journal of Health Psychology
- Reviewer: Psychology Health & Medicine, Age and Aging, PLoSOne, BMJ, Health Psychology Open, Public Health

### Pat Dicker

- Scientific Advisory Board: The Irish Epilepsy Association
- Editorial Board: International Journal of Gynecology and Obstetrics
- Fellowship: Royal Statistical Society

### Dr Aisling Walsh

- Member of SPHeRE Academic Panel
- Reviewer for: BMC Pregnancy and Childbirth, PLoSOne, BMJ Open
- Student Engagement and Partnership Programme (StEP) Staff Mentor 2023

#### Dr Jennifer Rvan

- Trustee, Up The Cerebral Palsy Movement
- Fellowship: Evidence Synthesis Ireland
- · Member, Irish Society of Chartered Physiotherapists Research Network Steering Committee
- Member, HSE Health and Social Care Professional Committee Research Group
- Associate Editor Frontiers in Rehabilitation Science

#### Dr Jennifer Fortune

- Review editor for Disability, Rehabilitation, and Inclusion
- Guest associate editor for Disability, Rehabilitation, and Inclusion
- Member, Irish Society of Chartered Physiotherapists Research Network Steering Committee
- Fellowship: Evidence Synthesis Ireland

### Eunice Phillip

- Board member and Student Outreach Coordinator for Irish Global Health Network
- Student representative on RCSI Equality, Diversity, Inclusion Forum

### Dr Maisoon Mairghani

- Adjunct Lecturer of Public Health and Epidemiology at University of Limerick
- Member of Sudan Medical Council
- Member of UAE Diabetes Steering Committee
- Reviewer for: BMC Health Services Research, PLoS One, Journal of Tissue Viability

## Dr Paul Kavanagh

- Reviewer for Tobacco Control and Public Health
- Board Member and Honorary Secretary, Faculty of Public Health Medicine, Ireland
- · Board Member, Institute of Public Health in Ireland
- Member of the National Screening Advisory Committee, Ireland
- Member of the National Cancer Registry of Ireland Advisory Council

#### Dr Niall Roche

• MEHAI (Member of the Environmental Health Association of Ireland)

### Dr Melissa Sharp

- Member of National Clinical Effectiveness Committee (NCEC) Advisory Panel, Department of Health
- Member of working group on STROBE-Equity and TARGET trial reporting guidelines
- RCSI representative to national Irish Research Staff Association
- Reviewer for BMC Public Health, PLoSOne, Journal of Health Communication, National Patient Safety Office Conference 2023

### Dr Barbara Clyne

- Associate Editor, Trials, 2021 present
- Public Funding Agency of Portugal

   Fundação para a Ciência e a Tecnologia (FCT), Member Health and Sport Sciences panel, 2022 present
- Member of National Clinical Effectiveness Committee (NCEC) Advisory Panel, Department of Health
- Module lead HRB (Health Research Board) SPHeRE PhD programme
- Member, HIQA Scientific Advisory Panel, Bariatric Surgery for Obesity in Type 2 Diabetes

# Dr Manjula Manikandan

- Member, Irish Society of Chartered Physiotherapists and conference abstract reviewer
- Member of the American Association of Cerebral Palsy and Developmental Medicine (AACPDM)
   (2021 present): Lifespan committee, Journal digest working group and Special Interest Group (SIG)
   committee

## **Data Science Centre**

### Professor Kathleen Bennett

- Member of National Research Ethics Committee (NREC) for COVID-19 biobank
- Academic Editor PLOS ONE
- External examiner for PhD thesis (UCC)
- Member of International Society of Pharmacoepidemiology (ISPE) Public Policy Committee
- Member of European Network for Centres of Pharmacoepidemiology and Pharmacovigilance (ENCEPP)

#### Dr Fiona Boland

- Vice-Chair of the Royal College of Physicians ethics committee
- Associate Editor Journal of Multimorbidity and Comorbidity
- Member of HIQA Advisory Group Information management standards for national data collections
- Member of the Skin Wound and Trauma (SWaT) Research Network
- Member of the Diabetes Ireland Research Alliance (DIRA) Committee
- Member of the Irish Statistical Association

#### Dr Caitriona Cahir

- Member of the NREC medical devices ethical committee
- PI Development Programme inter-university peer mentoring programme called 'Collaborate' (2022/2023)
- Member of The International Society for Medication Adherence (ESPACOMP)

## Dr Maeve Mullooly

- School of Population Health Research Subcommittee member
- Organising committee for RCSI Research Day 2023
- PI Development Programme inter-university peer mentoring programme called 'Collaborate' (2022/2023)
- Member, The National Cancer Registry of Ireland Advisory Council
- Invited lectures: National Screening Service Research Seminar. Invited seminar 'Examining breast
  density in the breast screening setting' (7 November 2022); All Ireland Breast Cancer Conference
  New Developments and Current Challenges in Breast Radiology. Invited oral presentation 'Current
  breast density related practices within population-based screening programmes.' (2 December 2022).

### Dr Eithne Sexton:

- Winner of prize for best platform presentation at the All-Island Stroke Conference, Virtual. Sept 2022. Title: A "sit-down" and a "check-in": A qualitative study of information and communication needs of stroke survivors and their family members in Ireland.
- Winner of Highly Commended poster award at the European Life After Stroke Forum, Barcelona, March 2023. Title: Stroke Survivor, Family Carer and Professional Priorities for Improvement of Stroke Services in Ireland: Results of a Stakeholder Survey. Poster Presentation.

# **Healthcare Outcomes Research Centre (HORC)**

# Key staff appointments

Dr Gintare Valentelyte submitted her PhD thesis in November 2022, and began working part-time on the 'Digital technologies for managing COPD patients in Ireland' project with HORC. In April 2023, she transitioned into her current postdoctoral role working on the Smoking Cessation programme, supported by and in collaboration with the HSE Tobacco-Free Ireland Programme leaders.

#### **Events**

- HORC members co-organised the webinar series 'The Future of Value-Based Healthcare in Ireland', with the final event taking place in September 2022. The series was organised in collaboration with Novartis Pharmaceuticals Ireland and Janssen Sciences Ireland.
- HORC members co-organised the webinar series 'The Future of Cancer in Ireland: Health Economic Perspectives', with the first two events 'Investing in Cancer: Achieving Better Outcomes for Patients and Improving Value' and 'Assessing the Value of New Cancer Treatments and Innovations' taking place in March and May 2023 respectively. The webinar series is in collaboration with Novartis Pharmaceuticals Ireland, Janssen Sciences Ireland and EY Ireland.
- HORC members co-organised the sixth annual National Healthcare Outcomes Conference in April 2023, 'Irish Health Policy: Balancing the Good and the Bad', in collaboration with Novartis Pharmaceuticals Ireland and RCSI Events.
- HORC members co-organised the in-person event 'How do we measure success of obesity
  interventions? Identification, interpretation, evaluation and evidence translation of effects' in RCSI in
  May 2023, in collaboration with the COllaBoration in health economic modelling of overWEight and
  oBesity (Obesity Cobweb), RCSI, and the Medical Faculty Mannheim at Heidelberg University.

### Individual level achievements

### Professor Jan Sorensen

- Member of the OECD Quality of Life Working Group
- Member of the Danish Health Technology Council
- Member of the Pre-Hospital Emergency Care Council Research Committee
- Peer-reviewer for various scientific journals
- Presented to the 30th European Congress on Obesity, 19 May 2023

### Dr Gintare Valentelyte

- Dissertation project supervisor, MSc, Graduate School of Management, RCSI
- Presented at the European Health Economic Association (EUHEA) Conference, Oslo, Norway, 5-8
  July 2022
- Discussant at the 9th European Health Economic Association (EUHEA) PhD Conference, Galway, Ireland 29-31 August 2022
- Presented health economic evaluation results at event 'CARE Community and Acute Respiratory Excellence - 'Digital technologies for managing COPD patients in Ireland', TCS Letterkenny, 27 October 2022
- Presentation as invited speaker at the University of Aalborg, Denmark, 9 December 2022
- Presented at the School of Population Health research seminar, 12 January 2023
- Presented at the Irish Postgraduate and Early Career Economics (IPECE) workshop, Technological University Dublin, 19 January 2023
- Peer-reviewer for various scientific journals

## Institute of Global Surgery

# Key staff appointments

In April 2023, Professor Juan Carlos Puyana commenced in the role of The O'Brien Chair of Global Surgery, succeeding Professor Ruairí Brugha who had served as Interim Chair since April 2022. Professor Puyana joined RCSI from the University of Pittsburgh, where he was Director of Global Health-Surgery. He is a renowned trauma/acute care surgeon and a global health educator.

#### **Events**

- The Institute of Global Surgery, with the support of the RCSI faculty, hosted the 12th Meeting of the Permanent Council of the G4 Alliance from 11-14 November 2022, bringing an international surgical, obstetric, trauma and anaesthesia audience to RCSI's Dublin campus. Dr Jakub Gajewski spoke on the evaluation of Zambia's NSOAP. During this event the IGS, with its partners, hosted the Global Surgical Training Challenge, which was an interactive event including student teams, largely organised by student societies, who also built and demonstrated some prototypes.
- Novel educational programmes launched:
  - The United Nations Global Surgery Learning Hub
  - The East, Central and Southern African Perioperative Nursing e-Learning Foundational Programme
  - The College of Surgeons of East, Central and Southern Africa Continuous Professional Development Programme
- The Institute of Global Surgery provided examiners and external examiners to the College of Surgeons of East, Central and Southern Africa examinations in Namibia, December 2022, where 148 COSECSA Fellows graduated.

## Professor Juan Carlos Puyana

- Professor Puyana is transitioning some of his global health activities and projects during the spring of 2023.
- Participated in capacity building in emergency surgical care under the auspices of the European Society for Trauma and Emergency surgery and the UEMS (The Union of European Surgical Board and surgical specialties) seeking new partners, within the European Surgical societies, with an interest in collaboration in global surgery.
- Participated in a seminar on blood transfusion challenges and blood deserts in LMIC sponsored by Harvard Medical School.
- Presented at the CUGH on the Bloodsafe programme based an NIH funded project in Kenya aimed at improving access and safety to blood transfusions systems in Sub-Saharan Africa.

### Dr Jakub Gajewski

- Awarded the RCSI Student Partnership Champion Award 2023
- Appointed Extraordinary Senior Lecturer at the Centre for Global Surgery, University of Stellenbosch, South Africa.
- Selected as WHO technical consultant to support activities related to health systems and services performance assessment and monitoring.
- Presented on the Managed Clinical Network for paediatric surgery referrals in Malawi and kidSURG, and PAPSEP the Pan-African Paediatric Surgery E-Learning Programme, at CHI - Global Child Health: Communities Healing a World in Crisis event, RCSI, October 2022

#### Dr Chiara Pittalis

- Awarded the RCSI Student Partnership Champion Award 2023
- Selected as WHO technical consultant to support activities related to health systems and services performance assessment and monitoring.

### Dr Ines Perić

 Presented on the Managed Clinical Network for paediatric surgery referrals in Malawi and kidSURG, and PAPSEP the Pan-African Paediatric Surgery E-Learning Programme, at CHI - Global Child Health: Communities Healing a World in Crisis event, RCSI, October 2022

## Celina Flocks-Monaghan

• In partnership with Dr Chiara Pittalis and Dr Jakub Gajewski, initiated development of a global surgery research methods course collaborating with the Centre for Global Surgery, University of Stellenbosch, South Africa. This is work in progress funded by the RCSI StEP initiative.

### **Staff List**

## **School of Population Health**

Professor and Head of School

Edward W. Gregg PhD

### Director of Academic Programmes

Sarah Barry PhD, MA, BD, Bacc Phil, Dip Corporate Governance

### Research Manager

Elaine Healy BA (Mod), MSc (research), MSc Leadership, PG Dip Statistics

#### Operations Manager

Brian Lynch BComm, MSc, MPH

# Programme Manager, Cameron Scholars

Hilary Murray PhD

### Research Assistants

Nicola Frew BSc, MSc

John McCaffrey BA, HDipPsych, MSc

## **Department of Health Psychology**

Professor and Head of Department; Deputy Dean for Positive Education

Anne Hickey BA(Mod), PhD, AFPsSI, C Health Psychol PsSI

# Professor and Director, Perdana University Royal College of Surgeons in Ireland School of Medicine (PU-

RCSI) in Kuala Lumpur, Malaysia

Karen Morgan BA, MA, PhD, RegPsycholPsSI (seconded: Director PU-RCSI Medical Progamme)

#### Associate Professor

Mary Clarke BA, MSc, PhD

Frank Doyle BA (Hons), MLitt, PhD, C Health Psychol PsSI, Fellow PsSI, FEHPS

## Senior Lecturers

Sally Doherty BSc (Hons), PhD, CPsychol (seconded: Psychology Lead, RCSI-Bahrain)

#### Lecturers

Caroline Kelleher BA (Hons), PhD, Dip BSLM/IBLM

Lisa Mellon BA, MSc, PhD, C Health Psychol PsSI, PGDip, Dip BSLM/IBLM

Maria Pertl BSc (Hons), MSc, PhD, C Health Psychol PsSI

Barbara Caska MA, PhD, CPsychol PSsl, CPsychol BPsS, AFBPsS

Colm Healy BSc, MSc, PhD

## Honorary Clinical Associate Professor

Niall Pender BA, MSc, MSc, PGDip, PhD, CPsychol (BPS), CPsychol (PsSI), AFPsSI,

Principal Psychologist, Department of Psychology, Beaumont Hospital.

## Honorary Clinical Senior Lecturer

Diane Gillan BA, MA, DClinPsych, PgDip (Neuropsychol), Senior Clinical Neuropsychologist, Beaumont Hospital.

### Department Coordinator

Niamh Corbett MMII Grad. PG Dip CompSc, MA

## Postdoctoral Researchers

David Byrne BA(Hons) PhD

Catherine Nora Moran BA, MPsychSci, PGradCertStats, PhD

Isabelle Jeffares PhD

Nora Donnelly PhD

Michael McKay PhD

Research Assistants Ronan Fleury BA, MSc Ellen Kinsella Rahela Beghean Cheyenne Downey

Scholars

PhD students: 7 MD Students: 1

MSc/MPharm Students: 8

Undergraduate: 4

Student Research Placements: 7

## **Department of Public Health and Epidemiology**

Associate Professor and Head of Department

Debbi Stanistreet RGN, DPSN, BA (Hons), PhD, SFHEA

### Professors Emeriti

Ruairí Brugha MB, BCh, BAO, MD, FFPHMI, MSc, DCH, Dip Obs Ronán Conroy BA, MusB, DipEd, DSc

### Senior Lecturers

Barbara Clyne BSocSc, MSocSc, PG Dip, PhD

#### Lecturers

Jennifer Ryan BSc, MSc, PhD, fHEA Aisling Walsh BA, MSocSc, PhD Sinead Hurley BSc, PG Dip, PhD (to June 2023) Maisoon Mairghani MBBS, MSc, PhD Ross Brannigan BSc, PhD Patrick Dicker BA, MA, MSc, CStat

## Honorary Clinical Senior Lecturers

Paul Kavanagh MB, MSc, PG Dip Health Ec, PG Cert Med Ed, MRCPI, FFPHMI Lois O'Connor MB BAO BCh MICGP MPH MFPHMI Caoimhe O'Sullivan MA, MPH, PhD, FFPH

### Honorary Senior Lecturer

Niall Roche BSc (Env Health), MHSc

## Honorary Clinical Lecturer

Sadhbh Lee MB BCh BAO MRCPI

## Research Fellows

Melissa Sharp BS, MPH, PhD Frances Cronin BSc, PhD Jennifer Fortune BSc, PG Dip, PhD Iryna Mazhak MPA, PhD

## Postdoctoral Researchers

Shona Lee BA, MSc, PhD Samira Jabakhanji MSc, PhD Manjula Manikandan BPT, MSc, PhD

## Research Assistant

Eunice Phillip BScN, MPH

Department Administration Roma Acosta BA Mary O'Connell

Scholars

PhD: 2

Student Research Placements: 5

### **Data Science Centre**

Associate Professor and Head of Data Science Centre Kathleen Bennett BSc, PhD

Senior Lecturer

Fiona Boland BSc, MSc, PhD

## Lecturers

Caitriona Cahir BA (Mod), HDip (Psy), PhD Patrick Dicker MA, MSc, GradStat

StAR Lecturer

Stephen Madden BA (Mod), MRes, PhD

### Visiting Academics

Marina Fuente Moreno BSc, University of Barcelona Ruth Norris PhD, Newcastle University

#### Affiliated Staff

Valeria Lima Passos PhD (based in School of PBS) Aidan Beegan BSc, MSc (based in Children's Health Ireland)

# Senior Research Fellow

Maeve Mullooly BSc, MPH, PhD

# Senior Postdoctoral researchers

Eithne Sexton PhD

Jonathan Briody BSc, MSc, PhD

Bernadine O'Donovan BA, PhD

Ross Brannigan PhD, April 2022-October 2022

## Postdoctoral researchers

Tina Bedenik BA, PhD

Róisín Leahy BSc, PhD (from Oct 2022)

Mengyang Zhang BSc, PhD

## Research Assistant/Administrator

Leon McCarthy BA (to Feb 2023)

Nicola Frew BSc, MSc (from March 2023)

### Scholars

PhD (main/co-supervisor): 16

Master's by research: 2

MD: 2

# **Healthcare Outcomes Research Centre (HORC)**

Professor and Director

Jan Sorensen MSc (Health Econ.)

# Postdoctoral Researcher

Gintare Valentelyte MSc (Health Econ.) PhD

Research Officer Laura Hammond

## Institute of Global Surgery

O'Brien Chair of Global Surgery

Juan Carlos Puyana MD FACS FCCP FRCSC (from 1 April 2023)

Ruairí Brugha MB, BCh, BAO, MD, FFPHMI, MSc, DCH, Dip Obs (Interim Chair April 2022-March 2023)

Programme Directors

Research: Jakub Gajewski MSc, PhD

Education, Training and Advocacy: Eric O'Flynn MA, MSc

Operations: Deirdre Mangaoang MA, MBA

Research Fellow

Chiara Pittalis MSc, PhD

Research Assistant

Lawa Shaban MBChB, MSc

Collaboration Programme Manager

Lucia Brocato MSc

Education Project Manager

Ines Perić PhD

Administrative Assistant

Fergal O'Rourke BA, PgCert

Communication Specialist

Antonio Jaén Osuna BA MA

Scholars

PhD: 2

### Visiting students

The IGS hosted 4 Research Summer School students in the 2022 cohort, plus a visiting student from the University of South Carolina School of Medicine – Greenville. Two RCSI students also worked with us through internship.

# **Higher Degrees**

Healthcare Outcomes Research Centre (HORC)

Gintare Valentelyte, Thesis: "Assessing the impact of Activity-Based Funding in the Irish public hospital system: A comparison of methods and empirical investigations", PhD, SPHeRE PhD Programme, RCSI 2023

### **Publications**

Abuzeyad FH, Al Qasem L, **Bashmi L**, Arekat M, Al Qassim G, Alansari A, Haji EA, Malik A, Das P, Almusalam A, Abuzeyad MF. Women's contribution to medicine in Bahrain: leadership and workforce. Human Resources for Health. 2022. doi:10.1186/s12960-022-00762-9

Algeo N, **Bennett K**, Connolly D. Prioritising the content and delivery of a work-focused intervention for women with breast cancer using the nominal group technique. Work. 2022. doi:10.3233/WOR-211160 Al-Hindawi A, **Kumar N**, Gaynor D. Exploring changes in levels and patterns of physical activity in undergraduate medical and nursing students during the COVID-19 pandemic. Frontiers in Public Health. 2022. doi:10.3389/fpubh.2022.1042071

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AlQahtani M, **Kumar N**, Aljawder D, Abdulrahman A, Alnashaba F, Fayyad MA, Alshaikh F, Alsahaf F, Saeed S, Almahroos A, Abdulrahim Z, Otoom S, Atkin SL. Randomized controlled trial of favipiravir, hydroxychloroquine and standard care in patients with mild/moderate COVID-19 disease. Scientific Reports. 2022. doi:10.1038/s41598-022-08794-w

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Barquero-López M, Muñoz-Valencia A, **Puyana JC**, Martínez-Cabañero J. Author response to the letter from Dr Schmitt: Early transfusion strategy may have also an impact on trauma-related organ failure. Journal of Trauma and Acute Care Surgery. 2022. doi:10.1097/TA.0000000000003717

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## **Active Grants and Grants Awarded**

## **School of Population Health**

**Gregg E** (PI), Changing the direction of diabetes with integrated, population-level, data-driven decision-making, 22/RP/10091, Science Foundation Ireland, 3 April 2023. €4,259,520, Co-applicant share: €580,226

**Gregg E**, Development of Population Health and Health Services Research Cluster, AH-PHHS-2021, Royal College of Surgeons in Ireland, 1 October 2021. €25,000

**Gregg E**, Prioritising Action on Persistent and Emerging Missed Opportunities in Cardiovascular Disease Prevention in Ireland, EG-Novartis-2022, Private Donor (Novartis), 9 December 2022. €40,000

**Gregg E**, Satellite Symposium of WDC 2022 – The 17th Symposium of the International Diabetes Epidemiology Group, EG-AZ-IEDG-2022, Industry (Astra Zeneca), 2 August 2022. €20,000

**Gregg E**, To identify interventions to reverse or mitigate the impact of COVID-19 pandemic on primary health care of hypertension and diabetes in Latin America & Caribbean (LAC), EG-WB-2022, World Bank/PAHO, 29 November 2022. €132,619

### **Department of Health Psychology**

**Clarke M (PI),** Barry, S, Browne J. Structured Population Health, Policy and Health Services Research Education (SPHeRE), 2022-2030, Health Research Board €6,000,000

**Doyle F, Hickey A**, Harkin D, Ryan A, Moran CN: Impact of resilience and professionalism training in international medical students: IMPRINT randomised crossover trial, Irish Medical Council - Irish Network of Healthcare Educators, 2022, €4,982

**Doyle F**, Boland F, Sorensen J, Deasy C, Masterson S, Willis D, Hennelly D, **Hickey A**, Brent L, Fitzgibbon N, Moran B: Targeted Review and Amalgamation of Unmapped Major trauma and Ambulance data in Ireland: TRAUMA, Health Research Board Secondary Data Analysis Projects, 2021-2024, €249,924

**Doyle F**, Boland F. Do psychometrics matter? The effects of advanced psychometric analyses on depression randomised trial outcomes. Irish Research Council COALESCE/2021/68. €219,473

**Doyle F**, Sorensen J, Kavanagh P, Valentelyte G: Health Economics of Financial Incentives and Stop Smoking Services Research Award 2022, Health Services Executive Tobacco Free Ireland, 2022, €60.000

Dunne P, **Doyle F**, Byrne E, Brannigan R, Meehan T, McDonough S, O'Boyle C. RCSI coach connect - coach led digital support platform for frontline healthcare professionals. RCSI/Charitable Infirmary Charitable Trust, €75,000

French H, **Doyle F**, Cunningham J, Smith S: Better Osteoarthritis Care: Delivering education and training for primary care health professionals in Ireland. Knowledge Translation Awards: KTA-2022-021, Health Research Board, 2022, €36,510

French H, **Doyle F**, **Bennett K**, **Sorensen J**, McCarthy G, **Ryan J**, McDonough S, Grimaldi A, Vicenzino B, Mellor R: An EDucation and eXercise intervention (EDX-Ireland) for gluteal tendinopathy in an Irish setting: a feasibility randomised controlled trial (LEAP-Ireland trial). DIFA-2020-018, Health Research Board, 2021, €329,662

French H, Cadogan C, Clyne B, **Doyle F**, Ryan J, Smith S. Development of a Model of Care for Osteoarthritis in Primary Care in Ireland – A mixed methods study. Health Research Board, Investigator Led Projects, 2020, €366,000

Harkin D, **Doyle F**, Clarke E, Ryan A, Kennedy N, Harbinson M, Kearney G: PROfessionalism in Partnership for Education Research (PROPER) Study: a novel online express team-based learning approach to knowledge acquisition and skills development in medical professionalism for medical students. North-South Research Programme 2021, Higher Education Authority, 2022, €199,320

**Hickey A,** Williams D, Horgan F, Kelly PJ. Pender N, Wren MA, Pendlebury S, Johnston M, Bennett K, Merriman N, Fahy M: The StrokeCog-R study: pilot testing a novel intervention DIFA-2020-20 2022-2025. Health Research Board €398,219

**Hickey A,** Browne J, Thomas S: SPHeRE Phase II (2021 Cohort) 2021-2025. Health Research Board . €810,669

**Hickey A**, Browne J, Thomas S: SPHeRE Phase II (Extension or 1598). 2018 – 2025. Health Research Board . €2,499,997

**Hickey A,** Tully C, Williams D, Horgan F, Byrne E, Kelly PJ, Collins R, Thornton J, Sexton E, Merriman N, McCormack J, Ní Bhreacháin M: Maximising the Quality of Stroke Care in Ireland – Development of a National Stroke Audit. APA-2019-036. 2021-2023. €239,973.

**Kelleher C,** Hutch A. Adapting Active\*Consent for multi-cultural and diverse students in Ireland, Higher Education Authority, 2021, €50,000.

LiAF Group. Life After Falls – the influence of physiological, psychological and environmental factors on behaviour after falls (LiAF). University of Malaya Impact Oriented Interdisciplinary Research Programme Grant (IIRG) (2019). PI: Professor Tan Maw Pin. Amount: RM 249,470

**Mellon L**, Clyne B. A rapid review of the impact of COVID-19 on clinical health outcomes for patients with heart failure. Irish Heart Foundation Project Grant, 2022, €19,976.

**Mellon L,** Daswani S, Gorecki E: De-stigmatising Language – One Word at a Time. RCSI Student Engagement and Partnership Award, €2,000

**Mellon L, Doyle F**, Walsh A, Conlon P, O'Seaghdha C, Riddell P, McCormick A, Moore C: A qualitative investigation of patient preferences for medication adherence strategies post organ transplant. School of Population Health, RCSI, RCSI University of Medicine and Health Sciences, 2022, €15,528

**Mellon L, Doyle F**, Aisling Walsh, Carol Moore: Patient preferences for care. Irish kidney Association, 2022, €55,445

**Mellon L** (co-applicant) The effect of After Action Review in enhancing safety culture and second victim experience and its implementation in an Irish hospital. APA-2019-024. Health research board, 2020. €231,723

**Mellon L.** (co-applicant) Understanding and Enhancing Medication Safety During COVID-19: The CONNECTS (COVID-Nineteen Medication Safety) Toolkit. Health Research Board, 2020, €139,954.

**Mellon L.** (co-applicant). HealthEIR: A Journey to Improving Health and WellbeingThrough Community-Based Social Self-Care. HSE SlainteCare fund, €338,218

**Moran CN**, Demeyere N, Quinn T, Dockree P, Brosnan M, **Doyle F**, **Hickey A**: A Critical Review of Confounding Factors Affecting the Assessment of Cognitive Impairment in Stroke and Dementia: Challenges and Recommendations, Royal Irish Academy Charlemont Grant, 2023, €2,350

Pedersen S, Thorgaard Skou S, Herrman-Lingen C, Scherer M, Albus C, Wachter R, **Doyle F, Sorensen J**, Beresnevaite M, Stauder A, Urbinati S, Rafanelli C, Velasco Nunez CA, Kamel N, Danner M, Jaarsma T, Reuver M, Burg M: ESCAPE: Evaluation of a patient-centred biopsychosocial blended collaborative care pathway for the treatment of multi-morbid elderly patients. H2020 SC1-BHC-24-2020 RIA, EU, 2020, €6,101,616

**Pertl M, Doyle F,** Collier S, Guinan E, Wallace E, Walsh A. Managing depression among patients with cancer: Identifying what works best through Network Meta-Analysis and Stakeholder consultation. Irish Cancer Society Psycho-Oncology Research Award, 2020, €59,996

**Pertl, M** (co-applicant). Direct Funding and Health Equity in Dementia Care: Evaluating a New Direction in Service Delivery. Canadian Institutes of Health Research Catalyst Grant: Quadruple Aim and Equity, 2022, \$99,361 CAD €71,828

**Pertl, M** (co-applicant). Personalised Exercise Rehabilitation in Cancer Survivorship: The PERCS Programme. Irish Cancer Society COVID-Cancer Rapid Response Award, 2021, €149,930

**Pertl, M** (co-applicant). Evidence to Assess the Impact of COVID-19 on Community-Based Dementia Care in Nova Scotia. Nova Scotia COVID-19 Health Research Coalition, 2020, \$54,908 CAD; 10 months (June 2020 – March 2021)

Roslan NR, Yusoff MSB, **Morgan K**, Abdul Razak A. Conceptualising A Framework On Resilience Among Junior Doctors Towards Addressing Burnout Issues In Healthcare. FRGS 2019, RM 85,760.

Roslan NR, Abdul Razak A, Yusoff MSB, **Morgan K**, Abd Shauki NI. Exploring Mental Health Disorders Prevalence and Factors Contributing to Professional Resilience Among House Officers: A Mixed-Method Study. Universiti Sains Malaysia, 2018, RM 33,552.

# **Department of Public Health and Epidemiology**

**Balfe J, Walsh A** (PI/PhD Supervisor). Fertility and Pregnancy with Cystic Fibrosis: A Study of the Experience of Fertility and Maternity Care for People with Cystic Fibrosis in Ireland. Irish Research Council Enterprise Partnership Scheme PhD Scholarship 2021, €110,000

Bennett K (PI) **Walsh A**. (Collaborator): A mixed methods approach to the evaluation and implementation of the 'Know Check Ask' medication safety campaign amongst healthcare professionals and patients/carers. Research Collaborative in Quality and Patient Safety, HSE, HRB, RCPI, )2020.

Breathnach F, **Dicker P** (Collaborator): Ireland STUDY: Investigating the Role of Early Low-dose Aspirin in Pregnancies Complicated by Diabetes. Health Research BoardDefinitive Intervention and Feasibility Award 2017, €777,000

**Brugha R** (PI), **Gajewski J** (PI). The 'AKAZI' project. Irish Research Council COALESCE Research Fund. 2019, €349,322.

**Clyne B**, (PI), Smith S, O' Neill M, Ryan M, Mahtani K, Lynch, R. Evidence synthesis and translation of findings for national clinical guideline development: addressing the needs and preferences of guideline development groups. HRB Emerging Investigator Award, 2019, €727,136

Cotter D, **Dicker P** (Collaborator). Biomarker Discovery in Ultra High Risk for Psychosis: towards prediction of psychotic disorder, non-psychotic mental disorders and recovery. HRB Health Research Awards, 2017 €368,719

Doyle F (Co-Lead PI), Sorensen J (Co-Lead PI) et al. **Kavanagh P** (Knowledge User). Health Economics of Financial Incentives for Stopping Smoking: A Distributional Cost-Effectiveness Analysis. HSE Tobacco Free Ireland Research Collaborative Award HEFISSS2022, 2022, €60,000

French H (lead applicant), **Ryan J** (co-applicant) An Education and eXercise intervention (EDX-Ireland) for gluteal tendinopathy in an Irish setting: a feasibility randomised controlled trial (LEAP-Ireland trial). Health Research Board; Definitive Intervention and Feasibility Award, 2022, €329,661

French H, **Ryan J**. (co-applicant), Doyle, F., **Clyne, B.** (co-applicant), Cadogan, C., Smith, S.; Development of a Model of Care for Osteoarthritis in Primary Care - a Mixed Methods Study; HRB Investigator Led Project Award, 2020; €366,000

Hopewell S (lead applicant) **Ryan J** (co-applicant). Clinical effectiveness of an adolescent-specific strengthening programme, compared to usual care, for ambulant adolescents with spastic cerebral palsy – the ROBUST trial. National Institute for Health and Social Care Research (NIHR); Health Technology Assessment Programme. 2023, GBP £1,395,482 (€1,622,227). €17,800 to RCSI

Layte R (PI) and **Stanistreet D**. TeenPath: Social environment, health and well-being among adolescents in Ireland HRB SDAP award, 2020 €307,409

Matthews A, Chirwa E, **Walsh A** (Associate Investigator) Enhancing evidence-based infant feeding policy implementation in Malawi. Irish Research Council/Dept of Foreign Affairs (COALESCE), 2019, €349,615

Mazhak I, **Walsh A**: Health Profiles, Health Care Needs and Coping Strategies of Ukrainian Female Refugees Settled in the Czech Republic and Ireland. EU Horizon Europe. MSCA4Ukraine, 2023, €215.534

McCarthy C, Clyne B (Co-Applicant) Essential Medicines in General Practice. HSE Post CSCST Fellowship, 023, €85.041

McDonagh S, Hurley-Ossing D, French H et al **Walsh A** (collaborator) Sustaining activity with arthritis (SAWA) following an Arthritis Ireland Be active with arthritis (BAWA) exercise programme. Health Research Board/Health Research Charities of Ireland, 2023, €198,834

Mellon L, Doyle F, **Walsh A**, Conlon P, O'Seaghdha C, et al. A qualitative investigation of patient preferences for medication adherence strategies post organ transplant. RCSI School of Population Health Seed Funding Award, 2023, €14,000

Mellon L, Doyle F, **Walsh A**, Moore C. Patient preferences for care. Irish Kidney Association, 2023, €55,455

Moriarty F, Fahey T et al. **Clyne B** (Collaborator). Sláintemedicines – a roadmap to essential medicines entitlement for universal health coverage. Pl Dr Frank Moriarty, HRB Investigator Led Projects, 2019, €282,879

Murphy A, Smith S, et al. Clyne B (Collaborator). Health Research Board Clinical Trials Network, 2021, Primary Care Clinical Trials Network Ireland. €999,979

Ni Cheallaigh C (PI), et al. **Kavanagh P** (Collaborator). INCLUDE: Integrating National Repositories for the Cooperation Linkage and Understanding of a Data Driven approach to the needs of Excluded people. HRB SDAP (Secondary Data Analysis Projects) award, 2021,€248,981

O'Malley G (PI) O'Brien S (Lead Knowledge User) **Walsh A** (co-applicant) Smith S, Baur L, O'Gorman C, O'Shea B, O'Shea D, Schubert S, Ward F, O'Malley M, Looney K: Meeting the Challenge of Childhood Obesity Treatment in Irish Healthcare. Health Research Board, Ireland. Applied Partnership Award, 2021, €239,800

Pertl M, Doyle F, Wallace E, Guinan E, Collier S, **Walsh A** (co-applicant). Managing depression among patients with cancer: Identifying what works best through Network Meta-Analysis and Stakeholder consultation. Psycho-Oncology Research Award. Irish Cancer Society, 2021, €59,996

Rafter N (PI) Stuart C (Lead knowledge user) **Walsh A** (Co-applicant) Williams D, Mellon L, Keane T, McCarthy S, Stuart C, Jenkins L, Hogan C. The effect of After-Action Review in enhancing safety culture and second victim experience and its implementation in an Irish hospital. Health Research Board, Applied Partnership Award, 2021, €231,753

**Ryan J** (lead applicant), **Fortune J** The Ignition study: sharing stories to improve the experience of transition for young people with cerebral palsy. HRB Knowledge Translation Award, 2022, €20,431

**Ryan J**. (lead applicant), **Fortune J, Walsh A**. An investigation into the prevalence and experience of psychopathology and mental disorders among children and adolescents with cerebral palsy. Health Research Board-Health Research Charities Ireland Joint Funding Scheme, 2023, €114,607

**Ryan J.** (lead applicant), **Fortune J, Walsh A.** Use of intervention mapping to adapt a transition programme for young people with childhood-onset physical disability in Ireland: the Ignition 2 study. HRB Applied Partnership Award, 2023, €240,000

**Ryan J**, (co-lead applicant), Smith K, **Fortune J**, (co-applicant), Walsh M, Leahy A, McCarron M, Victor C, Shanahan P, Carew M, Livingston E, Lowton K. The UK-Irish Consortium for ageing well with a lifelong disability: Priorities, perspectives, and opportunities.; ES/V007432/1; UK/Ireland Networking Grant; Irish Research Council, 2021€21,000

Ryan J, (lead applicant), Walsh A, (co-applicant), Fortune J, (co-applicant), Walsh, M., MacLachlan, M., Kroll, T., Norris, M., Kerr, C. Lavelle, G., Harrington, S., Hensey, O., Owens, M; Understanding the impact of using digital technology to provide services remotely during the Covid-19 pandemic on the health of young people with disabilities; a multiple case study design; 2021-J5200810-219972; UCB Community Health Fund/King Baudouin Foundation, 2021,€111,341

**Ryan J**, (lead applicant), **Walsh A**, (co-applicant), Walsh, M., Kroll, T., Norris, M., Kerr, C., Lavelle, G., Harrington, S., Hensey, O., Owens, M., Byrne, M. Improving transition from children to adults' services for young people with cerebral palsy living in Ireland. APA-2019-004 HRB Applied Partnership Award, 2020, €204,327

Smith S, Boland F, Byrne M, **Clyne B** (Co-Applicant, Work package lead) Gillespie P, Moriarty F, Murphy A, Murphy E, Murphy P, O'Ciardha D. Medicines and SocIal Prescribing to aDdress pAtient priorities in multimorbidity (MIDAS): A multi-arm (definitive) cluster randomized trial in Irish general practice. HRB Definitive Intervention and Feasibility Award, 2023, €1,192,174

Smith S, O'Shea E et al. **Clyne B** (Collaborator). Managing complex multimorbidity in primary care: a multidisciplinary doctoral training programme. HRB Collaborative doctoral award, 2018, €1,416,644

**Stanistreet D** (PI) Mfutso-Bengo (co-PI) Clifford M, Jewitt S, Holden M, Walsh A. (Associate investigator): Applying a sanitation approach to the problem of Household Air Pollution in Malawi. Irish Research Council COALESCE, 2020, €350,000

**Stanistreet D**. Growing Up in a Pandemic: health behaviours and the impact of COVID-19 on health inequalities among young people in Ireland —Teenpath Covid. MSCA (Marie Skłodowska Curie Actions). Horizon 2020(EU), 2021, €165,390

**Stanistreet D**. ENBEL (ENHANCING BELMONT RESEARCH ACTION TO SUPPORT EU (European Union) POLICY MAKING ON CLIMATE CHANGE AND HEALTH) consortium including Stanistreet D. Connecting health and climate change, Horizon 2020(EU), 2020 €2,993,207(€36,000 to RCSI)

**Stanistreet D**. SFI Sustainable Development Goal Challenge Project – Surgical Data Science; Principal investigator of a project focusing on scaling up quality in surgical training across the College of Surgeons Eastern, Central and Southern African regions (COSECSA). 2022Science Foundation Ireland and Irish Aid, €310,429

Theologis T (lead applicant) **Ryan J** (co-applicant) Clinical effectiveness of a child-specific dynamic stretching exercise programme, compared to usual care for ambulant children with spastic cerebral palsy – the SPELL trial. National Institute for Health and Social Care Research (NIHR); Health Technology Assessment Programme, 2023, GBP £1,385,787 (€1,611,116). €17,800 to RCSI.

Wallace E, Fahey T et al. **Clyne B** (Collaborator). Characterising problematic polypharmacy in older community dwelling people attending general practice. PI Dr Emma Wallace, Emerging Clinician Scientist Award 2020, €1,000,006

Wallace E, Smith S, Collins C, Murphy E, **Clyne B** (co-applicant), Harkins V, Foy F, Kelly M, Hanley K, Cox T. Evidence-based guidance in general practice: exploring general practitioner preferences, content prioritisation and dissemination. HRB Applied Partnership Award, 2019, €207,815

Walsh A, Bennett K, Daly C, Daly D, Flynn C, Lambert V, Matthews A, McGrane K, Murphy P, Murphy S, O'Shaughnessy F: Health information and education resources for women with epilepsy from preconception to postpartum. Health Research Board, Ireland. Applied Partnership Award, 2023, €174,608

## **Data Science Centre**

**Bennett K** (Principal investigator). Surgery, radiotherapy, chemotherapy, but now what? Exploring the rehabilitation needs of people with brain tumours in Ireland. HRCI-HRB-2022-021. Health Research Board / HRB and HRCI (Breakthrough Cancer). 2022, €344,765

**Bennett K** (co-applicant). Early Detection and Early Intervention 'The Lung Health Check'. Irish Cancer Society, ICS-2023, 2023, €3,000,000

**Bennett K** (co-applicant). Examining the effectiveness, and cost-effectiveness of a Work and Cancer Self-management programme to support women with breast cancer to return to work. HRB-DIFA-2023-006, Health Research Board, 2023, €1,035,135

**Bennett K** (joint PI). Putting data in the Service of Personalized Health care through the development of a prototype Learning Health System. SFI EMPOWER/Novartis, 2023, €293,000

**Bennett K** (co-applicant). Co-design Life After Stroke support pathways (CLASP). HRB-APA-2022-19, Health Research Board, 2023, €240,000

**Bennett K** (co-applicant). Health information and education resources for women with epilepsy from preconception to postpartum. HRB-APA-2022-14, Health Research Board, 2023, €174,609

**Bennett K** (co-applicant). Identifying support needs of adolescents and young adult cancer survivors returning to education and work, ICS-AHPC-2023, Irish Cancer Society Allied Health Professional Cancer Research Award, 2023, €75,000

**Bennett K** (Principal applicant). Building public trust and confidence in the secondary use of patient data to drive continuous healthcare improvement. EMPOWER/IQVIA-2021. Science Foundation Ireland, 2022, €290,000

**Bennett K** (co-applicant). The StrokeCog-R study: a randomised pilot study of a novel cognitive rehabilitation intervention in stroke. HRB-DIFA-2020-20, HRB, 2022, €398,220

**Bennett K** (co-applicant), **Cahir C** (PI). The scope and nature of potential medication-related harm in older populations in Ireland. HRB-SDA-2021-009, HRB, 2022, €247,628

**Bennett K** (co-applicant). An EDucation and eXercise intervention (EDX-Ireland) for gluteal tendinopathy in an Irish setting: a feasibility randomised controlled trial (LEAP-Ireland trial). HRB-DIFA-2020-18, HRB, 2022, €329,661

**Bennett K** (co-applicant). Prescription drugs with potential for misuse: A multi-indicator analysis of supply, patterns of use and the associated health burden in Ireland over the past ten years. HRB-SDA-2021, 2022, €249,856

**Bennett K**, **Mullooly M** (Joint PI). Examining the impact of COVID19 on cancer in Ireland. CMP21BEMU, Irish Cancer Society, 2021, €315,408

**Bennett K** (co-applicant/supervisor). Pharmacoepidemiology and Pharmacoeconomics of drug-drug interactions in older community-dwelling adults. GOIPG/2021/1213. Irish Research Council (IRC), 2021, €82,500

**Bennett K** (co-applicant), **Sexton E** (Principal applicant). Scenario and Intervention Modelling in Ireland for Stroke: Evaluating the effect of alternative policy scenarios and interventions for stroke in Ireland on outcomes and costs. ARPP-2020-010, Health Research Board, 2021, €183,122

**Bennett K** (co-applicant). Impact of Covid-19 on breast cancer in relation to social determinants of health. StAR International PhD Programme, 2020, €130,000

**Bennett K** (PI), **Cahir C** (**co-applicant**). A mixed method approach to the evaluation of the 'Know Check Ask' medication safety campaign amongst Healthcare professionals and patients/carers. RCQPS-2019-14, Health Research Board, 2020, €267,528

**Bennett K** (co-applicant), **Mullolly M** (Principal applicant). Investigating breast cancer risk factors to understand breast cancer epidemiological outcomes. EIA-FA-2019-012, Health Research Board, 2020, €752,129.

**Bennett K** (co-applicant). COLOSSUS: Advancing a Precision Medicine Paradigm in metastatic Colorectal Cancer: Systems based patient stratification solutions. 754923, EU Horizon 2020, 2018, €6,000,000; co-applicant share €127,867

**Boland F**. (Co-applicant). Medicines and SocIal Prescribing to aDdress pAtient priorities in multimorbidity (MIDAS): A multi-arm definitive cluster randomised trial in Irish general practice. DIFA-2023-002, HRB Definite intervention Feasibility Award, 2023, €1,200,000

**Boland F**. (Co-applicant). Preliminary testing of the Safety, Usability and Functionality of an innovative and smart medical device: Compression Therapy System Prototype for Venous Leg Ulcer treatment in healthy volunteers. EI Innovation Partnership, 2022, €1,000,000

- **Boland F**. (Co-applicant). The impact of Cutimed® Siltec® on pressure ulcer incidence, among at risk individuals, residing in a long stay health care setting (a pilot feasibility study). BSN, 2022, €50,000
- **Boland F**. (Co-PI). Do psychometrics matter? The effects of advanced psychometric analyses on depression randomised trial outcomes. COALESCE-2021-68, Irish Research Council, 2021, €220,000
- **Boland F**. (Co-applicant). Varicose Vein Education Informed coNsent (VVEIN) Study: a pilot randomised controlled trial (RCT). The Royal College of Surgeons in Ireland, Strategic Academic Research (StAR) programme together with the Bon Secours Health System (Ireland), 2021, €120,000
- **Boland F**. (Co-applicant). 'Characterising problematic polypharmacy in older community-dwelling people attending general practice. ECSA-2020-002, Health Research Board Emerging Clinician Scientist Award, 2021, €1,000,000
- **Boland F**. (Co-applicant). 'Identifying Children At Risk of Schizophrenia. ECSA-2020-005, Health Research Board Emerging Clinician Scientist Award, 2021, €1,000,000
- **Boland F**. (Co-applicant). Data CDRx project: Data analysis of policies and practices for safe, appropriate controlled drug prescribing. SDAP-2019-023, HRB Secondary Data Analysis, 2020, €250,000
- **Boland F**. (Co-applicant). 'Right Care": a programme of research to enhance safe and appropriate care for older patients in Ireland, CDA-2018-005, Health Research Board Collaborative Doctoral Awards, 2018, €1,385,000
- **Boland F**. (Co-applicant). Managing complex multi morbidity in primary care: a multidisciplinary doctoral training programme, CDA-2018-005, Health Research Board Collaborative Doctoral Awards, 2018, €1,417,000
- **Boland F**. (Collaborator). Targeted Review and Amalgamation of Unmapped Major trauma and Ambulance data in Ireland: TRAUMA. SDAP-2021-006, HRB Secondary Data Analysis, 2020, €250,000
- **Boland F** (Collaborator). iPASTAR-Improving Pathways for Acute STroke And Rehabilitation. Health Research Board Collaborative Doctoral Awards, 2019, €1,500,000
- **Boland F** (Collaborator). Evidence-based guidance in general practice: exploring general practitioner preferences, content prioritisation and dissemination, HRB-APA-2019-001, Health Research Board, 2019, €218,000
- **Briody J (Principal applicant), Bennett K** (Co-applicant). Estimating the population health impact and cost-effectiveness of implementing evidence based diabetes care and prevention in Ireland. EPSPD/2022/165. Irish Research Council (IRC), 2022, €106,365
- **Cahir C** (Principal Investigator), **Bennett K** (co-investigator) The scope and nature of potential medication-related harm in older populations in Ireland. HRB Secondary Data Analysis Grant (SDAP-2021-020), 2021, . €247, 628
- **Cahir C** (Principal Investigator) Medication without harm: Building a network and knowledge exchange programme. HRB Knowledge Translation Award (KTA), 2022, €24,675.
- **Cahir C** (co-investigator) Improving outcomeS for Women diagnosed with early breast cancer through adhErence to adjuvant Endocrine Therapy (SWEET). National Institute for Health Research (NIHR) Programme Grants for Applied Research, 2020, £2,538,229
- Cahir C, Bennett K (co-investigators) Pharmacoepidemiology and pharmacoeconomics of drug-drug interactions in older community-dwelling adults.Government of Ireland Postgraduate Scholarship Programme (GOIPG/2021/1213), 2021, €100, 000
- **Madden SF** (Collaborator). Interrogating the role of miRNA in predicting responses to novel modulator therapies in children with Cystic Fibrosis. HRB-EIA 2022, €608,106

**Madden SF** (Collaborator). ExamIning the diagnostic and functional role of a novel DNA meThylation signaturE in predicting ColoRectAl Cancer meTastasis - "INTERACT". HRB-ILP 2022, €369,787

**Madden SF** (Collaborator). Investigating the relationship between the Complement Pathway and outcomes in Psychosis; from Clinical High Risk to First Episode Psychosis. HRB-ILP 2022, €369,866

**Madden SF** (Co-applicant). Translational Cancer research On pan-heR iNhibition (ACORN): Dublin City University/PUMA Biotechnology, Inc. Strategic Partnership. SFI-SPP 2021, €800,000

**Madden SF** (Co-applicant). Linking 11-oxygenated androgens, skeletal muscle glucose metabolism and diabetes risk in polycystic ovary syndrome. HRB-ECSA 2020, €774,703

**Madden SF** (Collaborator). Precision Diagnosis and Care for Families with Pulmonary Fibrosis in Ireland. HRB-ECSA 2020, €769,035

**Madden SF** (Co-applicant). The impact of mutations in PI3K/AKT pathway gene loci on response to PI3K inhibitors. HRB-EIA 2019, €900,000

**Madden SF** (Co-supervisor). The multi-omic interrogation of HER2-positive breast cancer. IRC-Enterprise Partnership Scheme, 2019, €96,000

**Mullooly M** (joint Principal Investigator) 'Examining the impact of COVID-19 on cancer in Ireland' Irish Cancer Society. 2021, €315,000

**Mullooly M** (principal investigator): Investigating breast cancer risk factors to understand breast cancer epidemiological outcomes. Health Research Board, Emerging Investigator Award, 2020, €752,000

**Sexton E** (Lead applicant). Scenario and Intervention Modelling in Ireland for Stroke: Evaluating the effect of alternative policy scenarios and interventions for stroke in Ireland on outcomes and costs (SIMI-Stroke). ARPP-2020-010. Health Research Board, 2021, €225,000

**Sexton E** (Co-applicant). Maximising the quality of stroke care in Ireland – Development of a national stroke audit. APA-2019-036. Health Research Board, 2021, €240,000

### **Healthcare Outcomes Research Centre (HORC)**

Doyle F, **Sorensen J**, Kavanagh P, Valentelyte G: Health Economics of Financial Incentives and Stop Smoking Services Research Award 2022, Health Services Executive Tobacco Free Ireland, 2022, €60,000

McCarthy S, **Sorensen J**. Development of Health Economics Informed Quality and Patient Safety (QPS) Competencies. HSE, December 2021 (HORC engaged June 2022) €24, 999

Naidoo J. et al **Sorensen J** (co-applicant). Lung Health Check Programme, Irish Cancer Society, 2022, €4,500,000

**Sorensen J**, Funding for Cancer Webinar Series 2023. Novartis Ireland Limited and Janssen Sciences Ireland, 2023, €22,000

**Sorensen J**, Funding for National Healthcare Outcomes Conference. Novartis Ireland Limited, 2023, €15,000

# Institute of Global Surgery

Brugha R, Gajewski J. The "Akazi" Project. Irish Research Council 2019, €349,322

Gajewski J. StAR Intl PhD Programme 2020. RCSI, October 2020, €36,000

Gajewski J. kidSURG. BD. 2020, €211,861+ matched in-kind contribution

Gajewski J. kidSURG Phase 2. 2023, €92,440 + matched in-kind contribution

Gajewski J. StAR Intl PhD Programme 2019. RCSI. October 2020, €29,957

**Gajewski J.** Research into the impact of the COVID-19 pandemic on Health Centres funded by Misean Cara in East Africa, 2022, €13,915

Gajewski J. Enterprise Ireland, PhD training for surgical systems researchers, 2022, €12,000

**Gajewski J.** McGuigan K. SFI Sustainable treatment of water for clinical applications in Malawi- SURG-Water, 2023, €211,092

Gajewski J. MSCA4Ukraine, Fellowship for Dr Ivan Pyshnograiev, 2023, €199,694

Mangaoang D, Brocato L. RCSI/COSECSA Collaboration Programme. Irish Aid.2021. €2 million (€500,000 per annum for four years 2021-2024)

O'Flynn E. Global Surgical Training Challenge. Intuitive Foundation. 2021. US\$273,660

O'Flynn E. Pan-African Paediatric Surgery E-Learning Programme. KidsOR. 2020. €150,000

**O'Flynn E, Perić I.** United Nations Global Surgery Learning Hub. Global Surgery Foundation.2022. US\$99.501

Stanistreet D. Surgical Data Science. Science Foundation Ireland. February 2022. €51,616

# **POSTGRADUATE STUDIES**

### Overview

The highlight of the School of Postgraduate Studies calendar is always the conferring ceremonies. Since July 1<sup>st</sup> 2022, we have graduated 60 scholars with higher degrees by Research: 49 PhD, 9 MD, and 2 MSc. Since July 2022 5 PhD (10%) scholars and 1 MD (11%) scholar chose to submit their thesis by publication.

For the academic year 2022/23 we registered 115 new scholars for higher degrees by Research: 62 PhD, 22 MD, 10 MSc and 0 MCh, including 7 PhD/MD by prior publication in addition to our first intake of 21 DProf scholars. This represents a 46% increase in the number of new research scholars compared to 2021/22 and is the largest intake of PGRs to date.

Thanks to our continued collaborations with Soochow University and Fulbright, we currently have 26 RCSI StAR PhDs registered. Our 2022/23 intake includes 7 additional PhD scholars from the RCSI Soochow StAR PhD Programme, including 2 funded by the China Scholarships Council. Alongside these, we currently have 41 RCSI StAR MD scholars (3 of whom have transferred to the PhD programme). These MD StAR scholarships, led and coordinated by Prof. Emer Reeves, are in partnership with the Beacon Hospital, Blackrock Health (Blackrock Clinic and Hermitage Clinic), Bon Secours, Mater Private Network, Highfield Healthcare, UPMC Whitfield Waterford, and The Sports Surgery Clinic. We currently have scholars of 52 different nationalities registered with the school.

## **Summary of Key Achievements / Academic Activities**

In October 2022 we launched the Professional Doctorate programme in Nursing, Pharmacy, Physiotherapy and Positive Health. Our first cohort of 21 scholars began the programme in January 2023.

New Collaborative Agreements have been signed with two universities in Qatar: Qatar University and Hamad Bin Khalifa University. The first scholars on the joint PhD programme with Qatar University have been recruited and will commence in September 2023. The existing agreement with the Fulbright Commission was extended for a further 5 years and 2 more scholars have been recruited under this programme and will commence their studies in October 2023. The existing agreement with Soochow University was also extended for a further 5 years and 17 scholars have been recruited under this programme for 2023/24 (including 2 supported by the China Scholarships Council).

New agreements with the University of Minnesota, University of Pittsburgh and the Fraunhofer Institute are at an advanced stage with scholars expected to start in April '24. Finally, a new programme with the China Scholarships Council to support 2 new intakes of scholars for the SFI FutureNeuro centre is expected to launch in September 2023.

A review of the postgraduate annual review process was completed and as a result, the Annual Progress Review now takes place after the summer and the process has been effectively streamlined. The scholar's Progress Report is now shorter and more focused. It also includes space for supervisor feedback on the scholar's progress. All scholars will now undergo an annual review until they submit the soft-bound version of their thesis. The first annual report will constitute a more substantive examination and will form an exit point from the programme back to MSc for underperforming scholars.

We were delighted to support our Secondment award winners to undertake their placements. Scholars travelled to Queen's University Belfast; Université Laval; University of Aberdeen; Harvard T.H. Chan School of Public Health; University of Edinburgh; National Cancer Institute, Bethesda; and Ludger Ltd.

From January to May 2023, we were once again delighted to take part in the IUA Collaborative Webinar Series on Research Supervisor Support & Development. In February and March 2023, Dr Deirdre Fitzgerald Hughes, Prof. Catherine Greene and Prof. Niamh Moran with assistance from Dean Lennon, presented two workshops, one on Online and Distance Learning in Research Supervision: Benefits & Challenges and a second on Developing Clinical-Scientist Relationships to Progress Clinical Research.

In November 2022, we welcomed Bess McBride permanently to the SPGS team. Monica Jarzabek joined as Data manager from December 2022 to May 2023 and Maja Dumana temporarily replaced Kathleen Molloy in March 2023. Kathleen is providing maternity cover support for FutureNeuro.

### **External Committees**

Breast Cancer Now Dame Vera Lynn Clinical Fellowships Committee – Professor Darran O'Connor (Chair) June 2023

Breast Cancer Now Grant Committee – Professor Darran O'Connor (Deputy Chair) May 2023 Breast Cancer Now Grant Committee – Professor Darran O'Connor (Deputy Chair) November 2022

# **Conferences/Symposia Organised**

Soochow University Joint Research Symposium - Professor Darran O'Connor (co-organiser) May 2023

### Student Engagement and Partnership (StEP)

SPGS funded two StEP projects this year. The first, led by Dean Lennon and PGR scholar Celina Flocks Monaghan, "Let's Talk About It: A Mental Health Seminar Series for Postgraduate Scholars", provided an educational and supportive space for PGRs to discuss and address their mental health.

The second project, led by Bess McBride and PGR scholar Jennifer Donnelly, "Enhancing Career Development for Postgraduate Scholars" developed a Research Career Development Plan (RCDP) template for use by PGRs, which will be introduced for all new scholars in October 2023.

Lisa Maye-Gregory and PGR scholar Cian O'Connor were collaborators with the REACH office in the Junior Researcher Programme funded by SFI Discover. The project engaged PGRs and Postdocs in helping students from two local DEIS secondary schools to prepare for their Junior Certificate 'Science in Society' investigation.

#### **Staff Training**

Lisa Maye-Gregory - Managing Through People programme
Dean Lennon – Diploma in Data Analytics, Dublin Business School
Roger Preston – UPenn Resilience Training Programme

## **Staff List**

Professor & Head of School
Darran O'Connor BA (Mod), MSc, PhD

#### Associate Professors

Emer Reeves PhD (Deputy Head of School, MD programmes) Catherine Greene PhD (Deputy Head of School, PhD programmes)

#### Senior Lecturers

Deirdre Fitzgerald-Hughes PhD (Deputy Head of School, Academic Quality and Policy Development, Chair of ARC)

Tríona Ní Chonghaíle PhD (iMSc Programme Director) (2019-2023) Roger Preston PhD (Deputy Head of School, Curriculum Development

#### Lecturer

Sudipto Das PhD (Deputy Head of School, DProf & MSc programmes)

Quality and Operations Manager Lisa Maye-Gregory MComm MTh

### Data Manager

Monica Jarzabek PhD (Dec 2022-May 2023)

Postgraduate Development Coordinator Dean Lennon BA (Business)

Programme Coordinator Bess McBride MSc

### Programme Coordinator

Maya Dumana MPH (started March 2023)

## Programme Coordinator

Kathleen Molloy (moved to FutureNeuro January 2023)

#### **Higher Degrees**

## MSc

Baird Rory, Characterisation of a novel neutrophil-derived antimicrobial agent. MSc, RCSI & NUI 2023.

Skally Mairead, A decade of Clostridioides difficile infection – An in-depth analytical retrospective review of a single centre's experience. MSc, RCSI & NUI 2023.

#### MD

Aslam Razia, Synergistic effects of Alpelisib (PI3K inhibitor) and Ribociclib (CDK4/6 inhibitor) combination in preclinical colorectal cancer models. MD, RCSI & NUI 2023.

Bejleri Jorin, MicroRNAs as novel diagnostic targets in acute Ischaemic stroke. MD, RCSI & NUI 2023.

Carey Cornelia, The glutamate-GABA system in atypical neurodevelopment. MD, RCSI & NUI 2022.

Clerkin James, Preclinical interrogation of novel Immunotherapy treatment strategies in Glioblastoma (GBM) using a novel clinically relevant disease model. MD, RCSI & NUI 2022.

Daly Michael, Assessing the utility of hybrid simulation with wearable technology and repeated peer assessment on medical student learning and performance in cardiology long case examinations - the ASSIMILATE EXCELLENCE study. MD, RCSI & NUI 2022.

Galloway Iona, Predictors of outcomes in non-functioning pituitary adenomas and neuro-ophthalmic and endocrine outcomes following pituitary apoplexy. MD. RCSI & NUI 2023.

Hussein Hafiz, Left atrial appendage occlusion: A mechanical approach to treat patients with high thrombotic risks in whom anticoagulation is contraindicated. MD, RCSI & NUI 2023.

Moloney Patrick, Epilepsy in the mTORopathies molecular mechanisms and precision medicine opportunities. MD, RCSI & NUI 2023.

#### PhD

Bahlool Ahmad, Inhalable retinoic acid loaded nanoparticles as host directed immunotherapy for tuberculosis. PhD, RCSI & NUI 2023.

Blümel Anna Magdalena, Systems based approaches for refining precision medicine in breast cancer. PhD. RCSI & NUI 2023.

Carty Paul Gerard, Assessing the clinical and cost effectiveness of birth cohort screening for hepatitis C in Ireland. PhD, RCSI & NUI 2023.

Cox Shannon Louise, Regulation of the Lung Fibroblast Immune Response by the Core Clock Protein BMAL1. PhD, RCSI & NUI 2023.

Curtin Niamh, Near-infrared fluorescent imaging using BF2-azadipyrromethenes. PhD, RCSI & NUI 2023.

Devin Joan, Evaluation of health information technologies with respect to medication safety, workflow, and data usage potential in maternal and newborn care. PhD, RCSI & NUI 2022.

Dooley Niamh, Prenatal predictors of child and adolescent mental health. PhD, RCSI & NUI 2022.

Fadil Azim Darlina, The effectiveness of a personalized digital health intervention plan (Naluri) on physical and psychological outcomes among cardiac patients at the National Heart Institute (IJN): A radomized controlled trial. PhD, RCSI & NUI 2022.

Fitzgerald Sheila, Bioconjugations In Flow for Drug Conjugates and Theranostic Imaging Agents. PhD, RCSI & NUI 2023.

Fogarty Helen, Endotheliopathy in COVID-19 and Sickle Cell Disease. PhD, RCSI & NUI 2023.

Frawley Thomas, Decoding exosmal proteome and glycoprofile in drug resistant neuroblastoma. PhD, RCSI & NUI 2022.

Genoud Katelyn Jeffries, Development of antibiotic-free 3D printed composite scaffolds for the treatment of infected bone defects. PhD, RCSI & NUI 2023.

Gerbatin Rogério, Identification of new features and evaluation of antimir-based seizure therapies in the Scn1a(+/-)tm1Kea mouse model of Dravet syndrome. PhD, RCSI & NUI 2022.

Greenan Emily, Investigating the clinical and molecular characteristics of immune-mediated dry eye disease. PhD, RCSI & NUI 2023.

Guest Thomas, Investigating the clearance of FVIII. PhD, RCSI & NUI 2023.

Heiland Mona, microRNAs in the molecular mechanism of anti-convulsant and disease-modifying actions of cannabinoids. PhD, RCSI & NUI 2022.

Heskin Leonie, Surgical simulation: Considerations and features of the optimum simulator for open surgical skill acquisition in limb trauma procedures. PhD, RCSI & NUI 2022.

Hurley Camille, The role of immune subpopulations in governing therapeutic response in early HER2+ breast cancer. PhD, RCSI & NUI 2022.

Jirström Elisabeth, Functional Analysis of novel small non-coding RNAs derived from transfer RNAs in neuronal stress responses: Relevance as biomarkers and therapeutics for neurodegeneration. PhD, RCSI & NUI 2023.

Judge Nicola, Development of Ring Opening Mini-emulsion Polymerisation of N-Carboxyanhydride Monomers for the Formation of Polypeptide Nanoparticles. PhD, RCSI & NUI 2022.

Kelly Domhnall, Development of a siRNA-activated scaffold enabling targeted knockdown of pro-inflammatory signalling pathways for enhanced cartilage tissue regeneration. PhD, RCSI & NUI 2022.

Khalid Tehreem, The development of an implantable bioengineered tracheal scaffold for respiratory tissue regeneration. PhD, RCSI & NUI 2022.

Krysiak Kamelia, Medication safety in neonatal intensive care. PhD, RCSI & NUI 2022.

Larkin James, The burden of financial costs of healthcare for people with multimorbidity. PhD, RCSI & NUI 2023.

Lau E-How Kelvin, MicroRNA editing re-shapes target selection and regulated pathways in human temporal lobe epilepsy. PhD, RCSI & NUI 2022.

Manikandan Manjula, Examining health service use among adults with cerebral palsy: A mixed-methods approach. PhD, RCSI & NUI 2022.

Martin-Grace Julie, Assessing the impact of exogenous glucocorticoid exposure on adrenal function, cardiometabloic risk factor profile and health-related quality of life. PhD, RCSI & NUI 2023.

Melo Diaz Javier, Development of purification and modification strategies of N-type glycopeptide and glycan moieties. PhD, RCSI & NUI 2022.

Murphy Claire Anne, Platelets, thrombin generation and extracellular vesicles: the effects of prematurity and COVID-19 on neonatal coagulation. PhD, RCSI & NUI 2022.

Murphy Melanie, Medicines optimisation in older adults with cancer. PhD, RCSI & NUI 2023.

Nally Frances, Nanodelivery of microRNA based therapeutics to macrophages. PhD, RCSI & NUI 2023.

Nader Danielle, Taking control: hijacking of endothelial integrin-signalling networks by pathogens. PhD, RCSI & NUI 2022.

O'Brien Kelly Joanne, Can the design, development and examination of an eHealth self-management resource facilitate improved self-management outcomes, enhance self-efficacy and impact fibromyalgia patients' global impression of change? A mixed-methods sequential study. PhD, RCSI & NUI 2022.

O'Connor Cian, Development of an iPSC progenitor loaded biomimetic scaffold for spinal cord repair applications. PhD, RCSI & NUI 2023.

O'Siorain James, Circadian rhythms regulate the NLRP3 inflammasome in macrophages. PhD, RCSI & NUI 2023.

Pacifico Roberta, Pyridine-Based 1,2,3-Triazoles: a new class of potential KAT2A inhibitors and scaffolds for C-H activation and catalysis. PhD, RCSI & NUI 2022.

Patmore Sean, Determining the role of von Willebrand Factor in breast cancer metastasis. PhD, RCSI & NUI 2023.

Perrem Lucy, The clinical utility of the Lung Clearance Index (LCI) to track acute respiratory events in children with cystic fibrosis. PhD, RCSI & NUI 2022.

Power Rachael Nuala, Scaffold-based delivery of gene therapeutics for the repair of large volume defects in both healthy and osteoporotic bone. PhD, RCSI & NUI 2023.

Smith Jonathon, Targeting of the Purinergic P2 receptor family as a novel therapeutic strategy for neonatal seizures. PhD, RCSI & NUI 2022.

Smyth Jessica, Regulation of colonic epithelial function by the nuclear bile acid receptor, farnesoid x receptor. PhD, RCSI & NUI 2022.

Smyth Suzanne, Single site pilot clinical investigation of a novel app-assisted self-management programme for gestational diabetes. PhD, RCSI & NUI 2022.

Stefanovic Smiljana, Development of functional star-shaped polypeptides for biomedical applications. PhD, RCSI & NUI 2023.

Susai Subash, A biological investigation of the role of omega-3 fatty acids on psychopathology in clinically high risk of psychosis. PhD, RCSI & NUI 2022.

Tomasino Daniela Valeria, Glyco functionalized nanoparticles by PISA. PhD, RCSI & NUI 2023.

Trinh Duong N, Nanoparticle based glycoprotein enrichment and its applications in medical diagnosis. PhD, RCSI & NUI 2022.

Valentelyte Gintare, Assessing the impact of Activity-Based Funding in the Irish public hospital system: A comparison of methods and empirical investigations. PhD, RCSI & NUI 2023.

White Kieron, Identifying new tumour microenvironment contexts of vulnerability in glioblastoma. PhD, RCSI & NUI 2023.

Wilson Hannah, The correlation between Sub Epidermal Moisture (SEM) measurement, epidermal hydration, temperature, pain, and ultrasound, in the early detection of pressure ulcers. PhD, RCSI & NUI 2023.

## **Publications**

Higher degrees listed above published in the RCSI Library

## **Active Grants and Grants Awarded**

2020-2023: ERASMUS+ International Credit Mobility "Joint PhD programme Soochow University" (€37,320) [Grant Holder, Professor Darran O'Connor, Role: Principal Investigator] Grant# 2020-1-IE02-KA107-000744

2023-2025 ERASMUS+ International Credit Mobility "Joint PhD programme Qatar University" (€25,800) [Grant Holder, Professor Darran O'Connor, Role: Principal Investigator]

2023-2025 ERASMUS+ International Credit Mobility "Joint PhD programme University of Pittsburgh" (€30,960) [Grant Holder, Professor Darran O'Connor, Role: Principal Investigator]

# **PSYCHIATRY**

The Department of Psychiatry provides teaching at undergraduate level for medical students within Royal College of Surgeons in Ireland and for elective students from other medical schools. Medical students attend clinical attachments at Beaumont Hospital, Connolly Hospital, North Dublin Mental Health Services, St. Vincent's Hospital (Fairview), Cavan General Hospital, Newcastle Hospital, St. Luke's Hospital (Kilkenny), Cluain Mhuire Family Centre (Blackrock), University Hospital Waterford, Louth/Meath Mental Health Services, North Kildare Mental Health Services, Monaghan Hospital, St Edmundsbury Hospital and Highfield Healthcare. Clinical teaching includes the use of on-line video lectures, interactive tutorial program, small-group tutorials, case-based teaching, and clinical skills tutorials.

The Department also provides Basic Specialist Training in Psychiatry through the RCSI Rotational Training Programme in Psychiatry and Higher Specialist Training in Psychiatry through the National Higher Specialist Training Programme.

We have a very active research programme and specific research themes include cellular cytoarchitectural and protein signature of major psychiatric disorders, youth mental health, psychiatric epidemiology, genetics of psychiatric disorders, behavioural phenotypes of genetic disorders, the neuropsychiatry of epilepsy, structural and functional neuroimaging of genetic and neuropsychiatric disorders, ECT and mental health services research.

## Summary of Key Achievements / Academic Activities

Professor Kieran Murphy

- Director, Board of Management, St John of God Hospital
- Chair, Clinical Governance, Quality and Safety Committee, St John of God Hospital
- Director, Board of Management, Daughters of Charity Disability Support Services
- Senior Cycle 1 Co-Director
- Member, Editorial Board, Journal of Developmental Disorders

## Professor Mary Cannon

- Vice President, College of Psychiatrists of Ireland
- Vice Chair, Youth and Student Psychiatry Faculty, College of Psychiatrists of Ireland
- Member of the Royal Irish Academy (MRIA)
- · Member of executive board of RAMI
- Member of Executive Committee of Academic Faculty. Royal College of Psychiatrists
- Member HSE Transitions/ Youth Mental Health Working Group for Sharing the Vision Implementation Committee
- Co-Lead Organiser "New Directions in Youth Mental Health". Royal Irish Academy, September 2022
- Hosted Fulbright Scholar, Professor Farrokh Alemi, George Mason University, Virginia US

## Professor David Cotter

- Co-Lead Organiser "New Directions in Youth Mental Health". Royal Irish Academy September 2022
- Dublin Organiser College of Psychiatry Deanery Meeting "What sharing the vision means to psychiatrists"
- Organised College of Psychiatry Deanery Meeting on Public Mental health
- Member of College of Psychiatrists in Ireland conference organising committee
- Organiser and Dean RCSI Post graduate training scheme
- Lead PSI-STAR collaborative Doc Award programme
- Editorial Board member Irish Journal of Psychological Medicine
- Executive Committee member, Royal Academy of Medicine in Ireland
- Schizophrenia International research society awards committee member
- Member of the steering group H.S.E. Climate action & sustainability Program
- Member of the International Early Psychosis Association
- Member of the HSE climate change policy group
- Member of Schizophrenia international research society
- External Advisory board member for our CELEBRATE UKRI funded "Advancing adolescent mental health"

#### Professor Siobhan MacHale

- College of Psychiatrists of Ireland representative on the National Implementation and Monitoring Committee (NIMC) for the implementation of the Sharing the Vision Mental Health Strategy 202 -2024
- Chair Women's Mental Health Group NIMC 2021 -2023
- Member HSE Alcohol Programme Implementation Group
- HSE Report Lead Author: Embedding Women's Mental Health in Sharing the Vision HSE Nov 2022.
- CPsych I emodule MacHale S. *Somatisation*. College of Psychiatry of Ireland e-learning module elearning@irishpsychiatry.ie 2022

#### Professor John Lyne

Editor-in-Chief for Irish Journal of Psychological Medicine, the official scientific journal of the College
of Psychiatrists of Ireland. The journal has had a successful year with themed issues on Public Mental
Health and Autism Spectrum Disorders. The journal has this year been awarded an official impact
factor which will be announced in June/July 2023. Increased citations in the journal are reflected in an
increased SCIMAGO journal rank which increased to 0.94 (from 0.79) in 2022.
 Member, Academic Faculty and Youth and Student Faculty, College of psychiatrists of Ireland.

## Professor Brian O Donoghue

- Associate editor of 'Early Intervention in Psychiatry' and also the 'Irish Journal of Psychological Medicine'
- International advisory board for Australian and New Zealand Journal of Psychiatry
- Delivered a plenary lecture on psychopharmacology at the Winter conference of the College of Psychiatrists of Ireland.
- Organised UCD/SVUH Deanery Conference "Addressing Physical Health within Mental Health Services " March 2023.

#### Dr Caragh Behan

- Faculty Advisor Gold Honour Humanism Society (GHHS) RCSI chapter
- Vice-chair and member Academic Faculty College of Psychiatrists in Ireland Physical Health Special Interest Group (SIG)
- Member, Youth and Student Faculty College of Psychiatrists in Ireland
- Member, Physical Health SIG College of Psychiatrists in Ireland
- Editorial Board Member Irish Journal of Psychological Medicine
- Department of Psychiatry representative for THEP II integrating psychiatry into the undergraduate medical curriculum
- Reviewer for national and international journals on mental health, health economics, mindfulness, health services research

# Dr Melanie Föcking

- Deputy Director, RCSI International Electives Programme (European placements)
- Schizophrenia Research Society, Member of Educational Committee 2022-2025
- European Graduate School for Neuroscience (EURON), RCSI coordinator
  - Co-lead on the RCSI THEP2 CNS Module Medical Curriculum Development
  - Co-chair of the HUPO Brain Proteome Project Steering Committee
  - Associate Editor Frontiers in Psychiatry
  - ➤ Editor PROTEOMICS and PROTEMICS Clinical Applications

## Dr Darren Roddy

- President of the Royal Academy of Medicine (RAMI) in Ireland Student Section
- Organiser of RAMI Student Research Awards in November 2022
- Organiser of RAMI Student Research Workshops held online and in person July/August 2022
- Member of RAMI executive committee
- Member of Magnetic Resonance Spectroscopy working group, TCD.
- Contributor for Knowing Neurons, a neuroscience education website
- RCSI Human Research Ethics Committee member
- Co-supervision of Academic intern (AN) 2023
- Supervisor of 12 research summer students, summer 2022

## **Staff List**

Professor and Head of Department
Kieran C Murphy M Med Sci, PhD, FRCPI FRCPsych

#### **Professors**

Mary Cannon MB, BCh, BAO, FRCPsych, MSc, PhD, MRIA David Cotter MB, BCh, BAO, FRCPsych, PhD

#### Professor Emeritus

Vincent Russell MB, BCh, BAO, MSc, MRCPsych, FRCPC

#### Associate Professor

Mary Clarke (jointly with Department of Psychology)

## Honorary Clinical Associate Professor

Siobhan MacHale, Beaumont Hospital (Liaison Psychiatry)

Finian O'Brien, Monaghan General Hospital

John Lyne, Newcastle Hospital

Brian O'Donoghue, St Vincent's University Hospital

## Senior Clinical Lecturers

Caragh Behan

Fiona Toal

Darren Roddy

#### Senior Lecturers

Moayyad Kamali Newcastle Hospital, Greystones

Aideen Moran, Connolly Hospital, Blanchardstown

Robert Daly, North Dublin Mental Health Services

Philip Dodd, St. Michael's House (Intellectual Disability)

Melissa Gill, Cavan General Hospital

Iulia Dud, Highfield Healthcare

Eric Roche, Cluain Mhuire Family Centre

Aiveen Kirley, Cluain Mhuire Family Centre

Dan Herlihy, St. Luke's Hospital, Kilkenny

MacDara McCauley, St Brigid's Hospital, Ardee

Sarah Prasad, St Patrick's University Hospital (St Edmundsbury)

Darina Sloan, Waterford University Hospital

Paul Matthews, North Kildare Mental Health Services

Angela Noonan, St Vincent Fairview

Selena Pillay, North Dublin Mental Health Services

Louise Brennan, Tallaght University Hospital

## Honorary Senior Lecturers

Helen Barry

Maurice Clancy

Leah Lawler

Diane Gillan (Jointly with the Dept of Psychology)

Maeve Moran

Andrew Eustace

Angela Caballedo

Justin Brophy

Miriam Kennedy

Linda O' Rourke

Richelle Kirrane

Rachel Cullivan

Jennifer Wilson-O'Raghallaigh

Jogin Thakore

Clinical Lecturers Sahar Riaz Conan Brady

Research Lecturer Melanie Föcking

Post-Doctoral Fellow Colm Healy

Honorary Lecturers
David Mongan
Helen Coughlan

#### Clinical Tutors

Fisna Fysal - Cavan General Hospital
Aidan Roarty – Cluain Mhuire, Blackrock
Abubaker Abbas – University Hospital Waterford
Omer Najib & Mirat Qari – Connolly Hospital
Anna Feeney - St Vincents' Hospital, Fairview
Rachel Sparrow & Aisling O'Reilly – North Dublin MHS
Pat Fitzpatrick – Newcastle Hospital, Greystones
Anisha Bhagawan – St Luke's Hospital Kilkenny
Philip Brady - Louth/Meath MHS
Shubhangi Karmakar – Highfield Healthcare
Cailin Boland – Kildare North MHS
Hagir Eltahir - Monaghan Hospital

## Postdoctoral Researchers

Subash Raj Susai Niamh Dooley Darren Roddy

6 - PhD Students

Administrative Staff Máire O'Donovan Hilary Atkinson Catriona O'Grady

# **Higher Degrees**

Cornelia Carey "The glutamate-GABA system in atypical neurodevelopment". MD, RCSI & NUI, November 2022

Niamh Dooley "Prenatal predictors of child and adolescent mental health". PhD, RCSI & NUI, November 2022.

## **Publications**

Ahangari M, Gentry AE; Irish Schizophrenia Genomics Consortium (including **Murphy KC**); Nguyen TH, Kirkpatrick R, Verrelli BC, Bacanu SA, Kendler KS, Webb BT, Riley BP. Evaluating the role of common risk variation in the recurrence risk of schizophrenia in multiplex schizophrenia families. Transl Psychiatry. 2022 Jul 21;12(1):291. doi: 10.1038/s41398-022-02060-3. PMID: 35864105

Alexander L, Lyne J, **Cannon M**, Roch BA. The importance of anthropology in psychiatry. Ir J Psychol Med. 2022 Jun;39(2):113-114. doi: 10.1017/ipm.2022.22. PMID: 35578765.

Allott, K, Yuen H P, Baldwin L, **O'Donoghue B**, Fornito A, Chopra S, Nelson B, Graham J, Kerr M J, Proffitt T M, Ratheesh A, Alvarez-Jimenez M, Harrigan S, Brown E, Thompson A D, Pantelis C, Berk M, McGorry P D, Francey S M & Wood S J Effects of risperidone/paliperidone versus placebo on cognitive functioning over the first 6 months of treatment for psychotic disorder: secondary analysis of a triple-blind randomised clinical trial. Transl Psychiatry, 2023 13(1), 199. doi:10.1038/s41398-023-02501-7, PMID: 37301832

Amminger GP, Lin A, Kerr M, Weller A, Spark J, Pugh C, O'Callaghan S, Berger M, Clark SR, Scott JG, Baker A, McGregor I, **Cotter D**, Sarnyai Z, Thompson A, Yung AR, **O'Donoghue B**, Killackey E, Mihalopoulos C, Yuen HP, Nelson B, McGorry PD. Cannabidiol for at risk for psychosis youth: A randomized controlled trial. Early Interv Psychiatry. 2022 Apr;16(4):419-432. doi: 10.1111/eip.13182. Epub 2021 Jun 30. PMID: 34190422 Clinical Trial.

Barry J & Lyne J. The implementation of a public health alcohol policy in Ireland. Irish Journal of Psychological Medicine, 2023 40(1), 103-106. doi:10.1017/ipm.2023.2

Bipolar Disorder Group of the Psychiatric Genomics Consortium; iPSYCH; Working Group of the Psychiatric Genomics Consortium (including **Murphy KC**); Sex-Dependent Shared and Nonshared Genetic Architecture Across Mood and Psychotic Disorders. Biol Psychiatry. 2022 Jan 1;91(1):102-117. doi: 10.1016/j.biopsych.2021.02.972. Epub 2021 Mar 23.PMID: 34099189

Brannigan R, Tanskanen A, Huttunen MO, **Cannon M**, Leacy FP, **Clarke MC**. Maternal smoking during pregnancy and offspring psychiatric disorder: a longitudinal birth cohort study. Soc Psychiatry Psychiatr Epidemiol. 2022 Mar;57(3):595-600. doi: 10.1007/s00127-021-02094-w. Epub 2021 May 4. PMID: 33942155: PMCID: PMC8934322

Brown E, Castagnini E, Langstone A, Mifsud N, Gao C, McGorry P, Killackey E & **O'Donoghue B**. Highrisk sexual behaviours in young people experiencing a first episode of psychosis. Early Interv Psychiatry, 2023 17(2), 159-166. doi:10.1111/eip.13301, PMID: 35355426

Byrne JF, Healy C, Mongan D, Susai SR, Zammit S, Föcking M, **Cannon M**, **Cotter DR**. Transdiagnostic inflammatory subgroups among psychiatric disorders and their relevance to role functioning: a nested case-control study of the ALSPAC cohort. Transl Psychiatry. 2022 Sep 9;12(1):377. doi: 10.1038/s41398-022-02142-2. PMID: 36085284; PMCID: PMC9463145.

**Cannon M**, Power E, **Cotter D**, Hill M. Youth psychiatry: time for a new sub-specialty within psychiatry. World Psychiatry. 2022 Feb;21(1):2-3. doi: 10.1002/wps.20923. PMID: 35015349; PMCID: PMC8751566.

Campbell C, McCormack M, Patel S, Stapleton C, Bobbili D, Krause R, Depondt C, Sills GJ, Koeleman BP, Striano P, Zara F, Sander JW, Lerche H, Kunz WS, Stefansson K, Stefansson H, Doherty CP, Heinzen EL, Scheffer IE, Goldstein DB, O'Brien T, **Cotter D**, Berkovic SF; EpiPGX Consortium; Sisodiya SM, Delanty N, Cavalleri GL. A pharmacogenomic assessment of psychiatric adverse drug reactions to levetiracetam. Epilepsia. 2022 Jun;63(6):1563-1570. doi: 10.1111/epi.17228. Epub 2022 Apr 1.PMID: 35298028

Carey C, **Lyne J.** Lessons in Mental Health from a Pandemic. Irish Journal of Psychological Medicine, 2022 39(4), 327-328. doi:10.1017/ipm.2022.48

Cella M, Roberts S, Pillny M, Riehle M, **O'Donoghue B, Lyne J**, Tomlin P, Valmaggia L & Preti A. Psychosocial and behavioural interventions for the negative symptoms of schizophrenia: a systematic review of efficacy meta-analyses. Br J Psychiatry, 2023, 1-11. doi:10.1192/bjp.2023.21, PMID: 36919340

Cogley C, Bramham J, Bramham K, Smith A, Holian J, O'Riordan A, Wei The J, Conlon P, **MacHale S,** D'Alton P. High rates of psychological distress, mental health diagnoses and suicide attempts in people with CKD in Ireland. Nephrology Dialysis Transplantation 2023 <a href="https://doi.org/10.1093/ndt/gfad021">https://doi.org/10.1093/ndt/gfad021</a>

Consortium and the Schizophrenia Working Group of the Psychiatric Genomics Consortium. (PGC) (including **Murphy KC**); Genetics Workstream of the Schizophrenia Treatment Resistance and Therapeutic Advances (STRATA) Interaction Testing and Polygenic Risk Scoring to Estimate the Association of Common Genetic Variants With Treatment Resistance in Schizophrenia. JAMA Psychiatry. 2022 Mar 1;79(3):260-269. doi: 10.1001/jamapsychiatry.2021.3799. PMID: 35019943

**Cotter D.** Public Mental Health - time to embrace a different approach. Ir J Psychol Med. 2023 Mar;40(1):1. doi: 10.1017/ipm.2023.11.PMID: 36940728

**Cotter D**, Healy C, Staines L, Mongan D, **Cannon M**. Broadening the Parameters of Clinical High Risk for Psychosis. Am J Psychiatry. 2022 Sep;179(9):593-595. doi: 10.1176/appi.ajp.20220612. PMID: 36048484

**Cotter D**, Healy C, Staines L, Mongan D, **Cannon M**, Broadening the Parameters of Clinical High Risk for Psychosis. Am J Psychiatry. 2022 Sep;179(9):593-595. doi: 10.1176/appi.ajp.20220612. PMID: 36048484.

Coughlan H, Humphries N, Clarke MC, Healy C, **Cannon M**. Psychotic-like experiences? Trajectories and typologies of hallucinations and delusions from early adolescence to early adulthood in a population-based sample of Irish youth. Ir J Psychol Med. 2022 Jun;39(2):207-222. doi: 10.1017/ipm.2021.31. Epub 2021 May 10. PMID: 33969817.

Coughlan H, Healy C, Humphries N, Clarke M, Kelleher I, **Cannon M**. Phenomenological characteristics and explanations of unusual perceptual experiences, thoughts and beliefs in a population sample of early adolescents. Ir J Psychol Med. 2022 Jun;39(2):173-184. doi: 10.1 017/ipm.2020.26. Epub 2020 May 27. PMID: 32458773.

Croft J, Teufel C, Heron J, Fletcher PC, David AS, Lewis G, Moutoussis M, FitzGerald THB, Linden DEJ, Thompson A, Jones PB, **Cannon M**, Holmans P, Adams RA, Zammit S. A Computational Analysis of Abnormal Belief Updating Processes and Their Association With Psychotic Experiences and Childhood Trauma in a UK Birth Cohort. Biol Psychiatry Cogn Neurosci Neuroimaging. 2022 Jul;7(7):725-734. doi: 10.1016/j.bpsc.2021.12.007. Epub 2021 Dec 22. PMID: 34954139; PMCID: PMC9259502.

Crowley P, Casey S, Kelleher E, Roche E, **Behan C, Cannon M** & **Lyne J.** Survey of consultant psychiatrists about the draft heads of a bill to amend the mental health act. Irish Journal of Medical Science 2023 doi:10.1007/s11845-023-03355-0

da Cunha Koch C, Coughlan H, **Cannon M**. Representations of hallucinations and dissociation in young adult literature: using literature to challenge stigma about psychosis. Ir J Psychol Med. 2022 Oct 3:1-7. doi: 10.1017/ipm.2022.43. Epub ahead of print. PMID: 36189612.

Dhondt N, Staines L, Healy C, **Cannon M** Childhood adversity and recurrence of psychotic experiences during adolescence: the role of mediation in an analysis of a population-based longitudinal cohort study. Psychol Med. 2022 Mar 21:1-9. doi: 10.1017/S003329172200T071X. Online ahead of print. PMID: 35311635

Dooley N, Healy C, Brannigan R, **Cotter D**, Clarke M, **Cannon M**. Explaining the Association Between Fetal Growth and Childhood ADHD Symptoms: Cross-cohort Replication. Res Child Adolesc Psychopathol. 2023 Feb;51(2):247-259. doi: 10.1007/s10802-022-00971-9. Epub 2022 Sep 17. PMID: 36114937; PMCID: PMC9867674.

Dooley N, Clarke M, **Cotter D**, **Cannon M**. Birth Weight and Childhood Psychopathology in the ABCD Cohort: Association is Strongest for Attention Problems and is Moderated by Sex. Res Child Adolesc Psychopathol. 2022 May;50(5):563-575. doi: 10.1007/s10802-021-00859-0. Epub 2022 Jan 24. PMID: 35072847; PMCID: PMC9054906

Dooley N, Healy C, **Cotter D**, Clarke M, **Cannon M**. The persistent effects of foetal growth on child and adolescent mental health: longitudinal evidence from a large population-based cohort. Eur Child Adolesc Psychiatry. 2022 Jul 21. doi: 10.1007/s00787-022-02045-z. Epub ahead of print. PMID: 35861893.

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#### **Active Grants and Grants Awarded**

Dr Caragh Behan: Co-applicant, HSF Fund, €3,000 8- week Mindfulness programme for Management of Chronic Pain.

Dr Caragh Behan: StEP 2 Staff-student partnership 2023 Funding €3,000 'Revealing The Gold - Building a Compassionate Healthcare Skillset to support preparedness for practice' Co-Applicant

Professor Mary Cannon: Principal Investigator: HRB Investigator Led Project (ILP-PHR-2022-006). Investigating the risk factors and consequences for cannabis use in adolescence 2022-2025 €350.000 Co-Lead Investigator: HRB Collaborative Doctoral Award [CDA-2021-005]. PSI-STAR Psychosis Ireland Structured Training and Research Programme 2022-2026

Professor David Cotter: Predicting outcome in first episode psychosis. Health Research Board 2022-2025 €370,000. PI. TRUSTING: HORIZON Research and Innovation Actions HORIZONHLTH-2022-STAYHLTH-01-04- two-stage €5,999,510 (€508,113 to RCSI) PI Youth-GEMs (101057182) Horizon 2020. €9,900,000.

Professor David Cotter/ Dr Melanie Föcking: Investigating the relationship between the Complement Pathway and outcomes in Psychosis; from Clinical High Risk to First Episode Psychosis, HRB, Oct 2022, €369,000

Professor David Cotter / Dr Melanie Föcking: "IMPETUS" Investigating Markers derived from Proteomics for Estimation of Transition from the Ultra-high-risk State to psychotic disorder. Wellcome Trust, 2021, €1,360 000

Dr Melanie Föcking: Adolescent-onset and adult-onset schizophrenia: investigations in patient-derived olfactory cells. HRB Summer Student Scholarships 2023, €3,000

Dr Melanie Föcking: RCSI Student Engagement and Partnership (StEP) Programme 2022 Level 2 Funding: 'Hiding In Plain Sight: CNS Moodle Quizzes to Warm Up Your Neurons' €3,000

Dr Melanie Föcking: RCSI Student Engagement and Partnership (StEP) Programme 2023 Level 1 Funding: 'InterMed: A whistle-stop tour of clinical experiences across Europe, €850

Professor John Lyne: Co-applicant on the following grant (Professor David Cotter and Professor Mary Cannon are the primary applicants for RCSI). Title: TRUSTING: A TRUSTworthy speech-based AI monitorING system for the prediction of relapse in individuals with schizophrenia Funder grant reference: HORIZONHLTH-2022-STAYHLTH-01-04-two-stage Funder name: Horizon Europe Health Award date: December 2022. July 2023- December 2026. €508,113 for RCSI (total grant is €5,999,510)

# **RADIOLOGY**

#### Overview

The Department of Academic Radiology continues to teach both imaging and interventional radiology to RCSI students throughout the medical school curriculum. RCSI medical students rotate through the radiology department and receive one-to-one teaching by radiology consultants and SPRs in an organised programme. The department also continues to provide research opportunities for medical students at RCSI and several RCSI students have presented radiology related research papers at national and international academic meetings.

Professor Michael Lee retired in May 2022. Professor Paul Brennan retired in September 2022. Professor Morrin continues in the role of Chair of Radiology in the interim.

## **Staff List**

Interim Professor and Chair
Martina Morrin FFR(RCSI), FRCR, MSc, FRCPI

Honorary Associate Professors
Robert Paul Brennan MSc, MRCPI, FFR(RCSI), FRCR
Deirdre Duke FFR(RCSI), FRCPI, MSc (Rad. Sciences)
Mark Logan MB, BCh, BAO, FFR RCSI, FRCP(C) FRCPI, FFSEM
Seamus Looby MB, BCh, BAO, MRCPI, FFR RCSI
John Thornton MB, BCh, BAO, FRCSI, FFR(RCSI), FRCR

Senior Clinical Lecturer
Alan O'Hare MB, BCh BAO, MRCPI, FFR(RCSI), MSc

#### Lecturers

Laura Green MB, BCh, BAO, MRCPI, FFR(RCSI)
Johnny O'Mahony MB, BCh, BAO, MCh, MRCSI, FFR(RCSI)
Logeswaran Selvarajah MB, BCh, BAO, MRCPI, MRCSI, PGDip HPE,d FFRRCSI, FRCR

Secretary Gail O'Brien

## **Publications**

Alhabli I, Benali F, Murphy S, Toni D, Michel P. et al. The impact of time delays on endovascular reperfusion success in late window stroke patients. Journal of Neurointerventional Surgery 14 (Suppl 1): A89.2-A90 July 2022.

Bala F, Kim BJ, Ali Najm MA, Thornton J. et al. Outcomes with Endovascular Treatment of Patients with M2 Segment MCA Occlusion in the Late Time Window. American Journal of Neuroradiology. March 2023.

Briody H, Sheehan M, Hanley M, O Neill B, Dunne R, Lee MJ, Morrin M. Biochemically recurrent prostate cancer: rationalisation of the approach to imaging. July 2023

Brosnan C, Brennan D, Reid C, Power S, O'Hare A, Brennan P, Thornton J. et al. The impact of the COVID-19 pandemic on the provision of endovascular thrombectomy for stroke: an Irish perspective. Irish Journal of Medical Science. Feb16:1-7. February 2023.

Fearon C, Howley R Phd, Looby S, Byrne A. Establishing a committee for antemortem reviews of suspect Creutzfeldt-Jakob disease cases in Ireland. Irish Journal of Medical Science. July 2022.

Hannan CJ, Islim AI, Folusho Alalade A, Bacon A, et al. Radiological follow-up of endovascularly treated intracranial aneurysms: a survey of current practice in the UK and Ireland. Acta Neurochirurgica. October 2022.

Hanley M, Brosnan C, O'Neill D, Ni Mhuircheartaigh N, Logan M, Morrin M, Hurley K, Sulaiman I, O'Brien E, Morgan R, Lee MJ. Modified Brixia chest X-ray severity scoring system and correlation with intubation, non-invasive ventilation and death in a hospitalised COVID-19 cohort. J Med Imaging Radiat Oncol. September 2022

Hehir A, Gilmore R, Power S, Monaghan T, McGrath ER. Clinical Reasoning: A 25 year old woman, with eye swelling and headache. Neurology. Jan 2023.

Henry J, Amoo M, Crockett M, Javadpour M. MMA embolization for chronic subdural hematoma – a new treatment paradigm? World Neurosurgery. February 2023.

Henry J, Amoo M, Kissner M, Thomas D, Zilani G, Crockett M, Javadpour M. Management of Chronic Subdural Hematoma: A Systematic Review and Component Network Meta-analysis of 455 Studies With 103 645 Cases. Neurosurgery. September 2022.

Lee R, Herlihy D, O'Neill D, Madden-Doyle L, Morrin M. et al. CT imaging for occult malignancy in patients with unprovoked venous thromboembolism (VTE) in a tertiary centre: is it worthwhile? The Irish Journal of Medical Science. February 2023

Murray D, Choudhry A, Rawluk D, Thornton J, O'Hare A, Power S, Crockett M et al. The weekend effect in aneurysmal subarachnoid haemorrhage: a single centre experience and review. Neurosurgical Review. March 2023.

O'Cearbhaill RM, O'Herlihy F, Herlihy D, Alderson J, Brennan P, Power S, O'Hare A, Thornton J. Standardised aspiration first approach reduces materials used and cost of thrombectomy procedure in anterior circulation large vessel occlusion stoke. Interv Neuroradiol. September 2022.

Reid C, Kelly D, Briody H, Lawless P, Little D, Conlon P, Morrin M. Variant renal artery anatomy in first degree relatives on MDCT angiography. Clinical Transplantation. March 2023.

Rossi R, Douglas A, Molina-Gil S, Jabrah D, et al In acute ischemic stroke clots is a biomarker for post-thrombectomy intracranial hemorrhages. Frontiers in Neurology. January 2023.

## **Presentations**

Looby, Seamus. Imaging and Internal Carotid and Vertebral artery disease. Vienna Austria, March 2023.

Morrin, Martina. Steering committee and speaker CT colonography workshop. Vienna, Austria. October 2022.

Morrin, Martina. Steering committee and speaker CT colonography workshop. Vienna, Austria, April 2023

Morrin, Martina. CT Colonography: Approach to polyp and cancer detection. Valencia, Spain, June 2023.

Power, Sarah. Cerenovus at XVII edition of the annual congress held by the Portuguese Society of Diagnostic and Theraputic Neuroradiology (SPNR). "Tough Thrombectomies" – How to make it easier? November 2022.

Power, Sarah. Collaterals. National Thrombectomy Centre at Beaumont Hospital. Evolution of our service and use of Aspiration Thrombectomy, November 2022.

Power, Sarah. Faculty for Brain Conference. Bail Out Stenting for failed MT: The Current Evidence and the Beaumont Experience. London, UK, December 2022.

Power, Sarah. Evolution of Supraregional Thrombectomy Service and Challenges. iPASTAR Joint RCSI/Beaumont Hospital Research Symposium, Dublin, February 2023.

Power, Sarah. Non-aneurysmal Subarachnoid Haemorrhage: How do you know there is not an aneurysm? Faculty of ESOC, Munich, Germany, May 2023.

Thornton, John. ECR 2023. Steno-occlusive disease of carotid and vertebra basilar arteries. Multidisciplinary Session. Chairperson's Introduction, Vienna Austria. March 2023.

Thornton, John. Multidisciplinary Discussion. Subtitle Requested. Vienna Austria. March, 2023.

# **SURGERY**

Our Department has a strong focus on teaching undergraduate and postgraduate students. The undergraduate surgical curriculum is delivered in various ways: classroom based, online and on clinical sites across the country. We employ several teaching methods that are student and patient-centred, including simulation training, case-based teaching, clinical problem solving, interactive teaching sessions, multi-disciplinary teaching and interprofessional education. We direct the research programme for third-year students and the clinical electives programme for final year students, providing international collaborations with centres of excellence worldwide. We deliver teaching to the Physician Associate Studies programme, the paramedic programme, postgraduate teaching to clinical staff within the RCSI Hospitals group and clinical education of postgraduate doctors. This year the Department of Surgery delivered a number of case based learning facilitated sessions to the Year 1 students and helped in the development of case material. The Department continue to engage with the CBL facilitation and development and this year expand our facilitation to the Year 2 students.

We have a broad continuum of research interests, spanning clinical to translational to basic laboratory research. Our principal experimental focus is on breast cancer research. Specifically, the mechanisms of therapeutic resistance to endocrine drugs in breast cancer and the contribution of altered adhesion to breast cancer development or progression. The department has strong collaborative relationships with national and international collaborators, including NUI Galway, UCD, UL, TCD, Lund University (Sweden), Sidney Kimmel Cancer Centre at Johns Hopkins (USA), University of Michigan (USA), Western University Ontario (Canada), University of Pittsburgh University of Edinburgh, Biomedical Center, Faculty of Medicine in Pilsen, Charles University, Pilsen, Czech Republic, Toxicogenomics Unit, National Institute of Public Health, Prague, Czech Republic, Department of Biochemistry, Manchester University, NHS Foundation Trust, London, United Kingdom and Baylor College of Medicine, Texas.

# **Summary of Key Achievements / Academic Activities**

Arnold Hill

Appointed as Dean of Medicine Programmes at RCSI Awarded Doctorate of Science from NUI

## Gozie Offiah

Appointed as co-chair of the Race Equality Forum

Elected as a board member and Non-executive Director of the Medical Protection Society (MPS) Appointed as an academic rep to the Medicine and Health Sciences board

## Jean McBryan

Awarded the Shane O'Neill Medal at the Beaumont Hospital Translational Research Awards, Oct 2022

#### Ann Hopkins

Led the Beaumont RCSI Cancer Centre's participation in the INTERACT2 EU consortium, a €7 million programme recently funded by the EU4H to implement an Inter-Specialty Cancer Training (ISCT) curriculum in cancer centres across the continent.

Editorial board memberships: Scientific Reports, Cells

Invited guest editorship: "Cell Adhesion Molecules" special issue, Cells journal

# Leonie Young

National/International Conferences Organised

- Co-Chair 2023, Gordon Research Conference, Hormone Dependent Cancer, USA
- -Co-Chair 2023, Gordon Research Conference, Mammary Gland Biology, USA
- -Chair, Steroid Cancer Conference, International Meeting, October 2022, RCSI, Dublin
- -Beaumont RCSI Cancer Centre Conference, 22 September 2022, Dublin

## **Invited Speaker**

- -Dutch Endocrine Meeting, Netherlands, February, 2023
- -Nuclear Fusion Conference, Mexico, May 2023
- -EMBO Workshop, Malta, September, 2022

#### Marie McIlroy

RCSI Collaborate Symposium on Sex steroids in Health & Disease meeting brought together expertise in Clinical Endocrinology, Translational Endocrine-related Cancer Biology and the Clinical management of Menopause and Sexual Development.

Dr Marie McIlroy co-chaired a Symposium at the Sex steroids in Health & Disease meeting September 2022

## **Staff List**

Professor and Chairman Arnold DK Hill MCh, DSc, FRCSI

Professor

Leonie Young PhD

Associate Professors

Mark Redmond LRCP&SI, MB, BCh, FRCSI

Tom Walsh MD, MCh, FRCSI

Honorary Clinical Professors

Deborah McNamara MB. BCh. FRCSI

Paddy Broe MB, BCh, MCh, FRCSEd

Richard Reilly

Ronan Cahill MB, BAO, BCh, FRCSI

Honorary Clinical Associate Professors

Abel Wakai MB, BCh

Brian Kneafsey MB BCh I FRCSI

Colm Power LRCP&SI, MB, BCh

David Bouchier Hayes LRCP&SI, MB, BCh, FRCSI

Donacha O'Brien MB, BCh, FRCSI, MD

Fiachra Cooke MB, BCh, AFRCSI, MRCSI, MD

Gerry O'Donoghue LRCP&SI, MB, BCh

John Burke MB, BCh

Liam Joyce MB, BCh, FRCSI, FRCSEdin

Mark Grannell MB, BCh

Mayilone Arumugasamy LRCP&SI, MB, BCh, FRCSI

Mohsen Javadpour MB, BCh

Padraig Daly LRCP&SI, MB, BCh

Paul Balfe MB, BCh

Shahbaz Mansoor MBBS, FRCSI

Sherif El-Masry MB, BCh

Simon Cross MB, BCh, FRCSI, FRCS(Edin) MD

# Senior Lecturers

Ann M Hopkins BSc, PhD, PGDipEd Gozie Offiah BSc, MBBCh, BAO LRCP&SI, MD, MMedSc Peter Naughton LRCP&SI, MB, BCh

Niall Davis PhD, FRCSI

Honorary Senior Lecturers

Achille Mastrosimone LRCP&SI, MB, BCh FRCPI

Athar Sheikh MBBS, FRCSI

Barry O'Sullivan MB, BCh, BAO, MCh, FRCSI

Ben Husien MB. BCh

Daragh Moneley LRCP&SI MB, BCh

David Beddy MB, BCh

David O'Brien MB, BCh

Des Twomey LRCP&SI, MB, BCh

Dilly Little LRCPI&SI, MB, BCh, FRCSI, MD

Eleanor Cardon MB, BCh

Elrasheid Kheirelseid MB, BS, MRCSI

Emeka Nzewi MB, BS, FRCSI

Fabio Bartolozzi DMS

Faisal Awan MB, BS

Farah Mustafa MB, BS

Gerard Markey MB, BCh

ljaz Cheema MB, BS, FRCS Glas

Ivor Cullen MB, BCh

James Forde MB, BCh

James Murphy MB, BCh, BAO, MD, FRCSI

Jamie Smith MB, BCh

Kieron Sweeney MB, BCh

Mark Quinlan MB, BCh

Michael Allen MB, BCh

Michael Quirke MB, BCH

Morgan McMonagle MB, BCh

Niamh McCawley MB, BCh

Osama El-Faedy MB, BS, MRCSI

Osama El Sadig MB, ChB, FRCSI

Patricia Fitzgerald LRCP&SI, MB, BCh

Pawan Rajpal MBBS FRCSI, FRCSEd

Peter McCullough LRCP&SI, MB, BCh

Ponnusamy Mohan MB, BS, FRCSI

Richard Mascarenhas MB, BS FRCS Glasgow

Richard Power MB, BCh

Rick Pretorius MB, ChB

Ronan Long MB BCh, FRCSI

Sayed Aly MB, BCh, FRCSI

Tariq Cheema FRCSI

William Robb MB, BCh

Honorary Clinical Lecturers

Philip O'Halloran LRCP&SI, MB, BCh

Safwat Ibrhaim MB, BCh

Sarmad Alshamery MB, ChB

Senior Clinical Educator

Frank Cunningham MB, BCh, FRCSI

Senior Clinical Lecturer

Hannah Patricia Fitzgerald MD

## Lecturers

Donata Kilduff MD, PGDipHPE

Jean McBryan BSc(Hons), PhD

Marie McIlroy BSc(Hons), PhD

## Clinical Lecturers

Claire Hevican BDS NUI, MB, BCh BAO, PGDipHPE

Reem Salman MB, BCh, BAO, MMedSc FRCSI, MCh EBSQ

Susan Ogbo MB, BCh, BAO

Nektarios Mazarakis MB, BCh, BAO

Gavin Calpin MB, BCh, BAO

Rosanne Prenderville MB, BCh, BAO Mch

Adil Elabbas MB, BCh, BAO

Oliver Barrett MB, BCh, BAO

Abdelrazig Salih MB, BCh, BAO Peggy Miller MB, BCh, BAO Nitish Dasmuth MB, BCh, BAO

Clinical Tutors

Charlotte Bauer Dowling MB, BCh, BAO Jack Logue MB, BCh, BAO Claire Stenson MB, BCh, BAO Dylan Viani Walsh MB, BCh, BAO Saran Kennedy Williams MB BCh BAO Mary Ellen McMahon MB, BCh, BAO Jack Bell MB, BCh, BAO Aisha Nafha Saleem MB, BCh, BAO Eve Kaar MB, BCh, BAO

Clinical Intern tutor
Magdalena Mikiciuk MB BCh BAO

Research Fellow
Daniela Ottaviani PhD
Damir Vareslija BA, PhD
Sara Charmsaz PhD
Petra Jagust PhD
Research Academic
Katherine Sheehan MD
Nicola Cosgrove BSc

Post Doctoral Fellows Jason McGrath PhD Mihaela Ola PhD

Bioinformatician Ramón Fallon MSc

Senior Research Technicians Fiona Bane BAMod, MSc Lance Hudson BSc Sinead Cocchiglia MSc

Senior Technicians Derrick Borwick Martin Dunphy

Research Assistant Sean Hickey MSc David Marnika Vikrant Singh PhD Zahra Farabakhsh MSc

Research Nurse Chinelo Rosemary Eze Trudi Nelson MSc

Nurse Tutor Maria Lagman RN Mary Keville RN RM MSc Siobhan Lydon RN Siobhán Murphy BNS, MSc LHPE, RN,RCN Secretaries
Aisling McKernan
Paula Carty
Teresa Malone

11 Postgraduate Students

# **Higher Degrees**

Professor Arnold D.K. Hill, Diagnosing and Controlling Metastatic Disease in Breast Cancer, Degree of Doctor of Science (DSc) on Published Work, NUI, May 2023.

Eoin MacCraith: Development and investigation of a biodegradable mesh for the treatment of stress urinary incontinence. MD, RCSI & NUI 2023

MCh

Eve Kaar, RCSI & NUI 2023
Aisha Nafha Saleem, RCSI & NUI 2023
Jack Bell, RCSI & NUI 2023
Saran Kennedy Williams, RCSI & NUI 2023
Dylan Viani Walsh, RCSI & NUI 2023
Jack Logue, RCSI & NUI 2023
Adil Elabbas, RCSI & NUI 2023
Charlotte Bauer Dowling, RCSI & NUI 2023
Abdelrazig Salih, RCSI & NUI 2023

PG DIP HPE Mary Ellen McMahon Gavin Calpin

## **Publications**

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## **Active Grants and Grants Awarded**

Dr Jean McBryan. Precise temporal profiling of proteomic response to Tamoxifen: Identifying pre-emptive treatments for resistant breast cancer. The Physiological Society. Nov 2020-July 2022. €10,796.

Dr Jean McBryan. CircRNA as a blood biomarker for ovarian cancer. SUMSCH007, Breakthrough Cancer Research. June 2023. €3,000.

Dr Ann Hopkins & Professor Siobhan Glavey. Developing a non-rodent xenograft model of multiple myeloma and its use in testing novel antagonists of JAM-A signalling. External grant code HRCI-HRB-2022-020. HRB/ HRCI Joint Funding Scheme. November 2022, €262,415.

Dr Ann Hopkins & Dr Sheila Sarial. JAM-A and HER2/3 Antagonistic Strategy In Targeting breast cancer (JAM-HAS-IT). EU Horizon Europe. March 2023, €215,534.

Dr Ann Hopkins & Dr Sandra Hembrecht. Defining the relationship between HER2/HER3/JAM-A expression and Pertuzumab sensitivity in breast cancer" Beaumont Hospital Cancer Research and Development Trust. March 2023, €20,000.

Dr Marie McIlroy (applicant), Professor Jochen Prehn & Dr Michael O'Reilly (co-applicants). Evaluation of androgen driven cancer cell entosis as a potential mechanism of endocrine therapy resistance in breast cancer. Irish Endocrine Society, September 2022, €14,892.

Dr Marie McIlroy (applicant), Dr Michael O'Reilly (co-applicant). Utilising a 3d bioprinting model to dissect the impact of androgen excess on skeletal muscle energy metabolism in women with polycystic ovary syndrome. RCSI Translational Industry Seed Fund, October 2022, €15,000.

Dr Marie McIlroy. Rastrum 3D printer collaborative agreement. Inventia Life Sciences Collaborative Ioan. June 2020 – December 2023, €180,000

Dr Gordon Daly. Integration of aberrant gene expression and spatial genomics to identify new druggable targets to treat breast cancer brain metastasis. Irish Research Council IRC, Government of Ireland Postgraduate Scholarship, Co-Fund. Award date: 23.05.2023 Award value: €94,000

Dr Petra Jagust. Characterising the role of RET in facilitating breast cancer spread to the brain. Irish Cancer Society, Biomedical Research Fellowship Scheme. September 2022, €234,969.

Professor Leonie Young. eHealth Hub: All Island Research Hub for Federated Analysis of Cancer Data. Higher Education Authority, North-South Research Programme. August 2022, €126,888.

# Innovation and Commercialisation Activities ProbeMet – RCSI spin-out company, Copenhagen

