

Thursday 25th February 2016
IACR Scientific Sessions

08.45 - 09.00: Welcome Address: Prof William Watson (IACR President)

09.00 -10.30: PROFFERED PAPER 1 SESSION

(6 x 15 minute presentations from graduate students or postdoctoral fellows)

Chairs: Dr Darran O Connor (RCSI) and Dr. Naomi Walsh (DCU)

09.00-09.15 WHOLE GENOME TRANSCRIPTOME ANALYSIS OF SEQUENTIAL TUMOURS UNCOVERS NOVEL MEDIATORS OF METASTATIC DISEASE PROGRESSION

Damir Varešlija¹, A Fagan¹, S Cocchiglia¹, S Purcell¹, L Hudson¹, E Ward¹, P Buckley², M Farrell², ADK Hill¹, L Young¹, ¹Surgical Research, Royal College of Surgeons, Dublin, ²Neuropathology, Beaumont Hospital, Dublin

09.15-09.30 SRC-1 TRANSCRIPTIONAL TARGETS IN ENDOCRINE RESISTANT BREAST CANCER

Alacoque Browne¹, A Fagan¹, D Vareslija¹, ADK Hill², LS Young¹
¹Surgery, RCSI, Dublin 2, ²Surgery, Beaumont Hospital, Dublin 9

09.30-09.45 FUNCTIONAL EXPRESSION OF CAV1.3 CONTRIBUTES TO THE CASTRATE RESISTANT PROSTATE CANCER PHENOTYPE

Paul J Buchanan¹, KD McCloskey¹, ¹Centre for Cancer Research and Cell Biology, Queen's University Belfast, Belfast

09.45-10.00 A COMPARATIVE ASSESSMENT OF NUTRITIONAL SCREENING TOOLS IN THE IDENTIFICATION OF SARCOPENIA AND CANCER CACHEXIA IN AN IRISH COHORT OF 746 CANCER PATIENTS.

Eadoin Ni Bhuachalla¹, L Daly¹, S Cushen¹, P McEneaney², M Twomey³, D Power⁴, AM Ryan¹, ¹Dept. Food and Nutritional Sciences, University College Cork, ²Dept. of Radiology, Mercy University Hospital, ³Dept. of Radiology, Cork University Hospital, ⁴Dept. of Medical Oncology, Mercy University Hospital, Cork

10.00-10.15 IMPROVED EFFICACY OF A TUMOUR VACCINE BY BLOCKING THE IMMUNE CHECKPOINT PD-1

Lydia Dyck¹, KHG Mills¹, ¹School of Biochemistry and Immunology, Trinity College Dublin, Dublin

10.15-10.30 TUMOUR CONDITIONING INDUCES PD-L1 EXPRESSION ON STROMAL CELLS, THEREBY INHIBITING ANTI-TUMOUR IMMUNITY

Grace O'Malley^{1,2}, S Naicker², K Lynch², P Lohan², G Shaw², T Ritter², LJ Egan¹, AE Ryan^{1,2}, ¹Discipline of Pharmacology and Therapeutics, College of Medicine, NUI Galway, ²Regenerative Medicine Institute (REMEDI), College of Medicine, NUI Galway, Galway

10.30-11.00: Tea/Coffee/Posters & Meet the Sponsors

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- 11.00-12.30: Plenary Session 1: Microbes and Cancer**
Chairs: Dr Ken Nally (UCC) and Dr Olga Piskareva (RCSI)
- 11.00-11.30 BACTERIA & CANCER: CAUSERS OR CURERS?**
Dr Mark Tangney, Principal Investigator, Cork Cancer Research Centre, University College Cork, Cork
- 11.30-12.00 TARGETED CANCER THERAPY USING ONCOLYTIC VIRUSES**
Prof Len Seymour, Professor of Gene Therapies, Department of Oncology, Oxford University
- 12.00-12.30 HIGH-THROUGHPUT SEQUENCING BASED COMPUTATIONAL SUBTRACTION FOR MICROBIAL ANALYSIS IN CANCER**
Dr Susan Bullman, Dana-Farber Cancer Institute and Harvard Medical School, Boston, USA
- 12.30-12.45 IACR Publishing Partner Presentation**
Advances in Modern Oncology Research
Dr. Omar Abdel-Rahman, Editor-in-Chief. The IACR Publishing Partner
- 12.45-14.00 Lunch, Trade Exhibition and Posters**
- 14.00-15.30: Plenary Session 2: Immune based therapies in Cancer**
Chairs: Dr Marion Butler (NUIM) and Dr. Niamh Buckley (QUB)
- 14.00-14.30 'IMMUNOTHERAPEUTIC APPROACHES TO CANCER BASED ON BLOCKADE OF IMMUNE CHECKPOINTS AND REGULATORY T CELLS TO ENHANCE ANTI-TUMOUR IMMUNITY'**
Professor Kingston Mills, Professor of Experimental Immunology, School of Biochemistry and Immunology, Head Immunology, Inflammation and Infection Research Theme, Trinity Biomedical Sciences Institute
- 14.30-15.00 PD-1 CANCER IMMUNOTHERAPY**
Gordon Freeman, PhD, Professor of Medicine, Dana-Farber Cancer Institute, Harvard Medical School, Boston
- 15.00 -15.15 Gold Sponsor Presentation**
"Precision medicine: mutation tracking in circulating tumour DNA using Droplet Digital PCR."
Stephen Hague PhD, European Product Specialist for Digital PCR (Bio-Rad)
- 15.30-16.00 Tea/Coffee/Posters & Meet the Sponsors**

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- 16.00-17.00: **ORAL POSTER PRESENTATIONS (Prof. John Fitzpatrick Medal)**
(6 x 6 minute presentations from graduate students or postdoctoral fellows)
Chairs: Dr. Isabella Bray (ICS) & Dr. Emer Bourke (NUIG)
- 16.00-16.06 **IS RACK1 ABLE TO MODULATE TRANSLATION ELONGATION IN CANCER?**
Beatrice Malacrida¹, CM Dowling², PA Kiely^{1,2}, ¹Graduate Entry Medical School, University of Limerick, Limerick, ²Department of Life Sciences and Materials and Surface Sciences Institute, University of Limerick, Limerick
- 16.07-16.13 **Th1 Cytokines Synergise to Downregulate Multiple RTK Pathways in Human Cancer Cell Lines**
Jerzy A Woznicki^{1,2}, S Rajaram^{1,2}, RWD Gilbert¹, R O'Connor², N O'Donovan⁴, S Van Schaeybroeck⁵, S Melgar¹, F Shanahan^{1,3}, K Nally^{1,2}
¹APC Microbiome Institute, University College Cork, ²School of Biochemistry and Cell Biology, University College Cork, ³Department of Medicine, University College Cork, ⁴National Institute for Cellular Biotechnology, Dublin City University, Dublin, ⁵Centre for Cancer Research and Cell Biology, Queen's University Belfast, Belfast
- 16.14-16.20 **"SRC-1 MEDIATES TRANSCRIPTIONAL REPRESSION IN ENDOCRINE RESISTANT BREAST CANCER"**
Elspeth Ward¹, A Fagan¹, D Vareslija¹, A Hill^{1,2}, L Young¹, ¹Endocrine oncology research group, RCSI, Dublin, ²Beaumont Hospital, RCSI, Dublin
- 16.21-16.27 **A NOVEL ROLE FOR JAM-A IN RESISTANCE TO HER2-TARGETED BREAST CANCER THERAPIES**
Astrid O Leech¹, L Hudson¹, ADK Hill¹, LS Young¹, AM Hopkins¹
¹Surgery, Royal College of Surgeons in Ireland, Dublin
- 16.28-16.34 **AUTOMATED QUANTITATIVE ANALYSIS OF HGSOB TISSUE SAMPLES FOR MOLECULAR PROFILING IN DISCOVERY AND DIAGNOSTICS**
Laura Webster¹, P Hamilton¹
¹Centre for Cancer Research & Cell Biology, QUB, Belfast
- 16.35-16.41 **INVESTIGATING THE POTENTIAL OF CYTOKINE BIOMARKERS AS PROGNOSTIC INDICATORS OF CANCER MORTALITY IN STAGE I LUNG ADENOCARCINOMA PATIENTS**
Claire L Meaney¹, A Zingone¹, D Brown¹, BM Ryan¹
¹Laboratory of Human Carcinogenesis, National Cancer Institute, National Institutes of Health, MD, USA

- 17.00-18.00 IRISH CANCER SOCIETY SCHOLAR AND FELLOW PRESENTATIONS**
(The highest scoring abstracts from 2 x ICS funded PhD students and 2 x ICS funded Postdocs have been selected for presentation)
Chairs: Prof. William Watson (IACR President) and Dr Simon McDade (QUB)
- 17.00-17.15 **SOMATIC HER FAMILY MUTATIONS ARE PRESENT IN 8% OF HER2-POSITIVE BREAST CANCERS AND THE ERBB4-V721I MUTATION INCREASES GROWTH RATE AND INCREASES RESISTANCE TO TKIS BUT MAY SENSITISE CELLS TO A PI3K INHIBITOR**
Naomi Elster¹, Eustace AJ¹, Fan Y², Weiner-Gorzel K², Bhreathnach U², Murphy M², Naidoo J³, Fay J⁴, Kay EW⁴, Carr A¹, Furney S², Malgorzata M¹, Breathnach OS⁵, Morris PG⁵, Grogan L⁵, Hill AD⁵, Power CP⁵, Allen M⁵, Kennedy S⁶, Crown J⁶, Gallagher WM², Toomey S,^{*1} Hennessy BT^{*1,5}.
¹Medical Oncology Group, Dept Molecular Medicine, RCSI, ²Conway Institute, University College Dublin, ³Memorial Sloan-Kettering Cancer Centre, ⁴Dept Pathology, RCSI, ⁵Beaumont Hospital, Dublin, ⁶St Vincent's University Hospital, Dublin.
- 17.15-17.30 **FUNCTIONAL GENOMIC SCREENING IDENTIFIES USP11 AS A NOVEL THERAPEUTIC TARGET IN BREAST CANCER**
Lisa Dwane¹, AE O'Connor², L Mulrane², R Klinger¹, AM Dirac³, K Jirstrom⁴, JP Crown⁵, R Bernards³, WM Gallagher², DP O'Connor¹
¹Molecular and Cellular Therapeutics, Royal College of Surgeons in Ireland , Dublin 2, ²UCD Conway Institute, University College Dublin, Belfield, Dublin 4, ³Division of Molecular Carcinogenesis, Netherlands Cancer Institute, Amsterdam , The Netherlands, ⁴Department of Laboratory Medicine, Malmö University Hospital, Lund University , Malmö, Sweden
⁵St Vincent's University Hospital , Elm Park, Dublin 4
- 17.30-17.45 **NOVEL MOLECULAR TARGETS FOR ADVANCED PROSTATE CANCER**
Maria Prencipe¹, A O'Neill¹, G O'Hurley², S Lynch¹, E Kenny¹, K Murphy^{1,3}, A Fabre⁴, H Klocker⁵, WM Gallagher⁶, C Morrissey⁷, EW Kay⁸, RW Watson¹
¹UCD School of Medicine and Medical Science, Conway Institute , University College Dublin, Dublin, ²OncoMark Limited, Nova UCD, Dublin, ³UCD School of Mathematical Sciences and Insight Centre for Data Analytics, University College Dublin, Dublin, ⁴Department of Pathology, St. Vincent's University Hospital, Dublin, ⁵Department of Urology, Innsbruck Medical University, Innsbruck, Austria, ⁶UCD School of Biomolecular and Biomedical Science, Conway Institute , University College Dublin, Dublin, ⁷Department of Urology, University of Washington, Seattle, Washington, USA, ⁸Department of Pathology, RCSI Education and Research Centre Beaumont Hospital, Dublin

- 17.45-18.00 **EXAMINING DNA METHYLATION CHANGES AT ALTERNATIVE REGULATORY REGIONS ACROSS THE GENOME IN METASTATIC COLORECTAL CANCER**
Sudipto Das¹, B Moran^{1,8}, D Smeets², T Van Brussel², G Peutman², R Klinger^{1,8}, B Fender³, M Ebert⁵, T Gaiser⁵, JHM Prehn⁴, O Bacon^{4,6}, E Kay⁶, B Hennessy⁶, V Murphy⁷, A Byrne⁴, W.M Gallagher^{8,3}, D Lambrechts², D O'Connor¹
¹Department of Molecular and cellular therapeutics, Royal College of Surgeons in Ireland, Dublin, ²Department of Translational genetics, VIB, K.U., Leuven, Belgium, ³, OncoMark Ltd., NOVA UCD, Dublin, ⁴Department of Physiology, Royal College of Surgeons in Ireland, Dublin, ⁵, University of Heidelberg, Mannheim, Germany, ⁶, Beaumont Hospital, Dublin, ⁷Irish Clinical Oncology Research Group, Dublin, ⁸Cancer Biology and therapeutics lab, Conway Institute, University College Dublin, Dublin
- 18.00- 18.30 **Tea/Coffee/Posters & Meet the Sponsors**
- 18.30-19.30: **IRISH CANCER SOCIETY LECTURE**
Introduced by Dr. Robert O'Connor, Head of Research, Irish Cancer Society
UNDERSTANDING AND TARGETING THE OVARIAN CANCER MICROENVIRONMENT
Professor Fran Balkwill, OBE FMedSci, Centre Lead, Centre for Cancer and Inflammation, Barts Cancer Institute - a Cancer Research UK Centre of Excellence, Queen Mary, University of London
- 19.30–22.30: **FORMAL POSTER SESSION, TRADE EXHIBITION/ WINE RECEPTION/BUFFET DINNER**

Friday 26th February 2016
IACR Scientific Sessions

- 09.15 -10.45 PROFFERED PAPER 2 SESSION (6 x 15 minute presentations)**
(6 x 15 minute presentations from graduate students or postdoctoral fellows)
Chairs: Dr. Brona Murphy (RCSI) and Dr. Mark Tangney (UCC)
- 09.15-09.30 BREAST TUMOURS ADAPT TO AROMATASE INHIBITOR THERAPY INDUCING DYNAMIC ALTERATIONS IN ER ACTIVITY**
Jean McBryan¹, D Vareslija², A Fagan², A Redmond³, Y Hao⁴, AH Sims⁵, A Turnbull⁶, JM Dixon⁶, P O Gaora⁷, ADK Hill², LS Young², ¹Dept of Molecular Medicine, RCSI, Dublin, ²Dept of Surgery, RCSI, Dublin, ³, Cancer Research UK Cambridge Institute, Cambridge, ⁴, Cold Spring Harbor Laboratory, New York, ⁵, University of Edinburgh Cancer Research UK building, Edinburgh, ⁶, Breakthrough Breast Research Laboratories, Edinburgh, ⁷Biomolecular and Biomedical Science, Conway Institute, UCD, Dublin
- 09.30-09.45 THE ROLE OF BCL2-ASSOCIATED-ATHANOGENE-3 IN STABILISING EGFR SIGNALLING NODES AND PROMOTING TUMOUR PROGRESSION IN TRIPLE NEGATIVE BREAST CANCERS**
Sarah Shields¹, R Reilly¹, E Conroy¹, K Connor¹, T OGrady², A McGoldrick¹, E Kaye², A McCann¹, W Gallagher¹, J Coppinger¹, ¹Conway Institute , UCD, Dublin, ²RCSI Research Centre, Beaumont Hospital , Dublin
- 09.45-10.00 FER TYROSINE KINASE MEDIATES INSULIN-LIKE GROWTH FACTOR 1 (IGF-1) SIGNALLING VIA IGF-1 RECEPTOR (IGF-1R) STABILISATION.**
S O'Shea¹, **Joanna Stanicka**¹, R O'Connor¹
¹School of Biochemistry and Cell Biology, University College Cork, Cork
- 10.00-10.15 BROMODOMAIN INHIBITORS FOR THE TREATMENT OF INVASIVE LOBULAR CARCINOMA**
Louise Walsh¹, WM Gallagher³, T Ni Chonghaile*², DP O'Connor*¹
¹Molecular and Cellular Therapeutics, Royal College of Surgeons in Ireland, Dublin 2, ²Physiology and Medical Physics, Royal College of Surgeons in Ireland, Dublin 2, ³School of Biomolecular and Biomedical Science, Conway Institute, University College Dublin, Dublin 4
- 10.15-10.30 MOLECULAR UNDERSTANDING AND THERAPEUTIC TARGETING OF PROLYL ISOMERASES IN THE TREATMENT OF HAEMATOLOGICAL MALIGNANCIES**
PT Lavin¹, **Kieran Brennan**¹, L Shiels², A Byrne², WM Gallagher¹, J-F Guichou³, M M Mc Gee ¹, ¹UCD School of Biomolecular and Biomedical Science, University College Dublin, ²Royal College of Surgeons in Ireland, Dublin, ³Centre de Biochimie Structurale, UMR 5048 CNRS, INSERM, Montpellier Cedex 5, France
- 10.30-10.45 RELATIONSHIP BETWEEN 18F-FLUORODEOXYGLUCOSE UPTAKE AND HYPOXIC, ANGIOGENIC AND METABOLIC PROFILES IN OESOPHAGEAL CANCER**
Hazel O'Neill¹, V Malik², J Phelan¹, Z Claxton¹, N Gilmartin¹, C Muldoon³, C Johnston², JV Reynolds¹, J O'Sullivan¹, ¹Department of Surgery, St James Hospital/Trinity College, Dublin, ²Department of Radiology, St James Hospital, Dublin, ³Department of Pathology, St James Hospital, Dublin

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- 10.45-11.15** Tea/Coffee/Posters & Meet the Sponsors
- 11.15-12.30** Plenary Session 3: Targeting Oncogenic Signalling Networks in Cancer
Chairs: Prof William Gallagher (UCD) and Dr Norma O'Donovan (DCU)
- 11.15-11.45** **TARGETING BCL-2 SIGNALLING NETWORKS**
Prof Jochen Prehn, Professor of Physiology & Director, Centre for Systems Medicine, Royal College of Surgeons, Dublin
- 11.45-12.15** **ONCOGENIC KRAS REGULATES TUMOUR CELL FUNCTION VIA STROMAL RECIPROCAL SIGNALS**
Dr Claus Jorgensen. Group Leader, Systems Oncology, Cancer Research UK Manchester Institute
- 12.15-12.45** Platinum Sponsor Presentation
Breakthrough Cancer Research
- 12.45-13.15** IACR AGM – All Welcome
- 12.45-14.15** Lunch, Trade Exhibitions and Posters
- 14.15-15.30** Plenary Session 4: The hallmarks of Cancer: 'The newbies'
(Genetic instability, Epigenetics, Angiogenesis and Metabolism)
Chairs: Dr Antoinette Perry (TCD) and Graham Pidgeon (TCD)
- 14.15-14.45** **CENTROSOMES AND THE DNA DAMAGE RESPONSE**
Prof Ciaran Morrison, Biochemistry Professor in the Centre for Chromosome Biology at National University of Ireland Galway (NUIG)
- 14.45-15.15** **THE INS AND OUTS OF CENTROSOME AMPLIFICATION INDUCED INVASION**
Dr. Susana Godinho, Lecturer, Centre for Molecular Oncology, Barts Cancer Institute, London
- 15.30-16.00** Tea/Coffee/Posters & Meet the Sponsors
- 16.00 - 16.30** **EPIGENETIC FIELD DEFECTS IN HEPATIC AND CERVICAL CANCERS**
Prof. John Greally, Professor in the Departments of Genetics (Division of Computational Genetics), Pediatrics (Division of Genetics) and Medicine (Division of Hematology) at the Albert Einstein College of Medicine
- 16.30-17.00** **TUMOR HYPOXIA CAUSES DNA EPIMUTATIONS BY REDUCING TET ACTIVITY**
Diether Lambrechts, VIB Vesalius Research Center, Leuven, Belgium

Friday 26th February 2016
IACR Scientific Sessions

17.00-18.00 EACR Young Scientist Awards

Chairs: Mr Andrew Binns (EACR) and Dr Patrick Kiely (UL)

- 17.00-17.30 **Translational application of a mathematical model of apoptotic caspase activation provides a prognostic biomarker in stage III colorectal cancer**
Manuela Salvucci^{1,2}, Maximilian Wuerstle^{1,2}, Mattia Cremona^{1,3}, Sarah Curry^{1,4}, Clare Morgan^{1,3}, Andreas U. Lindner^{1,2}, Orna Bacon^{1,5}, Alexa Resler^{1,2}, Aine C. Murphy^{1,2}, Robert O'Byrne^{1,2}, Lorna Flanagan^{1,2}, Sonali Dasgupta⁶, Nadege Rice⁷, Camila Pilati⁷, Elisabeth Zink^{1,2}, Lisa Schoeller^{1,2}, Sinead Toomey³, Daniel B. Longley⁶, Mark Lawler⁶, Patrick G. Johnston⁶, Richard Wilson⁶, Sophie Camilleri-Broët⁷, Manuel Salto-Tellez⁶, Deborah A. McNamara⁵, Elaine W. Kay^{1,4}, Bryan T. Hennessy^{1,3}, Pierre Laurent-Puig⁸, Sandra Van Schaeybroeck⁶, Markus Rehm^{1,2,*}, and Jochen H.M. Prehn^{1,2,*}
¹Centre for Systems Medicine, ²Department of Physiology & Medical Physics, ³Department of Medical Oncology, Royal College of Surgeons in Ireland, Dublin 2, Ireland; ⁴Department of Pathology, ⁵Department of Surgery, Beaumont Hospital, Dublin 9, Ireland; ⁶Centre for Cancer Research and Cell Biology, School of Medicine, Dentistry and Biomedical Science, Queen's University Belfast, Belfast, United Kingdom; ⁷Faculté de Médecine, ⁸UMR-S775 INSERM Laboratory, Université Paris Descartes, Paris, France. *Shared senior authorship.

17.30-18.00 **Mutation-specific interactions between ultraviolet radiation and melanoma**

Simon J Furney¹, M Pedersen^{2,3}, A Viros², MR Girotti², B Sánchez-Laorden², G Saturno², E Galvani², SW Piraino¹, K Hogan², R Lee², P Lorigan⁴, M Cook⁵, R Marais²

¹School of Medicine, University College Dublin, ²Molecular Oncology Group, Cancer Research UK Manchester Institute, Manchester, ³Targeted Therapy Team, The Institute of Cancer Research, London, ⁴University of Manchester, Christie NHS Foundation Trust, Manchester, ⁵Histopathology, Royal Surrey County Hospital, Guildford, ⁶Equal Contribution

18.00 **CLOSE OF MEETING**

19.30 **GALA DINNER and Award Presentations**