

**MUCINS IN HEALTH AND DISEASE**  
**(15<sup>th</sup> International Workshop on Carcinoma-associated Mucins)**  
Robinson College, Cambridge, UK  
29<sup>th</sup> July - 2<sup>nd</sup> August 2019

**Conference Organising Committee:**

Joy Burchell  
Sandra Gendler  
Gunnar C Hansson  
Tatsuro Irimura  
Michael McGuckin  
Joyce Taylor-Papadimitriou  
David Thornton

**Conference Facilitator:**

Mrs Gursharn Hutchins

# P R O G R A M M E

## Monday, 29<sup>th</sup> July

12.00 -1.50     **REGISTRATION**

1.50 – 2.00     Welcome and Introduction  
**Joy Burchell, Joyce Taylor-Papadimitriou**  
*On behalf of the Organising committee*

<p style="text-align: center;"><b>SESSION I: Mucin-type O-linked glycosylation</b> <b>Chairman: Prof Sandra Gendler</b></p>
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2.00 – 2.30     New insights into the role of glycosylation in cancer signaling and Communication (**p13**)  
**Celso Reis**, *IPATIMUP, University of Porto, Portugal*

2.35 – 3.05     Sweet tales of mucin-type O-glycosylation: secretory granule biogenesis and beyond (**p14**)  
**Kelly Ten Hagen**, *NIH, Bethesda, USA*

3.10 – 3.40     Diverse roles of mucin-type O-glycans in protection from gastrointestinal cancers (**p15**)  
**Kirk Bergstrom**, *Oklahoma Medical Research Foundation, USA*

3.40 – 4.10     TEA/COFFEE

4.15 - 4.45     The roles for GALNTs in regulation of microenvironment in cancer development and progression (**p16**)  
**Mi-Young Kim**, *KAIST (Korea Advanced Institute of Science & Technology), Korea*

### PROFFERED PAPERS

4.50 – 5.05     Products of chemoenzymatic synthesis representing MUC1 tandem repeat unit with T-, ST- or STn-antigen revealed distinct specificities of anti-MUC1 monoclonal antibodies (**p17**)  
**Tatsuro Irimura**, *Juntendo University, Tokyo, Japan*

5.10 – 5.20     Sulfatases and fucosidases play critical roles in mucin utilisation by *Bacteroides* (**p18**)  
**Ana S Luis**, *Gothenburg University, Sweden*

5.25 – 5.40     Modified sialic acids in mucus of different animals and controls of cell expression (**p19**)  
**Colin R Parrish**, *Cornell University, Ithaca, USA*

5.45 – 7.00     POSTER HANGING & REVIEWING

7.30             DINNER

## Tuesday, 30<sup>th</sup> July

8.30 am      **LATE REGISTRATION**

### **SESSION II: Mucin Biosynthesis, Secretion and the mucus layer** **Chairman: Prof Gunnar Hansson**

- 9.00 – 9.30      Intestinal mucus secreted by different goblet cells(**p 20**)  
**Malin Johansson**, *University of Gothenburg, Sweden*
- 9.35 – 10.05      Mechanism of calcium dependent mucin secretion (**p21**)  
**Vivek Malhotra**, *Centre for Genomic Regulation, Barcelona, Spain*
- 10.10 – 10.40      Structural basis of mucin multimerization (**p22**)  
**Deborah Fass**, *Weizman Institute of Science, Israel*
- 10.40 – 11.15      TEA/COFFEE & POSTER VIEWING
- 11.15 – 11.35      The C-terminal dimerisation domain of mucin MUC5B; structure, stability and interactions (**p23**)  
**Caroline Ridley**, *University of Manchester, UK*

#### **PROFFERED PAPERS**

- 11.35 – 11.50      Mucus secreted from inter-crypt goblet cells is required for proper mucus layer formation in colon and protection against colitis (**p24**)  
**Elisabeth Nystom**, *University of Gothenburg, Sweden*
- 11.55 – 12.05      Intestinal compound mucus exocytosis – the integrated roles of goblet cells and enterocytes (**p25**)  
**Brendan Dolan**, *University of Gothenburg, Sweden*
- 12.10 – 12.25      In vivo imaging of airway mucus (**p26**)  
**Anna Ermund**, *University of Gothenburg, Sweden*

12.30      LUNCH

### **SESSION III: Membrane Mucin Expression and Signaling** **Chairman: Prof Joyce Taylor-Papadimitriou**

- 1.45 – 2.15      Mechanistic, diagnostic and therapeutic implications of MUC4 mucin in pancreatic neoplasms (**p27**)  
**Maneesh Jain**, *University of Nebraska Medical Centre, Omaha, USA*
- 2.20 – 2.50      Mucins, entropy, and regulation of membrane shapes (**p28**)  
**Matthew Paszak**, *Cornell University, Ithaca, USA*
- 2.55 - 3.25      A role for membrane mucins in intestinal barrier function (**p29**)  
**Thafer Pelaseyed**, *University of Gothenburg, Sweden*
- 3.30 - 4.30      TEA/COFFEE & POSTER VIEWING

- 4.35 - 4.55      **Function of Mucin 1 in kidney(p30)**  
**Rebecca Hughey**, *University of Pittsburgh, USA*
- PROFFERED PAPERS**
- 5.00 – 5.15      Transmembrane mucin MUC13 alters cell junctions and controls collective sheet migration **(p31)**  
**Karin Strijbis**, *Utrecht University, The Netherlands*
- 5.20 – 5.35      Cell surface interaction between MUC1 and galectin-3 promotes EGFR dimerization and activation in human epithelial cancer cells **(p32)**  
**Lugang Yu**, *University of Liverpool, UK*
- 5.40 – 5.55      **ONE MINUTE SLIDE of Poster Presentations (Even numbers)**
- 5.55 – 6.15      DISCUSSION OF FUTURE MEETINGS
- 6.15 – 7.15      POSTER SESSION I - WITH DRINKS
- 7.30                DINNER

**Wednesday, 31<sup>st</sup> July**

**SESSION IV: Mucins in Cancer Biology**  
**Chairman: Prof Joy Burchell**

- 09.00 – 09.30    The immune-mediated micro-environmental effects of MUC1 carrying sialylated core 1 glycans **(p33)**  
**Richard Beatson**, *King's College London, London, UK*
- 09.35 – 10.05    Sialoglycans as targets for cancer immunotherapy **(p34)**  
**Heinz Läubli**, *University Hospital, Basel*
- 10.10 – 10.40    Mucin-selective proteases as research tools and therapeutics **(p35)**  
**Kayvon Pedram**, *Stanford University, California, USA*
- 10.45 – 11.15    TEA/COFFEE & POSTER VIEWING
- 11.15 – 11.45    Integrative analysis of The Cancer Genome Atlas and Cancer Cell Lines Encyclopedia large scale-genomic database: MUC4/MUC16/MUC20 signature is associated with poor survival in human carcinomas **(p36)**  
**Isabelle van Seuning**, *INSERM, France*

**PROFFERED PAPERS**

- 11.50 – 12.05    MUC16 in pancreatic cancer malignancy **(p37)**  
**Prakash Radhakrishnan**, *University of Nebraska, Omaha, USA*
- 12.10 – 12.25    Comparison of MUC1 expression in healthy individuals and in patients with acute lymphoblastic leukemia **(p38)**  
**Ma. Del Rocio Banos-Lara**, *Universidad Popular Autonoma del Estado de Puebla, Mexico*

- 12.30 – 12.45 Roles of MUC4-miR-210 in pancreatic carcinogenesis and resistance to chemotherapy (**p39**)  
**Nihad Boukrout**, *INSERM, France*
- 12.50 – 1.05 Characterisation of the second CysD domain of MUC2 and its potential as transglutaminase substrate (**p40**)  
**Christian Rectenwald**, *University of Gothenburg, Sweden*
- 1.10 – 1.25 A proposed mechanism for the vWD module for multimeric assembling (**p41**)  
**Pablo Gallego**, *University of Gothenburg, Sweden*
- 1.30 LUNCH
- FREE AFTERNOON
- 7.30 SPARKLING WINE RECEPTION
- 8.00 CONFERENCE DINNER

**Thursday, 1<sup>st</sup> August**

**SESSION V: Mucins, micro-organisms and the Immune Response**  
**Chairman: Prof Tatsuro Irimura**

- 09.30 – 10.00 Lectin - guided tumor colonization by *Fusobacterium nucleatum* (**p42**)  
**Gilad Bachrach**, *The Hebrew University-Hadassah, Israel*
- 10.05 -10.35 Innate lymphoid cell (ILC2) driven mucus production primes for protection at peripheral mucosal barrier sites (**p43**)  
**Laura Campbell**, *University of Manchester, UK*
- 10.40 -11.00 Molecular insights into the function of trefoil factors (**p44**)  
**Ethan D Goddard-Borger**, *The Walter & Eliza Hall Institute of Medical Research, Australia*
- 11.05 - 11.45 TEA/COFFEE & POSTER VIEWING

**SESSION VI: Mucins and Microbe interactions**  
**Chairman: Dr Malin Johansson**

- 11.50 – 12.05 Sialic acid recognition and metabolism by gut symbionts (**p45**)  
**Nathalie Juge**, *Quadram Institute Bioscience, Norwich, UK*
- 12.10 – 12.25 Mucin glycans attenuate *Pseudomonas aeruginosa* virulence (**p46**)  
**Katharina Ribbeck**, *Massachusetts Institute of Technology, Cambridge, USA*
- 12.30 LUNCH

## **PROFFERED PAPERS**

- 2.00 – 2.15 Novel insights into mucin degradation by key members of the human gut microbiota **(p47)**  
**Lucy Crouch**, *Newcastle University, Newcastle-upon-Tyne, UK*
- 2.20 – 2.35 MUC1 is a receptor for the *salmonella* SiiE adhesin that enables apical invasion into enterocytes **(p48)**  
**Xinyue Li**, *Utrecht University, The Netherlands*
- 2.40 – 2.55 Delineating N1rp6 inflammasome and microbiota regulation of colonic inner mucus layer formation and function **(p49)**  
**George Birchenough**, *University of Gothenburg, Sweden*
- 3.00 – 3.15 A chemically modified, non-anticoagulant heparin derivative of galectin-3 inhibitor is a potential therapeutic agent for IgA nephropathy **(p50)**  
**Ann Chen**, *Tri-Service General Hospital, Taipei, Taiwan*
- 3.20 – 3.50 TEA/COFFEE & POSTER VIEWING
- 3.55 - 4.25 **ONE MINUTE SLIDE of Poster Presentations (Odd numbers)**
- 4.30 – 6.00 POSTER SESSION II – WITH DRINKS
- 7.30 DINNER

## **Friday, 2<sup>nd</sup> August**

### **SESSION VII: Mucins in Health and Non-Malignant Disease Chairman: *Prof David Thornton***

- 09.00 – 09.30 Molecular requirements for Muc5ac and Muc5b assembly and function In Vivo **(p51)**  
**Christopher Evans**, *University of Colorado, Denver, USA*
- 09.35 – 10.05 Clearance of the normal lung by mucus bundles and its conversion to a protective colonic type in COPD and cystic fibrosis **(p52)**  
**Gunnar C Hansson**, *University of Gothenburg, Sweden*
- 10.10 – 10.40 Transmembrane mucins 1, 4, 16 knockout mice: Is there a lung phenotype? **(p53)**  
**Wanda O-Neal**, *University of North Carolina at Chapel Hill, USA*
- 10.45 – 11.10 TEA/COFFEE
- 11.15 – 11.45 Airway pathology associated with altered mucus/mucins in lung disease **(p54)**  
**Brian Button**, *University of North Carolina at Chapel Hill, USA*
- 11.50 – 12.30 Airway Mucin Secretions(s) **(p55)**  
**Michael Tuvim**, *University of Texas MD Anderson, USA*
- 12.30 CLOSING REMARKS
- 1.00 LUNCH & DEPARTURE