

London  
Metabolomics  
Network

## Spring Meeting of the London Metabolomics Network

Tuesday 10<sup>th</sup> April 2018 – doors open 12:45

The Francis Crick Institute  
1 Midland Road  
London, NW1 1AT

**Chair: Dr James MacRae**

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|-----------------------|--|
| 1.20 – 1.30           | Welcome address  |
| 1.30 – 2.10 pm        | <i>Exploring the use of supercritical fluid chromatography mass spectrometry (SFC-MS) for lipidomics applications</i><br>Dr Joost Brandsma (University of Southampton)                 |
| 2.10 – 2.35 pm        | <i>Furthering understanding of paediatric critical illness using a multi-platform analytical approach</i><br>Dr Anisha Wijeyesekera (University of Reading)                            |
| 2.35 – 3.00 pm        | <i>The application of artificial neural networks to predict retention time in liquid chromatography</i><br>Dr Tom Miller (King's College, London)                                      |
| <b>3.00 – 3.30 pm</b> | <b>Coffee break</b>  |
| 3.30 – 4.10 pm        | <i>Advanced gas and liquid chromatography strategies in combination with fractionation. How useful are these for metabolomics?</i><br>Prof. Pim Leonards (Vrije University, Amsterdam) |
| 4.10 – 4.50 pm        | <i>Clinical separations from columns to capillaries: My historical migration</i><br>Prof. David Perrett (Barts & The London School of Medicine, QMUL)                                  |
| 4.50 pm               | Closing remarks  |
| <b>5 pm</b>           | <b>American Chemical Society Award Presentation Ceremony</b>   |
| <b>5 pm onwards</b>   | <b>Refreshments followed by discussion at The Big Chill House</b>  |

Tickets are free and strictly limited to 75 attendees.

To sign up for this event, please visit our Eventbrite page:

[www.eventbrite.co.uk/e/london-metabolomics-network-spring-meeting-tickets-43746372578](http://www.eventbrite.co.uk/e/london-metabolomics-network-spring-meeting-tickets-43746372578)

Please note: photographs will be taken at this event for the purposes of capturing the occasion. Please alert the photographer should you not wish your photograph to be taken.



Left to right: Peter Morris (ACS HIST representative) and Julian Downward (Associate Research Director, the Francis Crick Institute), April 10, 2018.



Division of the History of Chemistry  
American Chemical Society

**Citation for Chemical  
Breakthrough**

*British Medical Journal* 1956 (ii): 120-126

**GAS-LIQUID CHROMATOGRAPHY**  
A Technique for the Analysis and Identification  
of Volatile Materials

A. T. JAMES Ph.D.  
A. J. P. MARTIN Ph.D. F.R.S.  
National Institute for Medical Research  
Mill Hill, London

MR. A. SCHEMATIC DIAGRAM OF GAS-LIQUID AND  
GAS-GAS CHROMATOGRAPHY. THE  
APPARATUS IS DESCRIBED IN THE  
REFERENCES AND FIGURES 1 AND 2

Presented to The Francis Crick Institute: 2017

Left to right: Katie Matthews (Director of Public Engagement), Nicola O'Reilly (Peptide Chemistry Science Technology Platform Lead), James MacRae (Head of Metabolomics), Julian Downward (Associate Research Director), and Peter Morris (ACS HIST representative) at the Francis Crick Institute, April 10, 2018.



The Crick has been selected to receive one of 2017's Citation for Chemical Breakthrough awards. This award programme honours publications, patents and books that have made breakthroughs in chemistry and the molecular sciences, that have been revolutionary in concept, broad in scope, and long-term in impact. The Francis Crick Institute is being honoured for: AT James and AJP Martin, "Gas-Liquid Chromatography. A Technique for the Analysis and Identification of Volatile Materials," *British Medical Journal* **1954**, *10*, 170-176. (A copy of the paper is attached to Katie's cover email.)

The award is given to the institution from which the award winning material was published (ie NIMR), rather than to the authors or inventors themselves (should they be alive, which they are not).

### **Guest/speaker biographies**

**Dr Peter Morris** is Research Fellow Emeritus at the Science Museum in London and an Honorary Research Associate at UCL. He recently retired as Keeper of Research Projects at the Science Museum. He has written widely on the history of chemistry and the chemical industry, and in 2015 published *The Matter Factory*, a history of the chemical laboratory between 1600 and 2000. Peter was also editor of the leading history of chemistry journal, *Ambix*, between 2001 and 2012. He was given the Edelstein Award for excellence in the history of chemistry by the American Chemical Society in 2006 and the Wheeler Award by the Royal Society of Chemistry in 2013.

**Dr Julian Downward** is Associate Research Director at the Crick. He obtained his bachelor's degree in natural sciences from Cambridge University and then studied for his PhD in biochemistry in the laboratory of Michael Waterfield at the Imperial Cancer Research Fund in London, where he established in 1984 a link between a retroviral gene (v-erbB) and a cellular growth regulatory protein, the EGF receptor, leading to an ISI 'citation classic' publication.

In 1986, he moved to Robert Weinberg's laboratory at the Whitehead Institute at the Massachusetts Institute of Technology in Cambridge, MA, where he began work on the role of Ras proteins in human cancer.

In 1989 he started his own lab at the Imperial Cancer Research Fund in London, which became Cancer Research UK in 2002 and is now part of the Francis Crick Institute. The lab has provided critical insights into the molecular mechanisms of function and regulation of oncogenic proteins of the Ras family and their importance in human tumours.

Julian has a long held interest in functional genomics, coordinating a number of programmes in this area. He holds honorary professorships at University College London and at St Bartholomew's Hospital Medical School, London. He has published over 150 papers in international scientific journals. He was elected to the membership of the European Molecular Biology Organisation in 1995 and was made a Fellow of the Royal

Society in 2005. He belongs to the Editorial Boards of the journals *Cell*, *Science* and *Molecular Cell*.

**Dr James MacRae** is Head of Metabolomics at the Crick. He completed a PhD on structural glycobiology in trypanosomatid parasites at the University of Dundee, before moving to the University of Melbourne in 2006. Here, he expanded these interests into developing novel techniques in order to study the metabolism of apicomplexan parasites, including *Toxoplasma gondii* and the malaria parasite, *Plasmodium falciparum*. This mass spectrometry-based metabolism research has now grown into a field in its own right - *Metabolomics*.

Since 2013, James has been of Head of Metabolomics at the Francis Crick Institute (formerly the National Institute for Medical Research) in central London, where he is developing new tools for metabolomics research in a number of areas (including cancer metabolism, heart disease, mitochondrial dysfunction), while maintaining interests in host-parasite metabolism.

**Katie Matthews** is Director of Public Engagement at the Crick and leads on the institute's strategic objective of engaging and inspiring the public through an ambitious programme of science, education and community outreach.

She joined the Crick in 2009, having spent 25 years working with underserved audiences throughout the UK, leading urban regeneration, public health improvement, advocacy and arts projects.

Continued 



**Frank Cole, Cancer Research UK London Research Institute**  
Member of the Institution of Chemical Engineers, F.I.C.  
Member of the Royal Society of Chemistry, F.R.S.  
Member of the Institution of Chemical Engineers, F.I.C.



**Sir Paul Higgs, Cancer Research UK London Research Institute**  
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Paul Martin, Cancer Research UK London Research Unit



The Heart of Cancer Research UK London Research Unit



Francis Crick



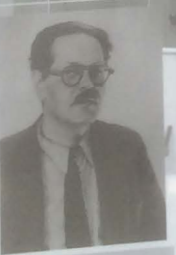
James Watson



Francis Crick



James Watson



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James Watson



James Watson



James Watson