**Abstract**

**The glycobiology of cancer**

Pauline Rudd, Radka Saldova, Roisin O’Flaherty, Ian Shaw,

When cells become cancerous their glycoprotein products are usually found to have altered glycans. Since glycosylation involves more than 600 different proteins and numerous pathways it is challenging to determine the processes which lead to these changes and the potential effects of altered protein glycosylation in the patient. We have developed technologies that give us detailed, semi-automated analytical data and insights into how altered glycosylation is linked to protein, lipid and genetic alterations. In a project focused towards personalised medicine we are beginning to collect large data sets from individual patients in order to map pathways, disease progression and markers as well as to identify which patients will respond to particular treatments.

**Short Bio**

Professor Pauline M. Rudd BSc, LRIC, MA (Oxon), FISSR, PhD heads the GlycoSciences Group at NIBRT, Ireland and is a Visiting Investigator at BTI, A-Star, Singapore. She obtained a BSc at the University of London and a PhD at the Open University. Before moving to Dublin (2006) she was University Reader in Glycobiology at Oxford University. She was a Founding Scientist of Wessex Biochemicals, Visiting Research Associate at The Scripps Research Institute, Visiting Professor at Shanghai Medical University, Visiting Scientist at Ben Gurion University Israel, Erskine Visiting Fellow, Canterbury University, NZ. She is a Fellow of the Royal Society of Medicine, Visiting Professor at St. George’s Hospital, and Adjunct Professor at NE University, Boston, UC Dublin, NUI Galway and Trinity College Dublin. 2010: James Gregory Medal,Agilent Thought Leader award. 2012/2017: Waters' Global Centres of Innovation Awards in NIBRT/BTI. 2014: Honorary Doctorate Sahlgrenska Academy, Gothenburg University.