



**Molecular Medicine Ireland Clinician Scientist Fellowship Programme Structured Training**

**Schedule for Period 16 September – 26 September 2008**

**Tuesday 16 September**

<b>Bioinformatics workshop</b>	
Venue: Trinity Centre for Health Sciences, St James's Hospital	
0930 - 1300	<b>Bioinformatics workshop - Session 1</b> Dr Tony Ryan (TCD)
<b>The Biology Behind the Disease</b>	
Venue: Durkan Lecture Theatre, TCD Institute of Molecular Medicine, St James's Hospital	
1300 – 1400	Lunch
1400 – 1515	Dr Ross McManus (TCD) <i>Introduction to Molecular Biology: DNA Replication and Recombination</i>
1515 – 1530	Tea/coffee
1530 – 1645	Dr Ross McManus (TCD) <i>Mutation and Repair and Human Disease</i>

**Wednesday 17 September**

<b>Bioinformatics workshop</b>	
Venue: Trinity Centre for Health Sciences, St James's Hospital	
0930 - 1300	<b>Bioinformatics workshop - Session 2</b> Dr Tony Ryan (TCD)
<b>The Biology Behind the Disease</b>	
Venue: Durkan Lecture Theatre, TCD Institute of Molecular Medicine, St James's Hospital	
1300 – 1400	Lunch
1400 – 1500	Dr Aideen Long (TCD) <i>Overview of cell signalling mechanisms</i>
1500 – 1600	Dr Aideen Long (TCD) <i>Cell signalling and cancer</i>
1600 – 1615	Tea/coffee
1615 – 1715	Dr Yuri Volkov (TCD) <i>The molecular engines, tyres and brakes for leukocyte locomotion</i>

### Thursday 18 September

<b>Clinician Scientist Keynote Lecture</b>	
Venue: Durkan Lecture Theatre, TCD Institute of Molecular Medicine, St James's Hospital	
0800 – 0900	Professor Timothy O'Brien, Professor and Head of Medicine, NUI Galway, Director of the Regenerative Medicine Institute (REMEDI)
<b>Bioinformatics workshop</b>	
Venue: Trinity Centre for Health Sciences, St James's Hospital	
0930 - 1300	<b>Bioinformatics workshop - Session 3</b> Dr Tony Ryan (TCD)
<b>The Biology Behind the Disease</b>	
Venue: Durkan Lecture Theatre, TCD Institute of Molecular Medicine, St James's Hospital	
1300 – 1400	Lunch
1400 – 1500	Dr Henry Windle (TCD) <i>Infectious diseases: the biology of the host-pathogen interaction</i>
1500 – 1600	Dr Mark Lawler (TCD) <i>Control of gene expression and its relevance to human disease</i>
1600 – 1615	Tea/coffee
1615 – 1715	Dr Mark Lawler (TCD) <i>Genetics, Molecular Medicine and cancer</i>

### Friday 19 September

<b>Animal Models of Disease. Relevance to study of human pathophysiology</b>	
Venue: Conway Lecture Theatre, UCD Conway Institute, UCD, Belfield, Dublin 4	
0900 – 0915	Tea/coffee
0915 – 0945	Professor Ciaran Regan, UCD <i>Developmental emergence of disease: Modelling mechanisms in animals</i>
0945 – 1015	Professor Catherine Godson, <i>From Mice and Men to mechanisms of disease in microvascular complications of diabetes</i>
1015 – 1045	Professor Michael Keane, UCD and St Vincent's University Hospital <i>Animal models of pulmonary disease</i>
1045 – 1115	Tea/coffee



1115 – 1145	Dr Ollie Blacque, UCD <i>Using tiny worms (C. elegans) to investigate the molecular basis of human disease. Absurd? Certainly not!</i>
1145 – 1215	Dr Breandan Kennedy, UCD <i>Using tropical fish to understand colour vision</i>
1215 – 1330	Lunch and networking with speakers
<b>Core Technology</b>	
Venue: Conway Lecture Theatre, UCD Conway Institute, UCD, Belfield, Dublin 4	
1330	Group splits into 4 small groups and visits core technology facilities: <ul style="list-style-type: none"> <li>• Mass spectrometry for proteomics hosted by Professor Giuliano Elia, UCD</li> <li>• Confocal Imaging hosted by Professor Dimitri Scholz, UCD</li> <li>• SPF facility and in vivo imaging hosted by Colin Travis and Professor Liam Gallagher, UCD</li> <li>• High throughput genomics hosted by Professor Brendan Loftus, UCD</li> </ul> 30 mins at each facility
1530	Reassemble for tea and the entire group will then visit the Electron Microscopy suite hosted by Dr David Cottell

### Monday 22 September

<b>Information Retrieval Workshop</b>	
Venue: Mercer Library, RCSI	
1000 – 1130	Workshop delivered by RCSI library staff
<b>Clinician Scientist Keynote Lecture</b>	
Venue: Pharmacy Tutorial Room (Ground Floor, York House), RCSI	
1200 – 1300	Professor Dermot Kenny, Associate Professor, Director Molecular & Cellular Therapeutics, RCSI
1300 – 1345	Lunch
1345 – 1430	Tour of RCSI

1430 – 1700	The Biology behind the Disease (Self directed learning Preparation time) Venue: Pharmacy Tutorial Room (Ground Floor, York House), RCSI
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**Tuesday 23 September**

<b>The Biology behind the Disease (Self directed learning)</b> Venue: Durkan Lecture Theatre, TCD Institute of Molecular Medicine, St James's Hospital	
<b>Session 1</b>	
0930 – 1000	Coffee
1000 – 1100	Dr Sanjay Chotirmall / Dr David Prichard <i>Tuberculosis &amp; Toll-like Receptors: Innate Immunity and Reactivation</i>
1100 – 1200	Dr Ruth Morrell / Dr Mazen Al-alawi <i>The Road to Cure for Chronic Myeloid Leukaemia</i>
1200 – 1300	Lunch
<b>Session 2</b>	
1300 – 1400	Dr Aoife Lowery / Dr Niall Conlon <i>Familial cold autoinflammatory syndrome</i>
1400 – 1500	Dr Oliver Schubert / Dr Gerard Curley <i>Regulation of osteoclast activity in osteoporosis</i>
1500 – 1515	Coffee
1515 – 1615	Dr Eoin Feeney / Dr Damian McCartan <i>Hepatocellular Carcinoma and Epidermal Growth Factor</i>

**Wednesday 24 September**

<b>The Biology behind the Disease (Self directed learning)</b> Venue: Durkan Lecture Theatre, TCD Institute of Molecular Medicine, St James's Hospital	
<b>Session 3</b>	
0930 – 1000	Coffee
1000 – 1100	Dr Patrick Collier / Dr Mark Coyne <i>The myofibroblast...when good cells go bad</i>
1100 – 1200	Dr Jane Sanders / Dr James Ryan <i>Huntington's disease – Molecular pathogenesis and potential therapeutic targets</i>
1200 – 1300	Lunch



<b>Clinician Scientist Keynote Lecture</b>	
1300 – 1400	Professor Dermot Kelleher, Head of the School of Medicine and Director of the Institute of Molecular Medicine, TCD & St James's Hospital
<b>Session 4</b>	
1400 – 1500	Dr Aidan Ryan / Dr Fionnuala Ni Ainle <i>Endothelial dysfunction and the pro-inflammatory state in vascular disease</i>
1500 – 1515	Coffee
1515 – 1615	Dr John O'Sullivan / Dr Finian O'Brien <i>HIV pathogenesis and therapeutic targets</i>

**Thursday 25 September**

<b>Introduction to Project Management in Healthcare and Education</b> Venue: Green Room 3, Mercer Hotel, Lower Mercer St, Dublin 2 (beside the RCSI)	
0930 – 1630	Introduction to Project Management in Healthcare and Education – Day 1 Luke Feeney, Institute for Leadership & Healthcare Management, RCSI

**Friday 26 September**

<b>Introduction to Project Management in Healthcare and Education</b> Venue: Green Room 3, Mercer Hotel, Lower Mercer St, Dublin 2 (beside the RCSI)	
0930 – 1630	Introduction to Project Management in Healthcare and Education – Day 1 Luke Feeney, Institute for Leadership & Healthcare Management, RCSI
<b>Structured Training Period 2 Feedback session</b>	
1630 – 1700	Informal feedback

## **Molecular Medicine Ireland Clinician Scientist Fellowship Programme**

### **Learning objectives of second period of structured training**

#### **Bioinformatics workshop**

- Be aware of freely available web-based tools and biological databases
- Have an understanding of how nucleic acid and protein sequence data is obtained and analysed
- Understand principles of sequence search and alignment
- Develop skills in utilising online databases and interpreting data and how bioinformatics can be used to solve problems and generate knowledge

#### **The Biology Behind the Disease (Lecture Series)**

- understand the concepts and techniques in molecular and cell biology and genetics including DNA replication and recombination, mutation and repair, gene expression, cell signaling mechanisms and the biology underlying infectious diseases.

#### **The Biology Behind the Disease (Self-Directed Learning Module)**

- Demonstrate critical thinking and communication across the spectrum from the basic molecular biology of cellular processes to the physiological manifestations of disease
- Conduct collaborative investigative work with colleagues based in different institutions
- Critically evaluate a recent published research paper
- Gain experience in presenting research following on from previous Communications workshop

#### **Animal Models of Disease**

- Understand the concepts/considerations in the development of animal models for diseases including schizophrenia, diabetes, pulmonary disease
- Understand studies directed at elucidating disease pathogenesis as well as development of therapeutic approaches

#### **Core Technologies**

- Have an understanding of the theory behind and application of the current state-of-the-art technology used in biomedical research

#### **Information Retrieval Workshop**

- Access the scientific literature on the web and in databases
- Find and evaluate information effectively and efficiently
- Manage the information collected or generated

#### **Introduction to Project Management in Healthcare and Education**

- develop knowledge and understanding of best practice in project management and also acquire practical tips and tools of project management which can be applied to your own area of practice