

## MOLECULAR MEDICINE IRELAND – Education & Training

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

#### Schedule for Period 30 June – 5 July 2008

##### Monday 30 June

Venue: Cheyne Lecture Theatre, Royal College of Surgeons in Ireland

1800-1815    **Introduction**

1815-1900    *Clinician Scientist Keynote Lecture*

**25 Years of Clinical Research – structure and serendipity**

Prof. William Powderly, Dean of Medicine, Head of UCD School of Medicine and Medical Science

1900-2000    **Wine reception**

##### Tuesday 1 July

#### Introduction to Research and Laboratory Methods for Clinician Scientists – Day 1

Venue: Fintan Gunne Lecture Theatre, Catherine McCauley Centre, Nelson St, Dublin 7

Course Organisers: Dr David Murray & Dr Peter Doran (UCD)

0830-0900    **Registration Tea/Coffee**

0900-0915    **Introduction, Overview and Welcome**

Dr Ruth Barrington, Molecular Medicine Ireland.

0915-0940    **Introduction to Scientific Research**

Dr Peter Doran, UCD Clinical Research Centre

0940-1010    **Ethical & Legal Issues**

TBC

1010-1030    Coffee / Tea

1030-1115    **Key elements of research proposal (experimental design)**

Dr Mary Codd, UCD School of Medicine

1115-1200    **Statistics**

Dr Mary Codd, UCD School of Medicine

1200-1320    Lunch

1320-1400    **Laboratory safety**

Ms Paola Bagaglia, UCD Clinical Research Centre

1400-1445    **Cell biology & cell culture**

Dr Eoin Cotter, UCD Clinical Research Centre

1445-1515    Coffee/Tea

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1515-1615 **DNA & RNA: biology and techniques**  
Dr David Murray, UCD Clinical Research Centre

1615-1700 **An overview of bioinformatics**  
Dr Denise Sadlier, UCD & Mater Hospital

### Wednesday 2 July

#### **Introduction to Research and Laboratory Methods for Clinician Scientists – Day 2**

Venue: Fintan Gunne Lecture Theatre, Catherine McCauley Centre, Nelson St, Dublin 7

Course Organisers: Dr David Murray & Dr Peter Doran (UCD)

0830-0900 **The Medics Perspective**  
Dr Nick Chew, UCD & Mater Hospital

0900-0930 **The supervisors perspective**  
Dr Peter Doran, UCD Clinical Research Centre

0930-1000 **After the research degree, what next?**  
Dr Paddy Mallon, UCD & Mater Hospital

1000-1030 Coffee/Tea

1030-1130 **Protein analysis**  
TBC

### Technology Focused Talks & Case Studies

1130-1215 **Recent Advances and Biomedical Applications of Protein Array Technologies**  
Prof Dolores Cahill, UCD Conway institute

1215-1300 **Flow Cytometry**  
Dr Alfonso Blanco Fernández, UCD Conway Institute

1300-1345 Lunch

1345-1430 **High Content Bioassay Screening**  
Dr Anthony Davies, TCD Institute of Molecular Medicine

1430-1530 **Problem solving tutorial**  
Dr David Murray, UCD Clinical Research Centre

1530-1630 **Tour of the Mater Hospital Clinical Research Centre and Laboratories**

1630-1715 *Clinician Scientist Keynote Lecture*  
**The Clinician Investigator in 21<sup>st</sup> Century Ireland**  
Prof. Noel Caplice, Professor of Cardiovascular Sciences (UCC)

### Thursday 3 July

#### **Writing & Communication Skills Workshop** – Prof Alan Kelly (UCC)

Venue: Fintan Gunne Lecture Theatre, Catherine McCauley Centre, Nelson St, Dublin 7

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- 0930-1030 **Introduction to the literature**  
Why do scientists publish? The nature of scientific journals, impact factors, inter-field differences.
- 1030-1045 Coffee/Tea
- 1045-1215 **The scientific paper**  
The objectives and sections of a scientific paper, designing good figures and tables, writing abstracts, etc.
- 1215-1300 **Publication and beyond**  
Submission of papers to journals, the refereeing process (and all of its outcomes, with examples), how papers make an impact, bibliometry (h-indices, etc.), emerging issues such as open access journals.
- 1300-1400 Lunch
- 1400-1445 **Publication and beyond (continued)**
- 1445-1545 **Publication ethics**  
Falsification, fabrication and plagiarism and other areas of misconduct, with examples
- 1545-1600 Coffee/Tea
- 1600-1800 **Presentation skills**  
Designing and making effective scientific presentations, preparing to give talks, including Powerpoint design, designing effective poster presentations.

### Friday 4 July

Venue: Fintan Gunne Lecture Theatre, Catherine McCauley Centre, Nelson St, Dublin 7

- 0930-1300 **Translating your research into the clinical setting**  
(Tea/coffee at 1100) - Siobhan Gaynor (Molecular Medicine Ireland / ICRIN)  
Clinical research, definitions and regulations. Ethical & regulatory considerations of clinical trials, timelines, cost. The key players in clinical trials in Ireland
- 1300-1400 Lunch
- 1400-1700 **Integrity in Scientific Research Workshop (Part 1)**  
(Tea/coffee at 1530) - Prof David Brayden & Prof Alan Baird

### Saturday 5 July

Venue: Fintan Gunne Lecture Theatre, Catherine McCauley Centre, Nelson St, Dublin 7

- 0930-1230 **Integrity in Scientific Research Workshop (Part 2)**  
(Tea/coffee at 1100) - Prof David Brayden & Prof Alan Baird
- 1230-1330 Lunch

## Molecular Medicine Ireland Clinician Scientist Fellowship Programme

### Learning objectives of first week of structured training

*This July 2008 period of structured training encompasses at an introductory level four broad areas of skill development and learning for researchers.*

#### Introduction to Research and Laboratory Methods

- Understand the processes of scientific research (including generating hypotheses, experimental design, and quantitative aspects).
- Be primed on the environment of PhD research (including laboratory safety, ethics, student-supervisor roles, career development).
- Understand various research techniques and technologies.

#### Writing and Communication Skills

- Understand the scientific publication process (including rankings, impact factors, citation rates, open access journals).
- Be familiar with the organisation of a scientific paper and the principles of good scientific writing (including abstract writing and the design of good figures and tables).
- Understand the process of submitting a manuscript for publication (from referees to proofs and beyond).
- Be aware of publication ethics (including areas of misconduct such as falsification, fabrication and plagiarism).
- Understand how to craft effective scientific presentations (including slide and poster design).

#### Translating your Research into the Clinical Setting

- Understand the terminology and conventions of clinical research.
- Be familiar with the drug development pathway, including the clinical trial process.
- Understand the various rules and regulations and issues of patient consent and safety.

#### Integrity in Scientific Research

- Understand ethical issues and obligations relating to access to confidential information obtained in a professional capacity.
- Be familiar with the obligations involved in collaboration with industrial collaborators and sponsors.
- Understand the need for high levels of integrity and transparency in interpreting research results.
- Understand the criteria that are used for determining authorship of research publications.