

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 21st 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.