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 incuding 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