2005/06 Taught Postgraduate Module Catalogue

BIOL5220M

Host-Parasite Interactions
20 credits

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Taught Semester 2 View Timetable

Year running 2005/06

Pre-requisite qualifications
BSc or equivalent.

This module is mutually exclusive with
BLGY3161

Module replaces BIOL5217M

This module is not approved as an Elective

Objectives
On completion of this module, students should be knowledgeable in several microbial pathogens including bacteria, viruses, fungi, and parasitic protozoa and their effects on hosts at the organismal, cellular, and molecular levels. Particularly, an understanding of the impact of these interactions on detection and treatment will be endeavoured. Students will critically assess new research in the area and discuss key points on host-pathogen interactions in light of genomics studies. Application of bioinformatics to analyse host-parasite interplay will be a component. This module seeks to enhance independent thinking and the ability to evaluate while encouraging teamwork and communication skills.

Syllabus
This module will provide insights into current research on the interactions of hosts and pathogens: from pathology of diseases and host response to the promise of new therapies through advanced technologies and genomics.

Five sets of topics will include:
1) viral infections;
2) opportunistic fungi;
3) virulence signalling in bacteria;
4) development of a pathogenic lifestyle by parasitic protozoa; and
5) pressures on evolving host immune responses.

The use of genomic information in understanding these phenomena will be applied and application of this knowledge to developing treatments will be addressed.

Teaching methods
Lectures: 15 x 1 hour;
Tutorials: 10 x 1 hour (5 x paper analysis, 5 x seminars);
Bioinformatics practical: 2 hours.

Private study
Lecture reading: 60 hours;
Seminar preparation: 60 hours;
Bioinformatics exercise: 13 hours;
Grant proposal: 40 hours.

Progress monitoring
3 x presentations;
2 x research paper analysis;
1 x bioinformatics exercise;
1 x grant proposal.

Methods of assessment
Presentation: 20%;
Critical analysis of research paper (3 x 500-word) (10% each): 30%;
Grant proposal: 50%.

Reading list
The reading list is available from the Library website