UNIVERSITY of BRADFORD

Module Descriptor

Research Topics 1 in Medical Cell Biology

Module Code:	BIS6006-B
Academic Year:	2018-19
Credit Rating:	20
School:	School of Chemistry and Biosciences
Subject Area:	Biomedical Science
FHEQ Level:	FHEQ Level 6
Module Leader:	Dr Julie Thornton

Additional Tutors:

Pre-requisites:	Pathology 2017-18
Co-requisites:	

Contact Hours

Type	Hours
Lectures	24
Tutorials	5
Laboratory	4
Directed Study	167

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims

To broaden and deepen knowledge of medical cell biology and pathology, with an emphasis on regulation of cell fate and differentiation, cell response to injury, repair mechanisms and regeneration and pathological changes and disease including cancer. To further develop oral and written communication skills, and broaden experience of research techniques in cell biology and pathology.

Outline Syllabus

Theory: Cell signalling (development, differentiation, regeneration); stem cells, mesenchymal-epithelial interactions, cell response to injury (oxidative stress, apoptosis, genetic damage, aging, wound healing, inflammation and oncogenic pathways), pathologies. Practical sessions develop student knowledge of histology and histopathology including interpretation of stained tissues. Students will also extend and improve on their ability to search and critically evaluate the literature as well as improve their oral presentation skills.

Module Learning Outcomes

On successful completion of this module, students will be able to...

1 Critically discuss the cellular and molecular signalling mechanisms involved in cell fate and differentiation and explain the role of these in disease.

2 Discuss cell response to injury, repair mechanisms and regeneration and evaluate resulting pathological changes that give rise to disease including cancer.

3 Report, interpret and present scientific data, including evaluation of experimental design, using the correct scientific terminology (HCPC standards 3, 14, 10, 15).

4 Critically analyse and evaluate experimental data presented in the primary scientific literature to select and explain key complex aspects, which are at the forefront of the discipline (HCPC standards 1, 8, 13, 14).

5 Demonstrate knowledge and understanding of a range of appropriate research methodologies (HCPC standard 15).

6 Demonstrate an effective self-management of workload, time and resources to prepare and deliver concise oral reports, (HCPC standards 1, 3, 8, 10, 14).

Learning, Teaching and Assessment Strategy

The core knowledge for this module is delivered in a series of lectures, supplemented by reference to current published scientific literature which requires extensive further reading and autonomous learning by the students.
The specific laboratory skills required are developed in practical classes.
During directed study hours, students are expected to undertake reading to consolidate and expand on the content of formal taught sessions; research and prepare for assessments; revise material from formal taught sessions; and undertake specific elements as directed.
Private study will be facilitated and supported via the use of the VLE which will provide coursework advice and feedback, and revision support.
Reassessment of failed elements will be as per the original method of assessment. Where reassessment of the laboratory practical element is required, students will be given a data set or an opportunity to complete the laboratory practical on an alternative occasion, whichever is more appropriate.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Formative	Presentation	Students have a formative presentation session which involves presenting and peer observation (LO 3-6)	15 minutes	%	No
Summative	Presentation	Individual oral presentation to a group of peers (LO 3-6)	15 minutes	20%	No
Summative	Examination - practical/laboratory	Laboratory class test (LO 3-5)	1 hour	20%	No
Formative	Examination - practical/laboratory	Laboratory class test (LO 3-5)	3 hours	%	No
Summative	Examination - closed book	One 2-hour examination comprising two from a choice of five essays (LO1-2).	2 hours	60%	Yes

Legacy Code (if applicable)

BM-3117D

Reading List

To view Reading List, please go to **rebus:list**.