

Module Details	
Module Title	Research Topics 1 In Medical Cell Biology
Module Code	BIS6006-B
Academic Year	2022/3
Credits	20
School	School of Chemistry and Biosciences
FHEQ Level	FHEQ Level 6

Contact Hours	
Type	Hours
Lectures	23.5
Tutorials	4
Laboratories	3
Practical Classes or Workshops	2 (workshop)
Directed Study	167.5

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

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.

Learning Outcomes	
Outcome Number	Description
01	Critically discuss the cellular and molecular signalling mechanisms involved in cell fate and differentiation and explain the role of these in disease.
02	Discuss cell response to injury, repair mechanisms and regeneration and evaluate resulting pathological changes that give rise to disease including cancer.
03	Report, interpret and present scientific data, including evaluation of experimental design, using the correct scientific terminology (HCPC standards 3, 14, 10, 15).
04	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).
05	Demonstrate knowledge and understanding of a range of appropriate research methodologies (HCPC standard 15).
06	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	Weighting
Summative	Presentation	Individual oral presentation to a group of peers (15 Mins)	20%
Summative	Examination - Closed Book	Class test based on the practical material (1 Hr)	20%
Summative	Coursework	Online assessment comprising of two essays (32 Hrs)	60%
Formative	Presentation	Students have a formative presentation session which involves presenting and peer observation (LO 3-6)	N/A
Formative	Examination - practical/laboratory	Laboratory class test (LO 3-5)	N/A

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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