

Module Information

2022.01, Approved

Summary Information

Module Code	5113BMBMOL
Formal Module Title	Advanced cell and molecular biology
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	44
Practical	3
Tutorial	3

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	1. Understand the principles of cell migration and differentiation 2. Highlight applied scenarios of these cell processes, and observe how they can be involved in both positive and negative processes. 3. Gain an understanding of key molecular biology techniques used to count cells, and examine important markers of differentiation
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate understanding of the principles of cell migration and differentiation
MLO2	2	Apply knowledge of the cell processes by highlighting scenarios where cell processes are relevant, and observe how they can be involved in both positive and negative applications.
MLO3	3	Apply understanding of key molecular biology techniques used to count cells, and examine important markers of differentiation by practically using molecular techniques.

Module Content

Outline Syllabus	This module aims to allow students to examine the key cellular processes of cell migration and differentiation in both positive and negative scenarios. The positive scenarios will include the use of stem cell migration and differentiation for tissue engineering purposes, leading to potential new therapies. The negative scenarios will highlight differentiation in cells that lead to cancerous growths, and potential metastasis etc. There is also an emphasis on the types of molecular biology techniques that are used in the laboratory to examine markers of these types of cellular processes, how transgenic animals and cells can be used in research to highlight key biological pathways that are involved in these two key cell biology principles. The practical aspects of this module aims to reinforce the principles learned in the lectures – including cell and molecular biology based techniques. There will also be 3 hours of personal tutor time where students can discuss/feedback on the course.
Module Overview	
Additional Information	The course will be run as formal lectures and practical sessions. The practicals in this module are based upon the work undertaken by Biomedical Scientists in the NHS. They will give the student the necessary skills and experience to meet the work place needs of the NHS. They have also been developed in consultation with HCPC registered Biomedical Scientists who have confirmed that these practicals are suitable and applicable to the NHS work place

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Centralised Exam	Short answer and MCQ Exam	40	2	MLO1, MLO2, MLO3
Report	A workbook style report	60	0	MLO3

Module Contacts