

Module Details	
Module Title	Preclinical Models for Drug Evaluation
Module Code	INC7001-B
Academic Year	2024/5
Credits	20
School	School of Pharmacy and Medical Sciences
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	12
Tutorials	8
Directed Study	169
Laboratories	11

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
<p>To provide students with the opportunity to develop the knowledge and ability to solve complex problems and justify their decisions. To gain knowledge of techniques for current and critical evaluation of pre-clinical models used to evaluate potential anti-cancer drugs.</p> <p>To gain practical experience of experimental techniques involved in using preclinical models. An understanding of the ethics involved in experimental work with animals. The ability to reflect on their practice to inform and plan their professional development.</p>

## Outline Syllabus

Topics to be covered include; in silico modelling, cell-free assays, in vitro based experimental models, biochemical assays for investigating drug target interactions, micro-physiological systems, in vivo models including syngeneic, xenografts and orthotopic models, novel molecular models of tumour biology, non-invasive imaging techniques, endpoint analysis for assessing efficacy and ethical issues associated with animal usage (the 3R's).

Emphasis will be placed upon a critical analysis of the value of experimental models in terms of how data obtained in the laboratory setting translates into clinical activity and current or emerging issues in this field, particularly with regards to the ethics of animal testing.

## Learning Outcomes

Outcome Number	Description
01	Demonstrate a systemic understanding of the pre-clinical screening pathway.
02	Demonstrate a systemic understanding of the types of assays and models which are utilised in the pathway.
03	Demonstrate advanced good laboratory practices to a professional standard (behaviour, rules and regulations).
04	Autonomously undertake experiments, critically evaluate, and interpret results
05	Demonstrate a sound understanding of the relevant ethical and experimental issues involved with using animals in preclinical screening.
06	Utilise generic literature skills for life-long learning (literature and databases).
07	Explore ethical considerations when carrying out experimentation.
08	Utilise generic literature skills for life-long learning (literature and databases).

## Learning, Teaching and Assessment Strategy

The delivery of the module consists of lectures, laboratory sessions which will allow hands-on experience of some of the techniques covered in the lectures including analysis of experimental data, and tutorials revising the taught material and case studies of preclinical screening strategies.

## Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Directed questions on a pre-clinical screening strategy	30%
Summative	Coursework - Portfolio/e-portfolio	A portfolio containing the write-ups from the practicals	30%
Summative	Coursework - Written	Gantt chart detailing a pre-clinical screening strategy, plus specified supporting source literature evidence	40%

## 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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