

Module Information

2022.01, Approved

Summary Information

Module Code	4502YAUZOO
Formal Module Title	Molecular Biology and Pharmacology
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Yunnan Agricultural University

Learning Methods

Learning Method Type	Hours
Lecture	64
Practical	8

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-PAR	PAR	September	12 Weeks

Aims and Outcomes

Aims	This course focuses on the structure of biological macromolecules such as nucleic acids and proteins of animals, and the transmission of genetic information and cellular information. The aim is mainly to teach students the basic theories and basic knowledge of molecular biology techniques in animal medicine, so that students can master the basic theories and basic knowledge between molecular biology and animal medicine, and to master the molecular biology technology correctly. This course is a good foundation for the follow-up professional courses and the use of molecular biology methods after graduation. The course then focuses on the basic theories of animal pharmacology, and the correct use of drugs.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Master the basic requirements of the molecular biology laboratory
MLO2	2	Master bacterial culture, such as the culture of E. coli
MLO3	3	Understand the basic methods of bioinformatics
MLO4	4	Understand the fundamental structures of nucleic acids and proteins
MLO5	5	Master and understand the basic concepts and knowledge of drugs, the types of drugs in pharmacology and the characteristics of the drugs and master the main role of drugs and their applications and reactions
MLO6	6	Master the principle of action of various drugs and learn to use drugs correctly, pay attention to incompatibility and prevent drug resistance

Module Content

Outline Syllabus	Through the study of this course, the students will master the basic requirements of the molecular biology laboratory, and improve their biological safety awareness. They will master the basic operations of molecular biology experiments, and correctly use the experimental techniques of nucleic acid research, and understand the relevant experimental techniques of protein research. This course will help the students correctly use molecular biology techniques in subsequent scientific research. Students will also study pharmacology and the interaction between drugs and animals. The students will master the concepts of drugs, poisons, preparations and dosage forms, understand the concepts of pharmacokinetics and pharmacodynamics, master and understand the types of drugs in the pharmacology and the characteristics of the drugs, and the rational use of antimicrobials and anti-parasitic and prevent the emergence of drug resistance.
Module Overview	
Additional Information	The students will build on molecular biology and biochemical foundations from level 3 to apply molecular biology techniques to detect diseases and use these methods accurately in subsequent research through the study in animal medicine. This course will help students learn to use drugs correctly, especially drugs together, pay attention to the incompatibility between drugs, and prevent the drug resistance.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Written exam 1	30	2	MLO1, MLO2, MLO3, MLO4

Exam	Written Exam 2	30	2	MLO4, MLO6, MLO5
Test	Molecular biology test	5	0	MLO1, MLO2, MLO3, MLO4
Report	Practical report	15	0	MLO1, MLO2, MLO3, MLO4
Test	Pharmacology test	20	0	MLO4, MLO6, MLO5

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Rachael Symonds	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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