

Summary Information

Module Code	7130PHASCI
Formal Module Title	Natural Products in Cosmetics
Owning School	Pharmacy & Biomolecular Sciences
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Amos Fatokun	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
Jose Prieto Garcia	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	23
Practical	17
Workshop	4

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	This module aims to cover the phytochemical, formulation, environmental and sustainability of natural products. The lectures will offer an overview of the major: (1) Biosynthesis pathways (Shikimate, Mevalonic and amino acid) of natural products (alkaloids, phenolics, terpenes, glycosides and essential oils); (2) Application of natural products in cosmetic formulations; (3) Critical knowledge of the environmental and sustainability issues concerning natural products in cosmetic applications.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Demonstrate a thorough knowledge of the biosynthesis, structure and physico-chemical properties of natural products and their environmental consideration and sustainability.
MLO2	Demonstrate a thorough knowledge and practical understanding of how to apply natural product chemistry to cosmetic formulations.
MLO3	Locate, critically evaluate, critically assess and make appropriate use of information from scientific literature and relevant electronic resources on phytochemistry and natural cosmetic ingredients.
MLO4	Demonstrate the necessary skills to plan, perform, report and interpret the results of laboratory experiments and analyses on the chemistry and formulation of natural products.

Module Content

Outline Syllabus
1. Plant Metabolism and Enzymes 2. Shikimate Pathway 3. Amino acid Pathways 4. Mevalonic acid Pathway 5. Essential oils 6. Glycosides 7. Formulation of Natural Products 8. Perfumery 9. Environmental and sustainability of Natural Products 10. INCI and Botanicals

Module Overview

Additional Information

This module will require previous undergraduate and/or postgraduate knowledge in general biology and chemistry.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	Exam	50	2	MLO2, MLO1, MLO4
Report	Report	50	0	MLO3, MLO4