



Fridah Glelis Kariuki

has completed the following course:

DISCOVERING SCIENCE: GLOBAL CHALLENGES

UNIVERSITY OF LEEDS

Discovering Science: Global Challenges explores how chemistry plays a fundamental role in overcoming some of the modern issues that affect our everyday lives. The course explains the challenges we face with bacterial resistance and global food security.

2 weeks, 5 hours per week

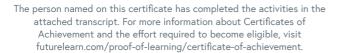
Professor Paul C Taylor

Professor of Chemical Education & Director of Student Education
University of Leeds



In association with













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STUDY REQUIREMENT

2 weeks, 5 hours per week

LEARNING OUTCOMES

- Explore the origins of antibiotic development and how some bacteria are able to become resistant to antibiotics.
- Explore the challenges behind educating people in the proper use of antibiotics.
- Identify uses of chemistry in addressing the challenges of feeding a growing population.
- Explore the uses of natural crops and their genetically-modified alternatives.

SYLLABUS

- The origins of penicillin and the research behind antibiotic development.
- The way in which pencillins kill bacteria.
- Introduction to the molecular structure of the penicillins and how their structure underpins their antibacterial properties.
- The ways in which some bacteria types are able to become resistant to antibiotics.
- The clinical research of a consultant in infectious and travel medicine.
- The challenges behind educating people in the proper use of antibiotics.
- The ways in which chemists are making contributions to overcoming the problem of bacterial resistance.

- The ethical issues associated with powerful medicines, and the appropriate uses of them.
- Assignment: prepare interview questions to demonstrate an understanding of the ethical issues behind a scientific topic.
- The uses of chemistry in addressing the challenges of feeding a growing population.
- The role of chemical crop protection agents and the development of agrochemicals.
- The way agrochemical products are discovered and designed.
- The discovery of the World's most widely used fungicidal agent, Azoxystrobin.
- The multidisciplinary nature of the discovery of new biologically active molecules.
- The uses of natural crops and their geneticallymodified alternatives.
- Sustainable options for feeding a rapidly growing population.
- Alternative methods of agriculture that complement the use of chemical crop protection agents.
- Assignment: a peer reviewed task to write a blog post on a scientific topic.

ACCREDITATION

This course has been certified by the CPD Certification Service as conforming to continuing professional development principles. By completing the course the learner has achieved 14 hours of CPD time.

