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Certificate of Achievement

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

UNIVERSITY OF LEEDS

In association with
CPD CERTIFIED
The CPD Certification Service

The person named on this certificate has completed the activities in the attached transcript. For more information about Certificates of Achievement and the effort required to become eligible, visit futurelearn.com/proof-of-learning/certificate-of-achievement.

This learner has not verified their identity. The certificate and transcript do not imply the award of credit or the conferment of a qualification from University of Leeds.

TRANSCRIPT

UNIVERSITY OF LEEDS

In association with

CPD CERTIFIED
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Fridah Glelis Kariuki

has completed the following course:

DISCOVERING SCIENCE: GLOBAL CHALLENGES
UNIVERSITY OF LEEDS

86%
AVERAGE TEST SCORE

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.

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 genetically-modified 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.