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### **Certificate of Achievement**

# MEIKANDAN CHANDRASEKAR

has completed the following course:

### BACTERIAL GENOMES: DISEASE OUTBREAKS AND ANTIMICROBIAL RESISTANCE WELLCOME CONNECTING SCIENCE

This course explored the use of cutting edge genomic techniques in research on bacterial diseases, how they spread and how they resist antibiotic treatment.

The Royal College of Pathologists (RCPath) has accredited this course for 9 Continuing Professional Development credits. This applies to medical staff and clinical scientists in career grade posts who are enrolled with one of the Royal Colleges for CPD purposes.

Joena Commin

Dr Treasa Creavin Scientific Programme Manager Wellcome Genome Campus Advanced Courses and Scientific Conferences

Professor Nicholas Thomson Group Leader, Bacterial Genomics and Evolution Wellcome Sanger Institute, Wellcome Genome Campus







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 certificate represents proof of learning. It is not a formal qualification, degree, or part of a degree.





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has completed the following course:

BACTERIAL GENOMES: DISEASE OUTBREAKS AND ANTIMICROBIAL RESISTANCE WELLCOME CONNECTING SCIENCE



The course covered bacterial genomes and pathogenic bacteria, genome sequencing technology, genomic epidemiology, disease outbreaks, and antimicrobial resistance. The course focused on how bacteria evolve to become effective pathogens and how genome sequencing and signatures of evolution are used: to identify and track the spread of pathogenic and drug resistant bacteria in communities and between countries, and in the prevention of antimicrobial resistance.

### STUDY REQUIREMENT

3 weeks, 3 hours per week

#### LEARNING OUTCOMES

- Explain why some bacteria are pathogenic
- Explore the structure of bacterial genomes
- Describe the uses of different genome sequencing technologies
- Investigate how genome data are used to track the spread of bacterial disease
- Discuss the role of genome sequencing in stopping the spread of antimicrobial resistance

### SYLLABUS

- Diseases caused by bacteria
- What bacterial genomes look like
- Genome sequencing technology
- Mechanisms of transmission and resistance
- Genomic epidemiology tracking the spread of bacterial pathogens
- Antimicrobial resistance

#### ACCREDITATION

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