



Certificate of Achievement

Noel Leon Kronenberg

has completed the following course:

THE GENOMICS ERA: THE FUTURE OF GENETICS IN MEDICINE
ST GEORGE'S, UNIVERSITY OF LONDON AND ST GEORGE'S UNIVERSITY HOSPITALS NHS
FOUNDATION TRUST

This course explored the growing role of genomics in healthcare for patient diagnoses and treatment.

5 weeks, 2 hours per week



Katrina Tatton-Brown
Consultant Clinical Geneticist and Honorary Senior Lecturer
St George's, University of London



St George's University Hospitals 
NHS Foundation Trust



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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STUDY REQUIREMENT

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LEARNING OUTCOMES

- Demonstrate an understanding of the fundamentals of human genetics; the human genome, DNA, chromosomes, and genes
- Describe the normal processes of cell division, transcription and translation within a human cell
- Evaluate the mechanisms for the introduction of variation into the human genome, including normal genetic variation and disease causing variation
- Compare the characteristics of somatic mutations vs constitutional mutations within the human genome
- Discuss the different mechanisms by which errors in the genetic code can lead to disease
- Explore the impact of a genetic condition on the lives of patients
- Compare the different technologies used to interrogate the human genome and describe the types of genetic variation which can be identified by different technological approaches
- Reflect upon the myriad clinical applications of genomic technology, their benefits and limitations and how they impact on clinical practice and the development of personalised medicine
- Explore the challenges involved in accurate and effective communication in genomics
- Debate the ethical and legal implications that are presented by the new era of genomics

SYLLABUS

- DNA, genes, chromosomes and the human genome;
- Normal genetic variation;
- Genetic variation and disease: genetic mutations and chromosome abnormalities;
- The inheritance of genetic conditions;
- Emerging genomic technologies including next generation sequencing;
- The interpretation of genomic data;
- The application of genomics to clinical practice;
- Communicating genomic information to patients;
- The legal and ethical implications associated with the use of genomic data.

ACCREDITATION

The Royal College of Pathologists (RCPATH) has accredited this course for 10 CPD credits.