# Professor Denise Syndercombe Court

# Personal statement

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Professor of Forensic Genetics

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Scientist, geneticist, statistician, academic, editor and author of a prize-winning medical textbook and published author of peer reviewed scientific publications. Trained in systematic reviews and evidence-based approaches of medical and scientific publications. From 1990 was Senior Lecturer in Forensic Haematology at Barts and The London School of Medicine and Dentistry and continues her appointment there as an Honorary Senior Research Fellow. In 2012 she moved to King’s College London where she is now the Professor of Forensic Genetics.

She has more than thirty years of experience in scientific research, forensic evidence examination and DNA interpretation in relationship and criminal evidence with a sound knowledge of the civil and criminal justice process, including court presentation as an accredited expert witness. She runs an ISO17025 laboratory dealing with all matters DNA and is an active researcher in new molecular techniques for human identification. She has an active interest in promoting science to a wider audience via television, radio and external lectures.

# Qualifications

MRSB, CBiol, FIBMS, CSci, DMedT, MCFS, PhD. Diploma in Forensic Statistics.

# Key skills

Complex DNA profiling interpretation (kinship and probabilistic mixture analysis). Statistician. Forensic genetics researcher. Blood pattern analyst. Systematic reviewer. Author of texts in anatomy, epidemiology, statistics, immunology, haematology, genetics, epigenetics, protein polymorphisms and forensic medicine. Lecturer to medical and dental students, post registration medical professionals, undergraduate and post-graduate students of forensic science and forensic medicine. Court going accredited expert witness. Director of an ISO17025 accredited laboratory as part of King’s Forensics.

# Current appointments

* Recognised Teacher, University of London
* Director of laboratory accredited to ISO17025 and appointed by the Ministry of Justice
* European DNA Profiling (EDNAP) UK representative
* European Network of Forensic Science Institutes (Associate Member)
* Accredited (CUBS) certificated criminal expert witness
* Secretary-General, British Academy of Forensic Sciences
* Secretary International Society for Forensic Genetics (English Speaking Working Group
* Member of the Forensic Regulator’s DNA working group
* Member of Home Office Biometrics and Forensic Ethics Group
* Member of the International Organisation for Standards

# Research funding

EU funded research in forensic genetics 2000 – 2015

* STADNAP – leading database collection
* SNP*for*ID – leading forensic application
* EUROFORGEN: network of excellence – leading legal and ethical considerations

# Expert evidence

* Over 600 expert reports prepared in relation to criminal cases as a result of instruction by the defence, and prosecution
* Over 2000 individuals tested annually for investigations of parent child and extended complex relationships
* Provider of complex forensic genetic analyses for FSPs and international police forces
* Advice and attendance in court to give expert evidence in a large number of cases.

# Membership of professional bodies

* Member of the Royal Society of Biology
* Fellow of the Institute of Biological and Medical Sciences
* Fellow of the Royal Statistical Society
* Member of the International Society for Forensic Genetics
* Member of the British Academy for Forensic Sciences
* Member of the Academy of Forensic Medical Sciences
* Member of the International Society of Blood Pattern Analysts
* Affiliate member of the Royal College of Pathologists Faculty of Forensic and Legal Medicine
* Member of the Chartered Society of Forensic Sciences
* Member of the Biochemical Society
* Member of the European Association for the Study of Science and Technology

# Recent publications

Over 100 peer reviewed publications and authored chapters in forensic science and medicine – most recent:

* Characterization of the public transit air microbiome and resistome reveals geographical specificity. Leung MHY et al (2021). Microbiome. <https://doi.org/10.1186/s40168-021-01044-7>
* A global metagenomic map of urban microbiomes and antimicrobial resistance. Dank O det al (2021). Cell 184: 3376-3393.
* Classification of STR allelic variation using massively parallel sequencing and assessment of flanking region power. Devesse l et al (2020) For Sci Int: Genetics 48: 102356
* Development and validation of the EUROFORGEN *NAME* (North African and Middle Eastern) ancestry panel. Pereira V et al (2019) For Sci Int: Genetics 42: 260-267
* DNA methylation-based age prediction using massively parallel sequencing data and multiple machine learning models (2018). Aliferi A et al. For Sci Int: Genetics 37: 215-226
* Forensic genealogy: some serious concerns. Syndercombe Court (2018). For Sci Int 36: 203-204
* Towards broadening forensic DNA phenotyping beyond pigmentation: improving the prediction of head hair shape from DNA. Pospiech E et al (2018). For Sci Int 37: 241-251
* Global patterns of STR sequence variation: sequencing the CEPH human genome diversity panel for 58 forensic STRs using the Illumina ForenSeq DNA Signature Prep Kit. Phillips C et al (2018) Electrophoresis 39: 2708-2724