



## Professor Sir Shankar Balasubramanian

AFFILIATION:  
University of Cambridge

LINK TO WEBPAGE: <https://www.balasubramanian.co.uk>

TITLE OF PRESENTATION: ***Fast track DNA sequencing for vaccine development and cancer therapy***

### **Biographical note**

Sir Shankar Balasubramanian is the Herchel Smith Professor of Medicinal Chemistry at the University of Cambridge and senior group leader at the Cambridge Institute. He works on the chemistry, structure and function of nucleic acids. He is a co-inventor of the leading next generation DNA sequencing methodology, Solexa sequencing (now Illumina) that has made routine, accurate, low-cost sequencing of human genomes a reality and has revolutionised biology. He has invented chemistry to decode several modified (epigenetic) DNA bases and DNA secondary structures (G-quadruplexes) in the genome and has made seminal contributions towards the understanding of their dynamics and function. His work on small molecule recognition of nucleic acids has revealed molecular mechanisms that can be exploited to modulate the biology of cancer. His collective contributions span fundamental chemistry and its application to the biological and medical sciences. Sir Shankar was knighted in the Queen's New Year's Honours in 2017 for his services to science and medicine and awarded the Royal Society's Royal Medal in 2018. In 2021, he was awarded the 2020 Millennium Technology Prize jointly with David Klenerman and the 2022 Breakthrough Prize for Life Sciences jointly with David Klenerman and Pascal Mayer for their work on sequencing technologies.