

Daniela Rhodes



Before joining Nanyang Technological University (NTU) in Singapore in 2011, I spent all of my research career at the world-renowned MRC Laboratory of Molecular Biology in Cambridge, UK. After studying for a PhD with Nobel Prize winner Aaron Klug, I obtained a Research Scientist Position in 1983, tenure in 1987 and Special Appointment in 1994. In Singapore I am a Professor at both the School of Biological Sciences and the

School of Chemical and Biomedical Engineering and the founding Director of the NTU Institute of Structural Biology since 2014. I have been Visiting Prof. at both the Rockefeller University and La Sapienza. Amongst other activities I chaired the EMBO Fellowship Committee (2000 – 2006) and was chair of EMBO Council (2010 –2012). I also chaired the ERC Advanced Grants LS1 Committee 2010 -2016.

My research has centered on uncovering nucleic acid structure and function and how DNA is packed into chromatin and how DNA is recognized sequence specifically by proteins such as transcription factors, using structural methods ranging from NMR to x-ray crystallography to EM. My scientific achievements include crystallizing the nucleosome core in 1976 and determined the 7Å structure in the early 80s, and later the EM structure of the chromatin “30nm” fibre, and how it is regulated by epigenetic marks. In the mid 90s I turned to telomeres and determined the first crystal structures of yeast RAP1, and human TRF1 and TRF2 in complex with DNA. I went on to provide the first evidence that G-quadruplex DNA is present at telomeres in vivo and that the protein that regulates its formation is also involved in telomerase recruitment. Our recent research focusses on the structure of human telomeres and telomerase.