Michael G Rossmann, J Proteomics Bioinform 2016, 9:10(Suppl)
http://dx.doi.org/10.4172/0974-276X.C1.087

6th International Conference on

Structural Biology

August 22-23, 2016 New Orleans, USA

Michael G Rossmann

Purdue University, USA

A personal history of structural virology

As a graduate student in Glasgow and post-doc in Minnesota I acquired a fairly good understanding of structural crystallography and the use of very early electronic computers. I then joined Max Perutz's laboratory in 1958 as a post-doc and was a member of the small team who witnessed the determination of the first 3D protein structures. I then started my own laboratory at Purdue University in 1964 with the aim of determining the atomic structure of a virus. As a start I worked on dehydrogenases that were oligomeric as were also viruses. That led to the recognition of the fold capable of binding nucleotides. This gave enough confidence to look at the structure of a plant virus. Steve Harrison at Harvard was also working on the structure of a plant virus, leading to the first two virus structures at near-atomic resolution in about 1979. From there we looked at the structure of a common cold virus (1985), the first animal virus to be determined. Many other viruses followed in our lab and many other labs, giving a wealth of biological understanding. In the current year we published the structure of Zika virus, using electron microscopy instead of X-ray crystallography.

Biography

Michael Rossmann graduated from the University of London (B.Sc. General in Physics and Mathematics, 1950; B.Sc. Special 1951 in Physics; M.Sc., 1953) and the University of Glasgow (Ph.D., 1956). He was a postdoctoral fellow with Prof. William Lipscomb at the University of Minnesota (1956-1958) and a Research Associate with Dr. Max Perutz at the MRC Laboratory of Molecular Biology, Cambridge, England (1958-1964). Currently he is the Hanley Professor of Biological Sciences at Purdue University, where he has worked for the last 52 years. His laboratory utilizes X-ray crystallography and electron microscopy to study the structures of animal and bacterial viruses.

mr@purdue.edu