

Biography of Invited Speakers

Alan Ferst

Alan Fersht is a group leader at the MRC Laboratory of Molecular Biology. He enjoys combining methods and ideas of molecular and structural biology with those from biophysics and chemistry to study the structure, activity, stability and folding of proteins, and the role of protein misfolding and instability in cancer and disease. His recent previous positions have been Herchel Smith Professor of Organic Chemistry at Cambridge University and Director of the MRC Centre for Protein Engineering.

Currently, his major work is using structural and biophysical methods to study how mutation affects proteins in the cell cycle, particularly the tumour suppressor p53, in order to design novel anti-cancer drugs that function by restoring the activity of mutated proteins. He is solving the structures of p53 and its negative regulator Mdm2, which are paradigms for partly intrinsically disordered proteins, by combining a variety of structural methods.

Alan Fersht is a Fellow of the Royal Society, Foreign Associate of the National Academy of Sciences (USA), Honorary Foreign Member of the American Academy of Arts and Sciences, Member of EMBO and Member of Academia Europaea. He has won several international awards, including: the FEBS Anniversary Prize, 1980; Novo Biotechnology Award, 1986; Charmian Medal of the Royal Society of Chemistry, 1986 (for Enzymology); The Gabor Medal of the Royal Society, 1991 (for Molecular Biology); Max Tishler Lecture and Prize, Harvard University, 1992; FEBS Datta Lecture and Medal, 1993; Jubilee Lecture and Harden Medal of the Biochemical Society, 1993; the Feldberg Foundation Prize 1996; Distinguished Service Award (for Protein Engineering), Miami Nature Biotechnology Winter Symposium, 1997; the Davy Medal of the Royal Society 1998 (for Chemistry); the Chaire Bruylants, 1999; Natural Products Award of the Royal Society of Chemistry, 1999; the Anfinsen (1999) and Stein and Moore (2001) awards of the Protein Society; the Bader Award of the American Chemical Society (2005), Linderstrøm-Lang Prize and Medal (2005), Bijvoet Medal (2008), The Royal Medal of the Royal Society (2008) and the G N Lewis Medal (2008). He was knighted in 2003 for his work on protein science, and has honorary degrees from Uppsala, Brussels, Weizmann Institute, Imperial College and The Hebrew University. He is Associate Editor of PNAS and Senior Editor of PEDS.

Stefano Forli

Stefano Forli got his degree in Medicinal Chemistry at the University of Siena, Italy. During his Ph.D. in Pharmaceutical Sciences, he also worked in the Drug Design Unit of Siena Biotech. He is currently a post-doc in the Molecular Biology Department of the Scripps Research Institute in Prof. Arthur Olson's laboratory. He is involved in the development of AutoDock forcefield and virtual screening tools, and in the TSRI joint effort for drug design of novel HIV inhibitors.

Luhua Lai

Luhua Lai graduated from the Department of Chemistry, Peking University in 1984. She went on for her graduate study in the same department and was awarded PhD in 1989. She joined the faculty of the Department of Chemistry, Peking University in 1989 as a lecturer, then became associated professor and full professor. During 1999-2000, she was a Berkeley Scholar in the University of California at Berkeley. Currently she is the Changjiang Professor in the College of Chemistry and Molecular Engineering, Peking University and a member of the Center for Theoretical Biology, Peking University. She also serves as associated editor for PLoS Computational Biology and member of the editorial board for BMC Bioinformatics.

Luhua Lai's group uses combined approaches of computational and experimental to study biological problems. They are working on understanding protein-protein interactions, protein design, structural and systems based drug design. For structural based drug design, they use *in silico* virtual screening and rational design methods to discover potential leads for several disease-related targets. The Lai group also works on developing new algorithms for drug design, e.g., accurate calculation of the protein-ligand binding free energy, new docking program, de novo drug design programs, etc.

Arthur Olson

Arthur Olson holds the Anderson Endowed Chair in the Department of Molecular Biology at The Scripps Research Institute where he is founder and director of its Molecular Graphics Laboratory. He received his Ph.D. from University of California Berkeley in Physical Chemistry, and went on to Postdoctoral Research at Harvard University where he was involved in solving the first atomic resolution structure of an intact virus capsid in 1977. He returned to Berkeley in 1979 to become Assistant Director of the National Resource for Computation in Chemistry. He has been at Scripps since 1981.

Dr. Olson is a pioneer in the analysis and visualization of biological assemblies His laboratory has developed, applied and distributed a broad range of molecular modeling and visualization software over the past 30 years, including AutoDock, which is the world's most highly cited ligand docking program. He started the first Internet distributed biomedical computing project, FightAIDS@Home, which is now running on over a million computers worldwide, and for which he was honored by resolution in the California State Legislature. Dr. Olson has served on advisory committees for two National Supercomputing Centers, as well as on a number of National Research Resources and editorial boards. He was awarded a Senior Fellowship to the Institute of Advanced Study at Durham University in the U.K. in 2007. In 2009 he was the Chair of the Gordon Research Conference on Visualization in Science and Education in Oxford, U.K.

Julian Tanner

Julian Tanner was awarded his PhD in Chemistry at Imperial College, London in 2001 for his work on the dinucleoside polyphosphates. He moved to the University of Hong Kong (HKU) to pursue post-doctoral work in enzymology and chemical biology, with a particular focus on characterization and finding inhibitors of the SARS coronavirus helicase. He established a research group in 2005 in the Department of Biochemistry at the University of Hong Kong with three major research areas: development of nucleic acid aptamers, studies on inorganic polyphosphates and mechanisms of skeletal disease. During the period 2005-2008 he also co-wrote a textbook entitled "Essentials of Chemical Biology – Structure and Dynamics of Biological Macromolecules" published in 2008 by Wiley, which has been used for undergraduate and postgraduate courses at many universities including MIT, Oxford and Imperial College. He continues to research and teach at the interface between chemistry, biology and medicine at the University of Hong Kong.

Nick Terrett

Nick Terrett was born in London and educated at Cambridge University (BA, Natural Sciences; PhD in organosilicon chemistry with Dr Ian Fleming). During his career in the pharmaceutical industry, Nick has worked at both GSK and Pfizer as a medicinal and technology chemist. In the 1980s he was the lead chemist for the program that discovered sildenafil (Viagra, Revatio). Nick established Pfizer's combinatorial chemistry group, and published in the mid-1990s on this new technology including writing the first single author text book on combiChem. During his time at Pfizer Nick was also responsible for high throughput screening and the materials management groups, playing central roles in the integration of the Warner-Lambert and Pharmacia compound collections. From 2003 to 2006 Nick was Head of Chemical Sciences at Pfizer, Cambridge MA. Nick is currently Chief Scientific Officer for Ensemble Therapeutics, a biotech company in Cambridge, MA using a DNA-programmed chemistry technology platform to prepare large libraries of macrocycles for drug discovery. Ensemble are demonstrating that difficult drug discovery targets such as protein-protein interactions are best addressed with compounds such as macrocycles that fall into a drug-like non-Lipinski space.

Wen-Ching Wang

Wen-Ching Wang obtained her B.S. degree at National Taiwan University in 1983, M.S. degree at University of California, Santa Barbara in 1985 and Ph.D. degree at California Institute of Technology in 1992.

Wang joined the faculty of National Tsing Hua University (NTHU), Hsinchu, Taiwan in 1992. She is currently Distinguished Professor in the Department of Life Science and Institute of Molecular and Cellular Biology at NTHU. She has served as Director of Center for BioMedical Sciences and Engineering since 2009 at NTHU. She has worked extensively in the molecular pathogenesis and resistance mechanism of *Helicobacter pylori*, structure-based discovery of inhibitors against *H. pylori* and structure-function relationship of enzymes.