

BIOGRAPHIES

GERMAINE FUH, MS

Senior Scientist
Department of Antibody Engineering
Genentech Inc., San Francisco, CA



Germaine Fuh has been with Genentech since 1986 and was mentored by Jim Wells for over ten years. She started her own laboratory in 2003 as an Associate Scientist in the Protein Engineering department. She is currently a Senior Scientist in the Antibody Engineering department with an adjunct appointment with the Early Biochemistry Discovery department, Research and Early development group (gRED) at South San Francisco, California. Fuh earned her Bachelor's degree in Medical Technology at National Taiwan University in 1980. She later went on to study Laboratory Sciences at the University of California – San Francisco where she earned a Master's degree in 1984.

Fuh's interest is in the molecular mechanisms of how proteins work and function in biological pathways. She has played a major role in developing antibody phage libraries and tools for antibody discovery and enhancement aiming to deliver molecules for treating diseases with unmet medical needs. She recently developed a strategy to engineer antibodies to target two different molecules at the antigen-binding site, which has provided an option for generating dual targeting therapeutic antibody. Her research has resulted in 57 publications and over 17 issued patents. Fuh received the Ralph Schwall Memorial Inventor Award at Genentech (2009), and her work on Two-in-One antibodies was listed by MIT Technology Review as an important emerging technology in 2010.

MICHAEL JEWETT, PHD

Assistant Professor
Department of Chemical and Biological Engineering
Member, Chemistry of Life Processes Institute
Robert H. Lurie Comprehensive Cancer Center
Northwestern University, Evanston, IL



Michael Jewett is an Assistant Professor of Chemical and Biological Engineering and Member of the Chemistry of Life Processes Institute at Northwestern University. He received a B.S. in Chemical Engineering in 1999 at the University of California, Los Angeles. He received his M.S. in 2001 and his Ph.D. in 2005 in Chemical Engineering at Stanford University. After completing postdoctoral studies as an NSF International Research Fellow at the Center for Microbial Biotechnology in Denmark and as an NIH Pathway to Independence Fellow at the Harvard Medical School, he joined the faculty of Engineering at Northwestern in 2009 where he engineers biological systems for compelling applications in medicine and biotechnology. He made strong contributions to cell-free biology during his Ph.D. work at Stanford, to systems biology at the Technical University of Denmark, and to synthetic biology at Harvard as a post-doctoral researcher before coming to Northwestern.

Jewett's research group is developing cell-free biology as an enabling technology for biomanufacturing lifesaving therapeutics, sustainable chemicals, and novel materials, both quickly and on-demand. He focuses on designing, constructing, and modifying biological systems involved in protein synthesis and metabolism, with promise to advance new paradigms for synthetic biology. In 2011, he was honored with a David and Lucile Packard Fellowship in Science and Engineering, the DARPA Young Faculty Award, and the Agilent Early Career Professor Award.



SHOHEI KOIDE, PHD

Professor
Department of Biochemistry and Molecular Biophysics
Committee on Cancer Biology
The University of Chicago, Chicago, IL

Shohei Koide is a professor in the Department of Biochemistry and Molecular Biology at the University of Chicago. He received his undergraduate (1986) and graduate (1991) degrees from the University of Tokyo, Japan. After postdoctoral training as a Human Frontier Science Program Postdoctoral Fellow at the Scripps Research Institute in La Jolla, California, he started his independent research career at the University of Rochester and has been at the University of Chicago since 2002. Koide is also a member of the University of Chicago Cancer Research Center, a Fellow of the Institute of Genomics and Systems Biology of the University of Chicago, and serves as a Scientific Director of the Chicago Biomedical Consortium.

Koide is well known for his research in protein engineering, design and folding. He focuses on creating proteins with novel functions and controlling biology with designer proteins. As the inventor of the widely used FN3 monobody system, he is among the pioneers of non-antibody scaffold technologies, and his group has also made important contributions to synthetic antibody technologies. His research is interdisciplinary, integrating approaches in structural biology, directed evolution, protein biochemistry and cell biology. He was among the first researchers in 2009 to win a NIH Transformative R01 award to develop an innovative protein-capture technology with high levels of fidelity and predictability called “affinity clamp”. His team has recently pioneered a new approach to study signaling networks called “directed network wiring” that pinpoints important protein interactions underlying biological phenomena such as cancer and development.



JIE LIANG, PHD

Richard and Loan Hill Professor of Bioengineering
Department of Bioengineering
University of Illinois at Chicago, Chicago, IL

Jie Liang is Richard and Loan Hill professor in the Richard and Loan Hill Department of Bioengineering at the University of Illinois at Chicago. He joined UIC in 1999 as an assistant professor, and was promoted to associated professor in 2003, and to full professor in 2007. He was a visiting professor at the Systems Biomedicine Institute at Shanghai Jiaotong University in 2006. Liang received his B.S. degree in Biophysics from Fudan University in 1986, and earned a Ph.D. in Biophysics from the University of Illinois at Urbana-Champaign in 1994. He was an NSF CISE postdoctoral research associate (1994-1996) at the Beckman Institute and National Center for Supercomputing and its Applications (NCSA) in Urbana, IL. He also spent eight months as a visiting fellow at the NSF Institute of Mathematics and Applications at Minneapolis. From 1997 to 1999, he was an Investigator at SmithKline Beecham Pharmaceuticals in Philadelphia. Liang received an NSF CAREER award in 2003. He was elected as a fellow of the American Institute of Medicine and Biological Engineering in 2007. He was a University Scholar at UIC from 2010-2013.

Liang’s research interests include systems biology, computational bioengineering, bioinformatics, and computational biophysics, especially in the areas of structural bioinformatics, computational proteomics, molecular stochastic networks, and cellular pattern formation. Current projects in his lab include protein function prediction, evolution analysis, membrane protein/nanodevice assembly, stochastic networks of biomolecules, tissue regeneration and wound healing, cell polarity, and cellular pattern formation.

LYNNE REGAN, PHD

Professor of Molecular Biophysics and Biochemistry
Professor of Chemistry
Yale University, New Haven, CT



Lynne Regan is a professor of Chemistry and Molecular Biophysics and Biochemistry at Yale University. Her research investigates interactions between proteins and nucleic acids. She earned her bachelor's degree in biochemistry from Oxford University in 1981. She went on to study at the Massachusetts Institute of Technology with a Fulbright Scholarship, and earned her Ph.D. there in 1987. Regan joined the Department of Molecular Biophysics and Biochemistry at Yale in 1990 as an assistant professor and became professor in 1998. In 2000, she became a professor in Yale's Department of Chemistry. In 2008, she became the first director of Yale's Raymond and Beverly Sackler Institute for Biological, Physical and Engineering Sciences.

Regan is the president of the Protein Society (2013-2014) and has received many honors throughout her career. Notable awards include a 2-year Shannon Grant in 1992 awarded by the NIH for work on small model proteins, the Margaret Oakley Dayhoff Award in 1995 given to women who have made significant contributions to biophysics early in their careers and a one-year Guggenheim Fellowship in 2005 for her studies of newly synthesized anti-cancer compounds.

JAMES A. WELLS, PHD

Professor
Department of Pharmaceutical Chemistry
University of California, San Francisco, CA



James A. Wells is professor and chair of the Department of Pharmaceutical Chemistry at the UCSF School of Pharmacy, and holds a joint appointment as professor in the Department of Cellular & Molecular Pharmacology in the School of Medicine. He earned a Ph.D. degree in biochemistry from Washington State University and completed postdoctoral work at Stanford University School of Medicine. Before joining UCSF, Wells was the founding scientist in Genentech's Protein Engineering Department, where his group was the first to develop protein phage display, and developed both naïve and affinity maturation technologies on two-chain Fab formats. Wells later co-founded Sunesis Pharmaceuticals, where he served as president and chief scientific officer. His team at Sunesis developed novel technologies for fragment-based drug discovery, notably Tethering.

At UCSF, the Wells lab focuses on developing engineered enzymes and small molecules to interrogate signaling pathways that drive regulated cell death. Wells is also the founder and director of the Small Molecule Discovery Center (SMDC) at UCSF, a core facility that offers UCSF researchers access to modern small molecule discovery technologies including high-throughput screening, fragment-based drug discovery, and hit-to-lead medicinal chemistry. He is a recipient of many honors, including the Hans Neurath Award by the Protein Society, the Pfizer Award given by the American Chemical Society, the du Vigneaud Award given by the American Peptide Society and the 2006 Hartwell Individual Biomedical Research Award.



KARL DANE WITTRUP, PHD

Carbon P. Dubbs Professor
Department of Chemical Engineering and Biological Engineering
Associate Director
Koch Institute for Integrative Cancer Research
Massachusetts Institute of Technology, Cambridge, MA

Karl Dane Wittrup is the Carbon P. Dubbs Professor of Chemical Engineering and Biological Engineering at MIT and Associate Director of MIT's Koch Institute for Integrative Cancer Research. He received a B.S. in Chemical Engineering in 1984 from the University of New Mexico, and a Ph.D. in Chemical Engineering from the California Institute of Technology in 1988. Following a year of postdoctoral research at Amgen's Yeast Molecular Biology Group (Thousand Oaks, CA), Wittrup joined the faculty at the University of Illinois. He was Assistant Professor, Associate Professor, and then J. W. Westwater Professor of Chemical Engineering, Bioengineering, and Biophysics at the University of Illinois in Champaign/Urbana from 1989 - 1999. He co-founded Adimab, Inc. in 2007 and currently serves as Chief Scientific Officer. In 2009, he co-founded Eleven Biotherapeutics, and serves on the Scientific Advisory Board.

Wittrup's research program is focused on protein engineering of biopharmaceutical proteins by directed evolution. Areas of interest include: pre-targeted radioimmunotherapy, biological response modification of EGFR, and immunotherapy of cancer *via* engineered cytokines and vaccines. He was elected a Fellow of the American Association for the Advancement of Science in 2011 and in 2012 he was elected to the National Academy of Engineering.