Jenny Gu, Ph.D.

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EDUCATION

University of California, San Diego (2006)
Ph.D .- Biomedical Sciences Graduate Program, Bioinformatics emphasis
University of California, Berkeley (1999)
B.A. - Molecular and Cellular Biology, Biochemistry emphasis

PROFESSIONAL EXPERIENCE

University of California, San Diego (2000 – Present)
Doctoral Studies

- Combined protein dynamic modeling and machine learning approaches to extract and generalize sequence-flexibility relationships important for protein function.
- Developed computational methods to identify local fluctuation changes important for protein function.
- Collaborated with experimental researchers to develop novel microarray analysis for a dataset addressing cerebellum development.
- Technical skills: Perl, C++. Matlab, UNIX, LINUX, MacOSX

BIOthena – La Jolla, CA (2005 – Present)
Scientific Consulting Partner and Co-founder

- Provided technical evaluation for the San Diego biotechnology community.
- Created nonconfidential summaries for technologies to be licensed.
- Evaluated potential of technologies to work synergistically.

RIKEN – Yokohama Institute, Japan (2004)
NSF EAPSI Research Fellow

- Developed and compared microarray analysis techniques to improve detection of coregulated gene expression.

The Scripps Research Institute – La Jolla, CA (1999 – 2000)
Lab Manager/Research Assistant

- Managed and organized a start-up lab.
- Tested feasibility of protein nanocrystallization for high-throughput X-ray crystallography with use of robotics.
- Conducted research on several *de novo* structures using X-ray crystallography.

University of California, Berkeley (1996-1999)
Undergraduate Researcher

- Improved educational laboratory experiments to enhance learning in fundamental chemistry.
- Conducted research on several *de novo* structures using X-ray crystallography.

TEACHING EXPERIENCE

UCSD Biological Data Representation and Analysis (2005)
Guest Lecturer
- *Protein Allostery and Motions.*

UCSD Structural Biochemistry (2002)
Head Teaching Assistant
- Coordinated lesson plans between teaching assistants.
- Conducted sections and office hours to further discuss topics covered in lectures.
- Created learning handouts.
- Wrote, proctored, and graded all examinations.

OASIS Student Mentor – (1996-1998)
Mentor
- Taught ESL to Oakland high school students.

AWARDS AND FELLOWSHIPS

UC San Diego Biomedical Sciences Best Image Award (2006)
NSF EAPSI Research Fellow, National Science Foundation (2004)
UC Berkeley Alumni Scholar Award (1996)

COMMUNITY ACTIVITIES

STARS – High School Mentorship in Science (2000)
Graduate Student Association – External Affairs Committee (2005)

PUBLICATIONS

Gu, J; Bourne P. *Allosteric Transistion Fluctuation as applied to Cyclin Dependent Kinase 2.* In submission with BMC Bioinformatics.

Gu, J; Gribskov, M; Bourne, P. *Wiggle – Predicting Functionally Flexible Regions from Primary Sequence.* PLoS Computational Biology 2006 Jul 14:2(7):e90.

Arndt, JW; Gu J; Jaroszewski L; Schwarzenbacher R; Hanson MA; Lebeda FJ; Stevens RC. *The structure of the neurotoxin-associated protein HA33/A from Clostridium botulinum suggests a reoccurring beta-trefoil fold in the progenitor toxin complex.* Journal of Molecular Biology 2005 Mar 346(4): 1083-1093

Santarsiero, BD; Yegian, DT; Lee, CC; Spraggon, G; Gu, J; Scheibe, D; Uber, DC; Cornell, EW; Nordmeyer, RA; Kolbe, WF; Jin, J; Jones, AL; Jaklevic, JM; Schultz, PG; Stevens, RC. *An approach to rapid protein crystallization using nanodroplets.* Journal of Applied Crystallography, 2002 Apr, 35(2):278-281.

POSTERS

Gu, J; Bourne P. *FlexoPred: Exercising the Power of Sequence Information to Predict Local Protein Flexibility.* RECOMB Satellite Workshop on Systems Biology and Regulatory Genomics.

Gu, J; Bourne P. *Transitional Dynamics Analysis reveals local fluctuation changes in Cyclin Dependent Kinase 2.* VIth European Society of The Protein Society (2005)

Gu, J; Gold, D; Hamilton, B; Gribskov M. *Microarray Analysis of the Developing Mouse Cerebellum.* 10th Intelligent Systems for Molecular Biology (ISMB) Conference, (2002)