

**Kam D. Dahlquist, Ph.D.**  
**Associate Professor and William F. McLaughlin Chair of Biology**  
**Loyola Marymount University**

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Last modified: October 25, 2012

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**EDUCATION**

<b>Ph.D.</b>	<b>University of California, Santa Cruz</b> Molecular, Cellular, and Developmental Biology Program <i>Advisor:</i> Joseph D. Puglisi, Ph.D. <i>Committee:</i> Harry F. Noller, Ph.D., Manuel Ares, Jr., Ph.D. <i>Thesis:</i> <i>Interaction of Translation Initiation Factor IF1</i> <i>with the E. coli Ribosomal A Site</i>	March 2000
<b>B.A.</b>	<b>Pomona College, Claremont, California</b> Biology, <i>cum laude</i>	May 1993
	<b>University College, Oxford University, Oxford, England</b> Study Abroad Program <i>Specialized tutorial in Philosophy of Science</i>	Fall 1991

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**POSITIONS HELD**

<b>William F. McLaughlin Chair of Biology</b> <b>Associate Professor</b> <b>Assistant Professor</b>	2010–2012 2009–present 2005–2009
Department of Biology, Loyola Marymount University, Los Angeles, California	
<b>Assistant Professor</b>	2003–2005
Department of Biology, Vassar College, Poughkeepsie, New York	
<b>Postdoctoral Fellow</b>	2000–2003
Gladstone Institute of Cardiovascular Disease, University of California, San Francisco	
<b>Adjunct Lecturer</b>	Spring 2000
Department of Biology, Santa Clara University, Santa Clara, California	
<b>Visiting Researcher</b>	1997–2000
Department of Structural Biology, Stanford University, Stanford, California	
<b>Research Assistant</b>	1994–1997
Department of Biology, University of California, Santa Cruz, California	

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**GRANTS, FELLOWSHIPS, HONORS, AWARDS**

- ASBMB Thematic Best Poster Award in Systems Biology** 2012  
\$500, for poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, April 20-24, 2012, San Diego California
- ASBMB and NSF Travel Grant** 2012  
\$2,250, to present at the American Society for Biochemistry and Molecular Biology Annual Meeting, April 20-24, 2012, San Diego California
- NSF-DMS Mathematical Biology, MCB Genes and Genome Systems** 2009–2013  
\$246,123, *Collaborative Research and RUI: Stochastic Dynamic Network Models of Gene Regulation under Environmental Stress*  
*Principal Investigator: Kam D. Dahlquist; Co-Principal Investigator: Ben G. Fitzpatrick*
- Loyola Marymount University Center for Teaching Excellence Travel Grant, \$740** 2009
- NSF-UBM (Interdisciplinary Training for Undergraduates in Biological and Mathematical Sciences)** 2007–2010  
\$240,000, *Analysis of Stress in Biological Systems*  
*Principal Investigator: Ben G. Fitzpatrick; Co-Principal Investigators: Wendy J. Binder, Erika Camacho, Kam D. Dahlquist, Gary A. Kuleck;*  
*Faculty Associates: Philippa M. Drennan, Martin G. Ramirez*  
*Interdisciplinary Research Project with Ben G. Fitzpatrick entitled, Modeling Gene Expression Networks in Saccharomyces cerevisiae*
- W.M. Keck Foundation** 2007–2010  
\$300,000, *Equipment for the Molecular Analysis and Imaging Laboratory*  
*Principal Investigator: Gary A. Kuleck; Co-Principal Investigators: Kam D. Dahlquist, David Moffet, Martin G. Ramirez, Carl R. Urbinati*
- Kadner-Pitts Research Grant** 2007–2008  
**Department of Biology, Loyola Marymount University**  
\$10,000, *Mapping Gene Regulatory Networks in Yeast using DNA Microarrays, Mathematical Modeling, and GenMAPP*
- Merck-AAAS Undergraduate Science Research Program** 2006–2008  
\$120,000 (\$60,000 plus \$60,000 matching funds from Loyola Marymount University)  
*Chemical and Biological Aspects of Pollution in the Ballona Wetlands*  
*Principal Investigator: M. Catherine McElwain;*  
*Director and Co-Principal Investigator: Kam D. Dahlquist;*  
*Co-Principal Investigators: Rachel Adams, Lambert Doezeema, John Dorsey, Philippa M. Drennan, Gary A. Kuleck, Jim Landry, Jeremy McCallum, David Moffet, Martin G. Ramirez, James Roe, and Carl R. Urbinati*  
*Interdisciplinary Research Project with David Moffet and Carl R. Urbinati entitled Identifying Soil Bacteria and Biochemical Pathways in the Ballona Wetlands for the Bioremediation of Organic Pollutants*
- Academic Technology Grant, Loyola Marymount University** 2007  
\$4,000, *Introducing DNA Microarray Technology in the New Laboratory Course, Biology 478: Molecular Biology of the Genome*

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<b>Dartmouth Faculty Summer Institute Travel Award and Stipend</b> <i>ELSI Reunion and Conference, Dartmouth University, Hanover, New Hampshire</i>	August 2006
<b>Summer Research Grant for New Faculty</b> , Loyola Marymount University \$4,000, <i>The Transcriptional and Proteomic Response to Cold Shock and Recovery in Saccharomyces cerevisiae</i>	2006
<b>Merck-AAAS Undergraduate Science Research Program</b> <i>Principal Investigator:</i> Richard B. Hemmes, Department of Biology, Vassar College <i>Interdisciplinary Research Project</i> with Eric S. Eberhardt, Department of Chemistry, Vassar College entitled <i>Examining the Molecular Details of Oxidative Stress from the Genome to the Proteome</i> [I declined my share of the funding upon my move to Loyola Marymount University]	2005
<b>Mellon Faculty Conversations Award</b> , Vassar College \$2,000, <i>Effective Grading: A Tool for Learning and Assessment</i>	2004–2005
<b>Dartmouth Faculty Summer Institute Travel Award and Stipend</b> <i>Ethical, Legal, and Social Implications of the Human Genome Project</i> Dartmouth University, Hanover, New Hampshire	July 2004
<b>Sigma Xi</b> , Full Membership Associate Membership	2004 1992
<b>Carolyn Grant Endowment for Embodied Learning</b> , Vassar College \$2,000, Sponsored a visit by Jean Couch to lead workshops on <i>Balanced Posture</i> for <i>Introduction to Biological Thought: The Human Genome</i> and the campus community	2004
<b>GAANN Fellowship</b> , U.C. Santa Cruz	1995–1997
<b>Phi Beta Kappa</b>	1993
<b>Vaile Prize in Biology</b> , Pomona College	1993
<b>Senior Service Award</b> , Pomona College	1993
<b>Eda May Haskell Library Prize</b> , Pomona College	1993
<b>Best Seminar in Plant or Microbial Biology</b> West Coast Undergraduate Research Conference in the Biological Sciences	1992

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## RESEARCH EXPERIENCE

<b>Associate Professor</b>	2009–present
<b>Assistant Professor</b>	2005–2009
Department of Biology, Loyola Marymount University, Los Angeles, California	
<i>Current Research Projects:</i>	
<ul style="list-style-type: none"> <li>• Creation of MAPPs and Gene Databases for GenMAPP software; XMLPipeDB: A Reusable Open Source Tool Chain for Building Relational Databases from XML Sources</li> <li>• The Global Transcriptional Response of <i>Saccharomyces cerevisiae</i> to Cold Shock and Recovery</li> </ul>	

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- Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in *Saccharomyces cerevisiae*
  - Identifying Soil Bacterial and Biochemical Pathways in the Ballona Wetlands for the Bioremediation of Organic Pollutants  
*Research advisor for a total of 34 undergraduates and 1 Master's level student at LMU since 2005*
- Assistant Professor** 2003–2005  
 Department of Biology, Vassar College, Poughkeepsie, New York  
*Research Projects:*
- Transcriptional and Proteomic Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery
  - Creation of MAPPs and Gene Databases for GenMAPP software  
*Research advisor for a total of 6 undergraduate students at Vassar 2003–2005*
- Postdoctoral Fellow** 2000–2003  
 Gladstone Institute of Cardiovascular Disease, University of California, San Francisco  
*Advisor:* Bruce R. Conklin, M.D.  
*Topic:* Pathway-based analysis of microarray data; project management, design, testing, and documentation of the GenMAPP software
- Visiting Researcher** 1997–2000  
 Department of Structural Biology, Stanford University, Stanford, California  
*Advisor:* Joseph D. Puglisi, Ph.D.
- Research Assistant** 1994–1997  
 Department of Biology, University of California, Santa Cruz  
*Advisor:* Joseph D. Puglisi, Ph.D.
- Rotation Student** 1993–1994  
 Department of Biology, University of California, Santa Cruz  
*Advisor:* Jack K. Okamuro, Ph.D.  
*Topic:* Identification of additional members of the *Apetala2* family in *Arabidopsis thaliana*  
*Advisor:* Jerry F. Feldman, Ph.D.  
*Topic:* Mapping of the *Period2* locus in *Neurospora crassa*
- Undergraduate Researcher** Summer 1993  
 Howard Hughes Summer Institute, University of California, Santa Cruz  
*Advisor:* Jane Silverthorne, Ph.D.  
*Topic:* Characterization of phytochrome genes in *Ginkgo biloba*
- Undergraduate Researcher** 1991–1992  
 Department of Biology, Pomona College, Claremont, California  
*Advisor:* David W. Becker, Ph.D.  
*Topic:* Effect of heat stress on photosynthesis in a high-temperature strain of the green alga, *Chlorella pyrenoidosa*
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## TEACHING EXPERIENCE

### College Level

- Associate Professor** 2009–present  
**Assistant Professor** 2005–2009  
 Department of Biology, Loyola Marymount University  
*Biology 201: Cell Function*
- Sophomore-level course in four-semester lower division curriculum for biology majors
- Biology 275: Human Genetics*
- Fulfills University core requirement for non-science majors
- Biology 439: Molecular Biology Applications*
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- Intensive laboratory course in molecular biology
  - Students performed semi-independent cloning project based on my dissertation research
- Biology 367/Computer Science 367/Honors 398: Biological Databases*
- Cross-listed and team taught with John David N. Dionisio, Ph.D., Department of Electrical Engineering and Computer Science
  - Interdisciplinary student teams created GenMAPP Gene Databases for *Plasmodium falciparum*, *Vibrio cholerae*, *Pseudomonas aeruginosa*, and *Staphylococcus aureus*, and others using XMLPipeDB open source software
  - Students maintained online laboratory notebooks using MediaWiki software
- Biology 398: Bioinformatics Laboratory*
- Project-based computer laboratory using GenMAPP, MAPPFinder, and other bioinformatics software
  - Projects include sequence and structural analysis of the gp120 protein of HIV and analysis of DNA microarray experiments
  - Students maintain online laboratory notebooks using Google Sites or OpenWetware.org wiki
- Biology 398/Mathematics 388: Biomathematical Modeling*
- Cross-listed and team taught with Ben G. Fitzpatrick, Ph.D., Department of Mathematics
  - Students create mathematical models of nitrogen metabolism and the transcriptional network in budding yeast
  - Students maintain online laboratory notebooks using OpenWetware.org wiki
- Biology 478: Molecular Biology of the Genome*
- Subject of 2007 LMU Academic Technology Grant
  - Intensive laboratory course in molecular biology
  - Students perform a DNA microarray experiment
  - Data analyzed with GenMAPP, MAPPFinder, and other bioinformatics software
- Biology 498/Computer Science 698: Special Studies in Bioinformatics*
- Master's-level course cross-listed with Computer Science, team taught with John David N. Dionisio, Ph.D., Department of Electrical Engineering and Computer Science
  - Project-based course developed XMLPipeDB software and Gene Database for GenMAPP using open source tools and the development environment of SourceForge
- Biology 585: Issues in Biotechnology*
- Seminar and capstone experience for biology majors
  - Read, present, and discuss articles from the primary literature
  - Present and discuss the ethical, legal, and social implications of biotechnology research and scientific misconduct
- Honors 240: On the Nature of Things*
- University core requirement for students in the Honors Program
  - An examination of the history, philosophy, and nature of scientific discovery, theory, and practice
  - Focus on recent advances in biology, specifically biotechnology and genomics, epistemology, and genetic determinism
  - Seminar-based discussion course with presentations and final projects relating to the students' major field of study
- Delivered Guest Lecture in the following courses*
- BIOE630: Genetic Medicine (October 2009)
  - BIOL 114: Biology for Engineers (March 2009)
  - PHIL 666: Philosophy of Science (October 2008)
  - CMSI 686: Database Systems (April 2007)
  - MATH 298: Biomathematics (April 2007)
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- MGMT 498: Technology Ventures (March 2006)
- CMSI 486: Introduction to Database Systems (October 2005)

**Assistant Professor**

2003–2005

Department of Biology, Vassar College

*Introduction to Biological Thought: The Human Genome*

- Students used MAPPFinder to analysis a publicly available cancer microarray dataset
- Students learned scientific writing step-by-step, culminating in a final draft of a review of a primary research article about a gene involved in cancer
- Evaluated highly on organization and meeting course goals

*Principles of Genetics*

- Students used GenMAPP to draw a biochemical pathway and analyze microarray data related to their “wet” lab work
- Emphasized the “practical” aspects of successful scientific research through special exercise in teamwork
- Genetics and Society presentations, papers, and discussions taught students about the ethical implications of genetics research

*Bioinformatics*

- Project-based computer laboratory using GenMAPP, MAPPFinder, and other bioinformatics software
- Students designed web sites to showcase their work
- Emphasized presentation skills and reading primary scientific literature

**Adjunct Lecturer**

Spring 2000

Department of Biology, Santa Clara University

*Molecular Biology*

- Taught lecture and lab to 20 upper-division, biology majors; was solely responsible for course content
- Developed lab exercise based on thesis research where students cloned different mutations in 16S rRNA into an *E. coli* expression vector and analyzed the phenotype of the mutant cells
- Developed bioinformatics lab exercise based on tools publicly available on the web
- Evaluated highly by students for stimulating independent thinking and for demonstrating an interest in them

**Course Assistant**

Winter 1998

Department of Biology, Stanford University

*Cell Biology*

- Led discussion of research articles

**Teaching Assistant**

Fall 1994

Department of Biology, U.C. Santa Cruz

*Concepts in Biology*

- Lectured when professor was out of town

**Teaching Assistant**

Summer 1994

Howard Hughes Summer Institute, U.C. Santa Cruz

*Molecular and Cell Biology Laboratory*

- Supervised semi-independent research projects on the cloning of *frequency* homologues in different species of fungi

**K-12****Scientist Volunteer**

2001–2002

Herbert Hoover Middle School and U.C. San Francisco

*Science and Health Education Partnership Triad Science Club*

- Developed and led hands-on activities, including gel electrophoresis

**Elective Teacher**

Fall 1994

Mission Hill Junior High School, U.C. Santa Cruz

*Project SAME: Science and Math Equity*

- Taught a girl-only elective class on building simple machines with the Lego-Logo system

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**SERVICE & PROFESSIONAL INVOLVEMENT****Internal****Loyola Marymount University****University-wide**

Digital Scholarship Repository Project Team 2010–2011

High Performance Computing Task Force 2010–2011

Research Council 2009–present

Valedictorian Committee 2009, 2011

Interviewer of candidates for Director of Sponsored Projects Office Summer 2008

Scholarship of Teaching and Learning Brown Bag Group 2005–present

**Frank R. Seaver College of Science and Engineering**

Pre-tenure Faculty Guidance Committee 2010–2011

Information Technology Committee 2005, 2009–2010

Search Committee for Presidential Professorship  
in Computational Biology 2008–2010Search Committee for Presidential Professorship  
in Mathematical Biology 2006–2008**Department of Biology**

Search Committee for Biochemist/Cell Physiologist 2010–2011

Collected and edited Department Laboratory Safety Documents Fall 2010

Faculty mentor 2009–present

Coordinator for Biology 201: Cell Function 2009–present

Search Committee for Vertebrate Physiologist 2009–2010

APRC Review Committee 2006–2011

Chair 2011

Webmaster for Department web site 2006–present

Review of Faculty Research Funds subcommittee 2006–2008

Sensitive Equipment subcommittee Spring 2006

**Vassar College**

Women in Science and Mathematics Faculty Adviser 2003–2005

Career Development Office Advisory Committee 2003–2005

Carolyn Grant Endowment Committee for Embodied Learning 2004–2005

Biology Department Curriculum Committee 2004–2005

Biology Department Community Committee 2004–2005

Women's Studies Steering Committee 2004–2005

**External****Intel International Science and Engineering Fair**

Sigma Xi Special Awards Judge, Los Angeles, California 2011

**West Coast Biological Sciences Undergraduate Research Conference**

Presentation and Poster Judge	2008
Member, Organizing Committee	2007
Poster Judge	2006

**Open Bioinformatics Foundation**

Abstract Reviewer, Session Chair, Bioinformatics Open Source Conference (Long Beach)	2012
Codefest Host, Loyola Marymount University	2012
Abstract Reviewer, Bioinformatics Open Source Conference (Vienna)	2011
At-large Member, Board of Directors	2008–2010
Chair, Bioinformatics Open Source Conference (Boston)	July 9–10, 2010
Chair, Bioinformatics Open Source Conference (Stockholm)	June 27–28, 2009
Chair, Bioinformatics Open Source Conference (Toronto)	July 18–19, 2008

**International Society for Computational Biology**

Member, Education Committee	2006–present
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**Genome Consortium for Active Teaching (GCAT)**

Alternate scanning center for DNA microarrays	2010–present
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**Grants and Publishing**

<b>Review Panel, National Science Foundation</b>	June 2009, December 2011
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<b>Associate Editor, <i>International Journal of Computational Bioscience</i></b>	2009–2010
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**Peer-reviewer**

<i>Journal of Computational Science Education</i>	2011
<i>CBE – Life Sciences Education</i>	2003, 2006, 2008, 2009
<i>Bioinformatics</i>	2003, 2009
<i>EURASIP Journal on Advances in Signal Processing</i>	2009
<i>PLoS ONE</i>	2009
<i>Briefings in Functional Genomics and Proteomics</i>	2008
<i>Molecular and Cellular Proteomics</i>	2004

<b>Chapter Reviewer, Watson et al., <i>Recombinant DNA</i>, 3<sup>rd</sup> edition</b>	2006
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**Association for Women in Science (AWIS)**

Chair, Programs Committee, Palo Alto Chapter	2001–2003
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- Organized and led monthly chapter meetings attended by 50-75 people
- Invited speakers (women scientists, career development)

<b>Postdoctoral Women Peer-mentoring Group, U.C. San Francisco</b>	2001–2003
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<b>Alumni Volunteer Admissions Interviewer, Pomona College</b>	1995–1998, 2001
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**Phoenix II Seminars, San Jose, California**

Graduate, Leadership Program	1994
Staff volunteer for courses and exit interviews	1994–1995

**Memberships**

American Society for Biochemistry and Molecular Biology	2009–present
Open Bioinformatics Foundation	2006–present
American Society for Cell Biology	2003–present
International Society for Computational Biology	2002–present
Association for Women in Science (AWIS)	1998–present
American Association for the Advancement of Science	1995–present



## PUBLICATIONS

**Peer-reviewed Research**

- Demir, E., Cary, M.P., Paley, S., Fukuda, K., Lemer, C., Vastrik, I., Wu, G., D'Eustachio, P., Schaefer, C., Luciano, J., Schacherer, F., Martinez-Flores, I., Hu, Z., Jimenez-Jacinto, V., Joshi-Tope, G., Kandasamy, K., Lopez-Fuentes, A.C., Mi, H., Pichler, E., Rodchenkov, I., Splendiani, A., Tkachev, S., Zucker, J., Gopinath, G., Rajasimha, H., Ramakrishnan, R., Shah, I., Syed, M., Anwar, N., Babur, O., Blinov, M., Brauner, E., Corwin, D., Donaldson, S., Gibbons, F., Goldberg, R., Hornbeck, P., Luna, A., Murray-Rust, P., Neumann, E., Reubenacker, O., Samwald, M., van Iersel, M., Wimalaratne, S., Allen, K., Braun, B., Whirl-Carrillo, M., Cheung, K.H., **Dahlquist, K.**, Finney, A., Gillespie, M., Glass, E., Gong, L., Haw, R., Honig, M., Hubaut, O., Kane, D., Krupa, S., Kutmon, M., Leonard, J., Marks, D., Merberg, D., Petri, V., Pico, A., Ravenscroft, D., Ren, L., Shah, N., Sunshine, M., Tang, R., Whaley, R., Letovksy, S., Buetow, K.H., Rzhetsky, A., Schachter, V., Sobral, B.S., Dogrusoz, U., McWeeney, S., Aladjem, M., Birney, E., Collado-Vides, J., Goto, S., Hucka, M., Le Novère, N., Maltsev, N., Pandey, A., Thomas, P., Wingender, E., Karp, P.D., Sander, C., and Bader, G.D. (2010) The BioPAX Community Standard for Pathway Data Sharing. *Nature Biotechnology* **28**: 935-942.
- Ogando, D.G., **Dahlquist, K.D.**, Alizadeh, M., Kunchithapautham, K., Li, J., Yu, N., LaVail, M.M., Rohrer, B., Vollrath, D., and Danciger, M. (2010) Candidate Genes for Chromosomes 6 and 10 Quantitative Trait Loci for Age-related Retinal Degeneration in Mice. *Molecular Vision* **16**: 1004-1018.
- Dionisio, J.D.N. and **Dahlquist, K.D.** (2008) Improving the Computer Science in Bioinformatics Through Open Source Pedagogy *ACM SIGCSE Bulletin* **40**: 115-119.
- Salomonis, N., Hanspers, K., Zambon, A.C., Vranizan, K., Lawlor, S.C., **Dahlquist, K.D.**, Doniger, S.W., Stuart, J., Conklin, B.R., & Pico, A.R. (2007) GenMAPP 2: New Features and Resources for Pathway Analysis. *BMC Bioinformatics* **8**: 217.
- Segal, M.R., **Dahlquist, K.D.**, & Conklin, B.R. (2003) Regression Approaches for Microarray Data Analysis. *Journal of Computational Biology* **10**: 961-980.
- Doniger, S.W., Salomonis, N., **Dahlquist, K.D.**, Vranizan, K., Lawlor, S.C., & Conklin, B.R. (2003) MAPPFinder: Using Gene Ontology and GenMAPP to Create a Global Gene-Expression Profile from Microarray Data. *Genome Biology* **4**: R7.
- Dahlquist, K.D.**, Salomonis, N., Vranizan, K., Lawlor, S.C., & Conklin, B.R. (2002) GenMAPP, A New Tool for Viewing and Analyzing Microarray Data on Biological Pathways. *Nature Genetics* **31**: 19-20.
- Dahlquist, K.D.** & Puglisi, J.D. (2000) Interaction of Translation Initiation Factor IF1 with the *E. coli* Ribosomal A site. *Journal of Molecular Biology* **299**: 1-15.
- Recht, M.I., Douthewaite, S., **Dahlquist, K.D.**, & Puglisi, J.D. (1999) Effect of Mutations in the A site of 16S rRNA on Aminoglycoside Antibiotic-Ribosome Interaction. *Journal of Molecular Biology* **286**: 33-43.
- Recht, M.I., Fourmy, D., Blanchard, S.C., **Dahlquist, K.D.**, & Puglisi, J.D. (1996) RNA Sequence Determinants for Aminoglycoside Binding to an A-site rRNA Model Oligonucleotide. *Journal of Molecular Biology* **262**: 421-436.

**Reviews, Book Chapters, Conference Proceedings**

- Dahlquist, K.D.**, editor (2010) Proceedings of the 11th Annual Bioinformatics Open Source Conference (BOSC) 2010. *BMC Bioinformatics* **11**(Suppl 12): S1-S13.
- Dahlquist, K.D.** (2004) Using GenMAPP and MAPPFinder to View Microarray Data on Biological Pathways and Identify Global Trends in the Data. In *Current Protocols in Bioinformatics* (Baxevanis, A.D., Davison, D.B., Page, R., Stein, L., Stormo, G., eds.), John Wiley & Sons, Inc., New York, N.Y., pp. 7.5.1-7.5.26.

- Puglisi, J.D., Blanchard, S.C., **Dahlquist, K.D.**, Eason, R.G., Fourmy, D., Lynch, S.R., Recht, M.I., & Yoshizawa, S. (1999) Aminoglycoside Antibiotics and Decoding. In *The Ribosome: Structure, Function, Antibiotics, and Cellular Interactions* (Garrett, R.A., Douthewaite, S.R., Liljas, A., Matheson, A.T., Moore, P.B., & Noller, H.F., eds.), pp. 419-429. ASM Press, Washington, D.C.
- Dahlquist, K.** & Puglisi, J.D. (1995) Investigating the Structure and Function of Translation Initiation Factor 1. *Nucleic Acids Symposium Series* **33**: 170-171.

### Software and Databases

#### **XMLPipeDB (A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources)**

Co-Principal Investigator with John David N. Dionisio, 2006–present

Availability: <http://xmlpipedb.cs.lmu.edu> , <http://sourceforge.net/projects/xmlpipedb>

#### **GenMAPP (Gene Map Annotator and Pathway Profiler) 1.0 and 2.0**

Project Manager, 2000–2003

Metabolic Pathway MAPP Archive for *Saccharomyces cerevisiae*, 2005; for *E. coli* K12, 2008

Gene Database for *Escherichia coli* K12, 2006, 2009; *Arabidopsis thaliana*, 2007, 2009; *Plasmodium falciparum*, 2009; *Vibrio cholerae*, 2009, 2010; *Pseudomonas aeruginosa* PAO1, 2010; *Staphylococcus aureus* MRSA 252, 2010, *Mycobacterium tuberculosis* H37Rv, 2010, *Helicobacter pylori*, 2011, *Mycobacterium smegmatis*, 2011, and *Salmonella typhimurium*, 2011.

Availability: <http://www.GenMAPP.org>, <http://sourceforge.net/projects/xmlpipedb>

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### **PRESENTATIONS**

#### External Talks

##### **Chapman University**

Orange, California, May 2012

*Brrrr--How Do Yeast Cope When It's Cold Outside? Using DNA Microarrays and Mathematical Modeling to Understand Gene Regulatory Networks in Saccharomyces cerevisiae*

##### **American Society for Biochemistry and Molecular Biology Annual Meeting**

San Diego, California, April 2012

*Regulatory Dynamics of the Transcriptional Network Controlling the Cold Shock Response in Saccharomyces cerevisiae*

##### **Harvey Mudd College**

Claremont, California, April 2012

*Brrrr--How Do Yeast Cope When It's Cold Outside? Using DNA Microarrays and Mathematical Modeling to Understand Gene Regulatory Networks in Saccharomyces cerevisiae*

##### **Mount Saint Mary's College**

Los Angeles, California, March 2012

*Teaching and Learning Bioinformatics*

##### **Career Day in Fields of Science, Institute for Integrative Genome Biology, University of California, Riverside**

Riverside, California, May 2011

*Career Envy: The Road to a Successful PUI Position*

##### **Graduate Student Career Workshop, University of California, Los Angeles**

Los Angeles, California, February 2011

*Career Envy: The Road to a Successful PUI Position*

##### **Postdoctoral Scholars Association Career Workshop, University of California, Irvine**

Irvine, California, November 2010

*Career Envy: The Road to a Successful PUI Position*

**Beyond Bio2010 Symposium: Celebration and Opportunities, National Academy of Sciences**

Washington, D.C., May 2010 (with John David N. Dionisio)

*An Open Source, Open Science Pedagogy for Computational Biology***Young Women in Computing and CREST, New Mexico State University**

Las Cruces, New Mexico, February 2010

*It's a Good Time to Be a Computational Biologist!**Bioinformatics Workshop***Bioinformatics Open Source Conference (BOSC)**

Stockholm, Sweden, June 2009

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources***Yeast Genetics and Molecular Biology Meeting**

Toronto, Ontario, Canada, July 2008

*Mathematical Modeling of the Transcriptional Regulatory Network Controlling the Cold Shock Response in *Saccharomyces cerevisiae****Pepperdine University**

Malibu, California, February 2008

Guest lecture in Molecular Biology course: *MAPPFinder Analysis of Prostate Cancer Microarray Data***8th BioPathways Meeting**

Vienna, Austria, July 2007

*Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in *Saccharomyces cerevisiae****Bioinformatics Open Source Conference (BOSC)**

Vienna, Austria, July 2007

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources**An Open Source Framework for Teaching Bioinformatics***MCD Biology Department, University of California, Los Angeles**

Los Angeles, California, May 2007

*Mapping the Gene Regulatory Networks in Yeast that Control the Environmental Stress Response to Cold Temperatures***Gladstone Institute of Cardiovascular Disease**

San Francisco, California, October 2006, joint seminar with John David N. Dionisio

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources***ELSI Reunion and Conference, Dartmouth University**

Hanover, New Hampshire, August 2006

*Discussion of Ethical, Legal, and Social Implications of Biological Research Incorporated into Courses in Genetics, Molecular Biology Applications, and a Seminar on Issues in Biotechnology***Bioinformatics Open Source Conference (BOSC)**

Fortaleza, Brazil, August 2006

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources***Bioinformatics Special Interest Group, California Institute of Technology**

Pasadena, California, July 2006

*Mapping Gene Regulatory Networks in Yeast using DNA Microarrays, Proteomics, and GenMAPP***Careers in Science Panel Discussion and Dinner, Claremont Colleges**

Claremont, California, July 2006

*Panelist*

**Natural Science Division, Pepperdine University**

Malibu, California, October 2005

*Mapping Gene Regulatory Networks in Yeast using DNA Microarrays, Proteomics, and GenMAPP***Department of Biological Sciences, Central Connecticut State University**

New Britain, Connecticut, November 2004

*Mapping Gene Regulatory Networks in Yeast using DNA Microarrays, Proteomics, and GenMAPP***BioQUEST Curriculum Consortium Summer Workshop 2004: Systems Biology Education**

Beloit College, Beloit, Wisconsin, June 2004

*GenMAPP and MAPPFinder for Systems Biology Education***Association for Laboratory Automation, smallTalk2003**

San Jose, California, July 2003

*GenMAPP and MAPPFinder: Tools for Viewing and Analyzing Microarray Data on Biological Pathways***The Fifth BioPathways Consortium Meeting, Intelligent Systems for Molecular Biology**

Brisbane, Queensland, Australia, June 2003

*GenMAPP and MAPPFinder 2.0: Tools for the Organization, Display, and Exchange of Pathway Information***W. Henry Feinstone Symposium, University of Memphis**

Memphis, Tennessee, June 2003

*Tutorial: GenMAPP and MAPPFinder, Tools for Viewing and Analyzing Microarray Data on using Biological Pathways and Gene Ontology**Seminar: Analysis of Microarray Data from a Mouse Model of Dilated Cardiomyopathy, New Insights from GenMAPP***Department of Plant Biology, The Carnegie Institution of Washington**

Stanford, California, May 2003

*GenMAPP and MAPPFinder: Tools for Viewing and Analyzing Microarray Data using Biological Pathways and Gene Ontology***Possibilities and Pitfalls of Mining DNA Microarray Data: from Mice to Men, University of Wyoming**

Laramie, Wyoming, February 2003

*Tutorial: GenMAPP and MAPPFinder, Tools for Viewing and Analyzing Microarray Data on Biological Pathways**Seminar: Analysis of Microarray Data from a Mouse Model of Dilated Cardiomyopathy, New Insights from GenMAPP***Advanced Topics in Microarray Analysis, National Institutes of Health**

Bethesda, Maryland, January 2003

*GenMAPP and MAPPFinder, Tools for Viewing and Analyzing Microarray Data on Biological Pathways***Lillehei Heart Institute, University of Minnesota**

Minneapolis, Minnesota, October 2002

*Tutorial: GenMAPP and MAPPFinder, Tools for Viewing and Analyzing Microarray Data on Biological Pathways**Seminar: Analysis of Microarray Data from a Mouse Model of Dilated Cardiomyopathy, New Insights from GenMAPP***The Fourth BioPathways Consortium Meeting, Intelligent Systems for Molecular Biology**

Edmonton, Alberta, Canada, August 2002

*GenMAPP and Gene Ontology: Tools for the Organization, Display and Exchange of Pathway Information*

**Physiological Genomics of Cardiovascular Disease: from Technology to Physiology**

San Francisco, California, February 2002

*GenMAPP: A New Tool for Viewing and Analyzing Microarray Data on Biological Pathways***Bay Area Bioinformatics Discussion Group**

Stanford, California, January 2002

*GenMAPP: A New Tool for Viewing and Analyzing Microarray Data on Biological Pathways***NIH-NHLBI Programs for Genomic Applications, External Scientific Panel Review**

Bethesda, Maryland, June 2001

*GenMAPP Enriches the BayGenomics Gene Trap Resource***Iconix Pharmaceuticals**

Mountain View, California, June 2001

*GenMAPP: A New Tool for the Functional Mapping of Microarray Data***Department of Neurosciences, University of New Mexico Health Sciences Center**

Albuquerque, New Mexico, October 2000

*Defining the Genomic Responses to G Protein Signals by Engineering Receptors and G Proteins in Transgenic Mice***National Center for Genome Resources**

Santa Fe, New Mexico, October 2000

*Defining the Genomic Responses to G Protein Signals by Engineering Receptors and G Proteins in Transgenic Mice***University of California, Berkeley, History of Science Graduate Student Workshop**

Berkeley, California, January 1997

*Panelist: The Relevance of History of Science to Practicing Scientists***Bay Area RNA Club**

San Francisco, California, June 1996

*Rites of Initiation: Decoding the role of IF1***Internal Talks****Department of Biology Seminar, Loyola Marymount University**

Los Angeles, California, October 2012

*Brrrr--How Do Yeast Cope When It's Cold Outside? Using DNA Microarrays and Mathematical Modeling to Understand Gene Regulatory Networks in Saccharomyces cerevisiae***Friday Faculty Colloquium Series, Loyola Marymount University**

Los Angeles, California, February 2010

*The Genome is the New Soul***Biology/Bioethics Movie Night, Loyola Marymount University**

Los Angeles, California, October 2009

*The Biology of Cancer*, followed by a screening of the film *Wit***Junior Faculty Seminar, Loyola Marymount University**

Los Angeles, California, February 2009

*The Genome is the New Soul***Center for Teaching Excellence, Loyola Marymount University**

Los Angeles, California, October 2008 (with John David N. Dionisio)

*Create. Share. Learn. Using Google Sites and MediaWiki***President's Day Forum, Loyola Marymount University**

Los Angeles, California, March 2008

*The \$1000 Genome***Department of Biology, Loyola Marymount University, Kadner-Pitts Research Grant Talk**

Los Angeles, California, March 2008

*Brrrr—How Do Yeast Cope When It's Cold Outside? Using DNA Microarrays and Mathematical Modeling to Understand Gene Regulatory Networks in Yeast*

**Center for Teaching Excellence, Loyola Marymount University**

Los Angeles, California, March 2008

*How Do You Teach “Research”? Incorporating DNA Microarray Technology into an Upper-division Biology Laboratory Course***Parent’s Weekend, Loyola Marymount University**

Los Angeles, California, February 2008

*How Close are We to GATTACA?***Center for Teaching Excellence, Loyola Marymount University**

Los Angeles, California, November 2007

*Panelist, Explorations of Faith and the Intellectual Life***President’s Day Forum, Loyola Marymount University**

Los Angeles, California, March 2007

*How Close are We to GATTACA?***Science Seminar and Film Series, Loyola Marymount University**

Los Angeles, California, organized by LMU undergraduate Morgan Henry ’07, November 2006

*Our Post-genomic Future*, accompanied by screening of *GATTACA***Junior Faculty Seminar Series, Loyola Marymount University**

Los Angeles, California, joint seminar with John David N. Dionisio, November 2006,

*Collaborating Early and Often: Bringing Biology and Computer Science Together Through an Open Source Culture***President’s Day Forum, Loyola Marymount University**

Los Angeles, California, March 2006

*The Human Genome and Beyond***Women’s Studies Brown Bag Lunch, Loyola Marymount University**

Los Angeles, California, November 2006

*Jesuit and Feminist Education: Transformative Discourses for Teaching & Learning Conference Report***Department of Mathematics, Loyola Marymount University**

Los Angeles, California, October 2005

*What is Bioinformatics?***Women’s Studies Program First Friday, Vassar College**

Poughkeepsie, New York, October 2004

*The Ethical, Legal, and Social Implications of the Human Genome Project: Feminist Reflections (with Mary Shanley, Department of Political Science, Vassar College)***Vassar College Orientation Week Faculty Research Talks**

Poughkeepsie, New York, September 2004

*Matthew Vassar Enters the Genomics Era: DNA Microarrays, Proteomics, and Bioinformatics in Yeast***Gladstone Institute of Cardiovascular Disease Scientists Meeting**

San Francisco, California, May 2003

*GenMAPP 2.0 and Beyond... Connecting Scientists and Science Education in the Genomics Era***Gladstone Institute of Cardiovascular Disease Scientists Meeting**

San Francisco, California, May 2002

*Analysis of Microarray Data from a Mouse Model of Dilated Cardiomyopathy: New Insights from GenMAPP***U.C. San Francisco, Pharmaceutical Sciences and Pharmacogenomics Program Retreat**

Marshall, California, November 2001

*GenMAPP: A New Tool for Viewing and Analyzing Microarray Data on Biological Pathways***The J. David Gladstone Institutes Joint Scientific Retreat**

Pacific Grove, California, May 2001

*GenMAPP: A New Tool for the Functional Mapping of Microarray Data*

**Gladstone Institute of Neurological Disease Weekly Seminar**

San Francisco, California, November 2000

*GenMAPP: A New Tool for the Functional Mapping of Microarray Data***Stanford University, Structural Biology Department Retreat**

Pacific Grove, California, November 1998

*Interactions between Initiation Factor 1 and the E. coli ribosome***Stanford University, Molecular Biophysics Club**

Stanford, California, February 1998

*Interactions of Translation Initiation Factor 1 with the Ribosomal A site***U.C. Santa Cruz, MCD Biology Seminar**

Santa Cruz, California, May 1996

*Investigating the Structure and Function of Translation Initiation Factor 1 in E. coli***U.C. Santa Cruz, RNA Club**

Santa Cruz, California, December 1994

*Investigating the Structure and Function of Translation Initiation Factor 1 in E. coli***External Posters** (\*indicates undergraduate co-author, \*\*indicates Master's student co-author)**American Society for Biochemistry and Molecular Biology Annual Meeting**

San Diego, California, April 20-24, 2012 (with Ben G. Fitzpatrick, Nicholas A. Rohacz\*, Katrina Sherbina\*)

*Regulatory Dynamics of the Transcriptional Network Controlling the Cold Shock Response in Saccharomyces cerevisiae**I received the ASBMB Thematic Best Poster Award in Systems Biology for this poster.***Systems Biology: Global Regulation of Gene Expression**

Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, March 20-24, 2012 (with Ben G. Fitzpatrick, Nicholas A. Rohacz\*, Katrina Sherbina\*)

*Regulatory Dynamics of the Transcriptional Network Controlling the Cold Shock Response in Saccharomyces cerevisiae***Southern California Systems Biology Conference**

University of California, Irvine, January 29-30, 2011 (with Alondra J. Vega\*, Ben G. Fitzpatrick)

*Mathematical Modeling of the Gene Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae***Yeast Genetics and Molecular Biology Meeting**

Vancouver, British Columbia, Canada, July-August 2010 (with Alondra J. Vega\*, Ben G. Fitzpatrick)

*Mathematical Modeling of the Gene Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae***Intelligent Systems for Molecular Biology**

Boston, Massachusetts, July 2010 (with, Alondra J. Vega\*, Stephanie D. Kuelbs, Ben G. Fitzpatrick)

*Mathematical Modeling of the Gene Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae***American Society for Cell Biology Annual Meeting**

San Diego, California, December 2009 (with John David N. Dionisio)

*Fostering Interdisciplinary Teamwork in an Undergraduate Biological Databases Course***Intelligent Systems for Molecular Biology**

Stockholm, Sweden, June 2009 (with, Alexandra Alphonso\*, Derek Smith\*, Chad Villaflores\*, John David N. Dionisio)

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources***First RECOMB Satellite Conference on Bioinformatics Education**

San Diego, California, March 2009 (with John David N. Dionisio)

*Fostering Interdisciplinary Teamwork in an Undergraduate Biological Databases Course*

**Yeast Genetics and Molecular Biology Meeting**

Toronto, Ontario, Canada, July 2008 (with Stephanie D. Kuelbs\*, Kevin C. Entzminger\*, Kenny R. Rodriguez\*, Ben G. Fitzpatrick)

*Mathematical Modeling of the Transcriptional Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae*

**Intelligent Systems for Molecular Biology**

Toronto, Ontario, Canada, July 2008 (with Stephanie D. Kuelbs\*, Kevin C. Entzminger\*, Kenny R. Rodriguez\*, Ben G. Fitzpatrick)

*Mathematical Modeling of the Transcriptional Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae*

**International Conference on Systems Biology**

Long Beach, California, October 2007 (with Stephanie Kuelbs\*, Nathan C. Wanner\*, Ben G. Fitzpatrick, and Erika Camacho)

*Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in Saccharomyces cerevisiae*

**Intelligent Systems for Molecular Biology**

Vienna, Austria, July 2007 (with Nathan C. Wanner\* and Erika Camacho)

*Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in Saccharomyces cerevisiae*

**San Diego Systems Biology Symposium: Systems to Synthesis**

Salk Institute, La Jolla, California, January 2007 (with Jeffrey Nicholas\*\* and John David N. Dionisio)

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources*

**American Society for Cell Biology Annual Meeting**

San Diego, California, December 2006 (with Wesley T. Citti\*, Matthew Mejia\*, Eric S. Eberhardt)  
*The Transcriptional and Proteomic Response to Cold Shock and Recovery in Saccharomyces cerevisiae*

**Intelligent Systems for Molecular Biology**

Fortaleza, Brazil, August 2006 (with, Joey Barrett\*\*, Joe Boyle\*\*, Adam Carasso\*\*, David Hoffman\*\*, Babak Naffas\*\*, Jeffrey Nicholas\*\*, Roberto Ruiz\*\*, Scott Spicer\*\*, John David N. Dionisio)

*XMLPipeDB: A Reusable, Open Source Tool Chain for Building Relational Databases from XML Sources*

**Intelligent Systems for Molecular Biology**

Glasgow, Scotland, United Kingdom, August 2004

*GenMAPP and MAPPFinder 2.0: Tools for Viewing and Analyzing Genomic Data Using Gene Ontology and Biological Pathways*

**Intelligent Systems for Molecular Biology**

Brisbane, Queensland, Australia, June 2003

*GenMAPP and MAPPFinder 2.0: Tools for Viewing and Analyzing Genomic and Proteomic Data Using Gene Ontology and Biological Pathways*

**Intelligent Systems for Molecular Biology**

Edmonton, Alberta, Canada, August 2002

*GenMAPP: A Tool for Viewing and Analyzing Microarray Data on Biological Pathways*

**Physiological Genomics of Cardiovascular Disease: from Technology to Physiology**

San Francisco, California, February 2002

*GenMAPP: A New Tool for Viewing and Analyzing Microarray Data on Biological Pathways*

**The Third International Meeting on Microarray Data Standards, Annotations, Ontologies and Databases**

Stanford, California, March 2001

*GenMAPP: A New Approach for the Functional Mapping of Microarray Data*



**The Ribosome: Structure, Function, Antibiotics, and Cellular Interactions**

Helsingør, Denmark, June 1999

*Interactions of Translation Initiation Factor 1 with the Ribosomal A site***RNA Society Meeting**

Madison, Wisconsin, May 1998

*Interactions of Translation Initiation Factor 1 with the Ribosomal A site***RNA Structure Meeting**

Santa Cruz, California, June 1997

*Interactions of Translation Initiation Factor 1 (IF1) with the Ribosomal A site***RNA Society Meeting**

Banff, Alberta, Canada, May 1997

*Interactions of Translation Initiation Factor 1 with the Ribosomal A site***Keystone Symposium: RNA-Protein Interactions**

Taos, New Mexico, February 1997

*Interactions of Translation Initiation Factor 1 (IF1) with the Ribosomal A site***RNA Society Meeting**

Madison, Wisconsin, May 1996

*Translation Initiation Factor 1 (IF1) is an A-site Ribosomal RNA Binding Protein***Symposium on RNA Biology I: RNA-Protein Interactions**

Research Triangle Park, North Carolina, October 1995

*Investigating the Structure and Function of Translation Initiation Factor 1 in Escherichia coli***Frontiers in Translation**

Victoria, British Columbia, Canada, May 1995

*Investigating the Structure and Function of Translation Initiation Factor 1 in E. coli***Sigma Xi Forum: Scientists, Educators, and National Standards: Action at the Local Level**

Atlanta, Georgia, April 1994

*Science Mentor Program at Mission Hill Junior High School***Internal Posters****Center for Teaching Excellence Scholarship of Teaching and Learning Showcase Week**

Loyola Marymount University, Los Angeles, California, September 2009

*Fostering Interdisciplinary Teamwork in an Undergraduate Biological Databases Course***Center for Teaching Excellence Scholarship of Teaching and Learning Showcase Week**

Loyola Marymount University, Los Angeles, California, September 2008

*How Do You Teach "Research"? Incorporating DNA Microarray Technology into an Upper-division Biology Laboratory Course***Teaching with Technology Forum**

Vassar College, Poughkeepsie, New York, April 2004

*GenMAPP: Connecting Students to Cutting-edge Genomics and Bioinformatics Research***The J. David Gladstone Institutes Joint Scientific Retreat**

Pacific Grove, California, May 2003

*GenMAPP and MAPPFinder 2.0***U.C. San Francisco, Pharmaceutical Sciences and Pharmacogenomics Program Retreat**

Marshall, California, November 2002

*GenMAPP: A Tool for Viewing and Analyzing Microarray Data on Biological Pathways***The J. David Gladstone Institutes Joint Scientific Retreat**

Pacific Grove, California, May 2002

*Analysis of Microarray Data from Mouse Models of Dilated and Hypertrophic Cardiomyopathy: New Insights from GenMAPP*

**U.C. San Francisco, Cardiovascular Research Institute Retreat**

Tahoe City, California, November 2001

*GenMAPP: A New Tool for Viewing and Analyzing Microarray Data on Biological Pathways***U.C. San Francisco, Biomedical Sciences Program Retreat**

Tahoe City, California, November 2000

*GenMAPP: A New Approach for the Functional Mapping of Microarray Data***U.C. San Francisco, Tetrad Retreat**

Tahoe City, California, September 2000

*GenMAPP: A New Approach for the Functional Mapping of Microarray Data***Student Presentations and Posters** (\*indicates undergraduate student, **bold** indicates presenting author)**Society for Mathematical Biology Annual Meeting**

Knoxville, Tennessee, July 2012

**Katrina Sherbina\***, Nicholas A. Rohacz\*, Kam D. Dahlquist, Ben G. Fitzpatrick, *Dynamical Systems Modeling of the Cold Shock Response in *Saccharomyces cerevisiae** (poster)**Nicholas A. Rohacz\***, Katrina Sherbina\*, Kam D. Dahlquist, Ben G. Fitzpatrick, *Continuous Time Markov Chain Models of Gene Regulation Regulatory Networks under the Environmental Stress of Cold Shock in *Saccharomyces cerevisiae** (poster)**West Coast Biological Sciences Undergraduate Research Conference**

Loyola Marymount University, April 2012

**Nicholas Rohacz\***, **Katrina Sherbina\***, Kam D. Dahlquist, Ben G. Fitzpatrick, *Mathematical Analysis of Gene Regulation in *Saccharomyces cerevisiae* in Response to Cold Shock* (poster)**Andrew Herman\***, Kam D. Dahlquist*Saccharomyces cerevisiae Responds to Cold Shock by Changing the Expression of Genes Involved in Nitrogen Metabolism* (poster)**Fourth Annual Undergraduate Research Symposium**

Loyola Marymount University, March 2012

**Nicholas Rohacz\***, **Katrina Sherbina\***, Kam D. Dahlquist, Ben G. Fitzpatrick, *Mathematical Analysis of Gene Regulation in *Saccharomyces cerevisiae* in Response to Cold Shock* (poster)**Andrew Herman\***, Kam D. Dahlquist*Saccharomyces cerevisiae Responds to Cold Shock by Changing the Expression of Genes Involved in Nitrogen Metabolism* (poster)**Second Annual Southern California Systems Biology Conference**

University of California, Irvine, January 2012

Nicholas Rohacz\*, **Katrina Sherbina\***, Kam D. Dahlquist, Ben G. Fitzpatrick, *Mathematical Analysis of Gene Regulation in *Saccharomyces cerevisiae* in Response to Cold Shock* (poster)**Southern California Conference for Undergraduate Research**

Mt. San Antonio College, Walnut, California, November 2011

**Cybele Arsan\***, Kam D. Dahlquist*The Hmo1 Transcription Factor Regulates the Expression of Ribosome Biogenesis Genes during Cold Shock and Recovery in *Saccharomyces cerevisiae** (talk)**Richard Brous\***, Kam D. Dahlquist, John David N. Dionisio*Implementing Multiple Species Export in XMLPipeDB's GenMAPP Builder* (talk)**Andrew Herman\***, Kam D. Dahlquist*Saccharomyces cerevisiae Responds to Cold Shock by Changing the Expression of Genes Involved in Nitrogen Metabolism* (poster)**Nicholas Rohacz\***, **Katrina Sherbina\***, Kam D. Dahlquist, Ben G. Fitzpatrick, *Mathematical Analysis of Gene Regulation in *Saccharomyces cerevisiae* in Response to Cold Shock* (poster)**Beta Beta Beta Western Regional Conference**

Azusa Pacific University, Azusa Pacific, California, April 2011

**Cybele Arsan\***, Andrew F. Herman\*, Alondra J. Vega\*, Lauren N. Kubeck\*, Kam D. Dahlquist.

*The Hmo1 transcription factor regulates the expression of ribosome biogenesis genes during cold shock and recovery in Saccharomyces cerevisiae.* (poster). **Cybele was given the second place John C. Johnson Award for Excellence in Student Research for posters in Microbiology.**

**Andrew F. Herman\***, Alondra J. Vega\*, Lauren N. Kubeck\*, Kenny R. Rodriguez\*, Kam D. Dahlquist.

*Saccharomyces cerevisiae Responds to Cold Shock by Changing the Expression of Genes Involved in Nitrogen Metabolism* (poster). **Andrew was given the second place John C. Johnson Award for Excellence in Student Research for posters in Physiology or Molecular Biology.**

**Kelly C. Parks\***, Kam D. Dahlquist, John David N. Dionisio.

*Using XMLPipeDB to Create a GenMAPP-compatible Gene Database for the Analysis of DNA Microarray Data for Staphylococcus aureus MRSA252* (talk)

### **The Third Annual Undergraduate Research Symposium**

Loyola Marymount University, March 2011

**Cybele Arsan\***, Andrew F. Herman\*, Alondra J. Vega\*, Lauren N. Kubeck\*, Kam D. Dahlquist. *The Hmo1 transcription factor regulates the expression of ribosome biogenesis genes during cold shock and recovery in Saccharomyces cerevisiae.* (poster).

**Andrew F. Herman\***, Alondra J. Vega\*, Lauren N. Kubeck\*, Kenny R. Rodriguez\*, Kam D. Dahlquist.

*Saccharomyces cerevisiae Responds to Cold Shock by Changing the Expression of Genes Involved in Nitrogen Metabolism* (poster).

**Kelly C. Parks\***, Kam D. Dahlquist, John David N. Dionisio.

*Using XMLPipeDB to Create a GenMAPP-compatible Gene Database for the Analysis of DNA Microarray Data for Staphylococcus aureus MRSA252* (talk)

**Don B. Murphy\***, Kam D. Dahlquist, John David N. Dionisio.

*Implementing Support for Multiple Species in XMLPipeDB's GenMAPP Builder* (poster)

### **Southern California Conference for Undergraduate Research**

Pepperdine University, Malibu, California, November 2010

**Andrew Herman\***, Alondra J. Vega\*, Lauren N. Kubeck\*, Kenny R. Rodriguez\*, Kam D. Dahlquist

*Saccharomyces cerevisiae Responds to Cold Shock by Changing the Expression of Genes Involved in Nitrogen Metabolism* (talk)

**Kelly C. Parks\***, Kam D. Dahlquist, John David N. Dionisio

*Using XMLPipeDB to Create a GenMAPP-compatible Gene Database for the Analysis of DNA Microarray Data for Staphylococcus aureus MRSA252* (talk)

**Don B. Murphy\***, Kam D. Dahlquist, John David N. Dionisio

*Implementing Support for Multiple Species in XMLPipeDB's GenMAPP Builder* (poster)

### **Society for the Advancement of Chicanos and Native Americans in Science National Conference**

Anaheim, California, October 2010

**Alondra J. Vega\***, Andrew F. Herman\*, Lauren N. Kubeck\*, Kam D. Dahlquist, and Ben G. Fitzpatrick

*Mathematical Modeling of the Gene Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae* (poster)

**Kevin Paiz-Ramirez\***, Kam D. Dahlquist, John David N. Dionisio

*Using XMLPipeDB to Create a GenMAPP-compatible Gene Database for the Analysis of DNA Microarray Data for Mycobacterium tuberculosis* (poster)

### **Experimental Biology 2010**

Anaheim, California, April 2010

**Kristen Buckmelter\***, Bianca Infanzon\*, Elizabeth M. Liu\*, Olivia S. Sakhon\*, Kenny R. Rodriguez\*, Wesley T. Citti\*.

*Saccharomyces cerevisiae responds to cold shock by inducing the transcription of genes required for zinc ion homeostasis* (poster)

**Bianca Infanzon\***, Kristen Buckmelter\*, Elizabeth M. Liu\*, Olivia S. Sakhon\*, Kenny R.

Rodriguez\*, Wesley T. Citti\*, Kam D. Dahlquist

*Saccharomyces cerevisiae* responds to cold shock by inducing the transcription of ribosome biogenesis genes (poster)

**Lauren N. Kubeck\***, **Andrew F. Herman\***, Kenny R. Rodriguez\*, Kevin C. Entzminger\*, Stephanie D. Kuelbs\*, Kristine B. Hubbard\*, Kam D. Dahlquist

*Phenotypic and Functional Genomic Analysis of Heat and Cold Stress in Transcription Factor Deletion Strains of Saccharomyces cerevisiae* (poster)

**Bernadette Pak\***, Don Murphy\*, Kam D. Dahlquist, John David N. Dionisio

*Extending XMLPipeDB with GO Slim to Update the GenMAPP-compatible Gene Database for Budding Yeast, Saccharomyces cerevisiae, for the Analysis of DNA Microarray Data* (poster)

**Kelly C. Parks\***, Andrew J. Hirning\*, **Kelia McDonald\***, John David N. Dionisio, Kam D. Dahlquist

*Extending XMLPipeDB to Create a GenMAPP-compatible Gene Databases for the Analysis of DNA Microarray Data from human pathogens* (poster)

**Stephen Speicher\***, Kam D. Dahlquist

*Gene Ontology Term Enrichment Analysis of Gene Expression Changes Observed in the TRAMP Mouse Model of Prostate Cancer upon Treatment with Green Tea Catechins* (poster)

**Alondra J. Vega\***, Stephanie D. Kuelbs\*, Ben G. Fitzpatrick, Kam D. Dahlquist

*Mathematical Modeling of the Gene Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae* (talk)

*Alondra J. Vega was awarded an NSF/ASBMB Travel Fellowship so that she could make this platform presentation*

#### The Second Annual Undergraduate Research Symposium

Loyola Marymount University, March 2010

**Kristen Buckmelter\***, **Bianca Infanzon\***

*Saccharomyces cerevisiae* responds to cold shock by inducing the transcription of genes required for ribosome biogenesis and zinc ion homeostasis (talk)

**Lauren N. Kubeck\***, **Andrew F. Herman\***, Kam D. Dahlquist

*Phenotypic and Functional Genomic Analysis of Heat and Cold Stresses in Transcription Factor Deletion Strains of Saccharomyces cerevisiae* (poster)

**Kelia McDonald\***, Kam D. Dahlquist, John David N. Dionisio

*Using XMLPipeDB to Create a GenMAPP-compatible Gene Database for Pseudomonas aeruginosa for the Analysis of DNA Microarray Data* (poster)

**Bernadette Pak\***, **Don Murphy\***, Kam D. Dahlquist, John David N. Dionisio

*Extending XMLPipeDB with GO Slim to Update the GenMAPP-compatible Gene Database for Budding Yeast, Saccharomyces cerevisiae, for the Analysis of DNA Microarray Data* (poster)

**Kelly Parks\***, Kam D. Dahlquist, John David N. Dionisio

*Using XMLPipeDB to Create a GenMAPP-compatible Gene Database for the Analysis of DNA Microarray Data for Staphylococcus aureus MRSA252* (poster)

**Alondra J. Vega\***

*Mathematical Modeling of the Gene Regulatory Network Controlling the Cold Shock Response in Saccharomyces cerevisiae* (talk)

**Stephen Speicher\***

*Gene Ontology Term Enrichment Analysis of Gene Expression Changes Observed in the TRAMP Mouse Model of Prostate Cancer upon Treatment with Green Tea Catechins* (talk)

*Stephen Speicher won a Sigma Xi award for this presentation*

#### Society for the Advancement of Chicanos and Native Americans in Science National Conference

Dallas, TX, October 2009

**Kenny R. Rodriguez\***, Kevin C. Entzminger\*, Stephanie D. Kuelbs\*, Kam D. Dahlquist

*Does Cin5p Regulate the Early Transcriptional Response to Cold Shock in Saccharomyces cerevisiae?* (poster)

**Society for Mathematical Biology Annual Meeting**

Vancouver, British Columbia, Canada, July 2009

**Kenny R. Rodriguez\***, Kevin C. Entzminger\*, Stephanie D. Kuelbs\*, Kam D. Dahlquist  
*Does Cin5p Regulate the Early Transcriptional Response to Cold Shock in Saccharomyces cerevisiae?* (poster)

**West Coast Biological Sciences Undergraduate Research Conference**

Point Loma Nazarene University, San Diego, California, April 2009

**Kara Taylor\***, Wesley T. Citti\*, Jeffrey D. McGowan\*, Kam D. Dahlquist, Carl R. Urbinati  
*Characterizing Soil Microbial Diversity in the Ballona Wetlands* (talk)

**Kevin C. Entzminger\***, **Kenny R. Rodriguez\***, Stephanie D. Kuelbs\*, Kam D. Dahlquist  
*Does Cin5p Regulate the Early Transcriptional Response to Cold Shock in Saccharomyces cerevisiae?* (talk)

**Alexandrea Alphonso\***, **Chad Villaflores\***, Derek Smith\*, Kam D. Dahlquist, John David N. Dionisio

*Extending XMLPipeDB to Create GenMAPP-compatible Gene Databases for Plants and Microorganisms for the Analysis of DNA Microarray Data* (talk)

**Kristine B. Hubbard\***, Kenny R. Rodriguez, Stephanie D. Kuelbs, Kam D. Dahlquist  
*Phenotypic and Functional Genomic Analysis of Heat and Cold Stresses in Transcription Factor Deletion Strains of Saccharomyces cerevisiae* (poster)

**The First Annual Undergraduate Research Symposium: Foundations for the Future**

Loyola Marymount University, March 2009

**Kara Taylor\***, Wesley T. Citti\*, Jeffrey D. McGowan\*, Kam D. Dahlquist, Carl R. Urbinati  
*Characterizing Soil Microbial Diversity in the Ballona Wetlands* (talk)

**Kevin C. Entzminger\***

*Does Cin5p Regulate the Early Transcriptional Response to Cold Shock in Saccharomyces cerevisiae?* (talk)

**Kevin C. Entzminger won a Sigma Xi award for this presentation**

**Alexandrea Alphonso\***, **Chad Villaflores\***, Derek Smith\*, Kam D. Dahlquist, John David N. Dionisio

*Extending XMLPipeDB to Create GenMAPP-compatible Gene Databases for Plants and Microorganisms for the Analysis of DNA Microarray Data* (poster)

**Kenny R. Rodriguez\***, Stephanie D. Kuelbs\*, Kam D. Dahlquist  
*Phenotypic and Functional Genomic Analysis of Heat and Cold Stresses in Transcription Factor Deletion Strains of Saccharomyces cerevisiae* (poster)

**Stephanie D. Kuelbs\***

*Mathematical Modeling of the Transcriptional Network Controlling the Cold Shock Response in Saccharomyces cerevisiae* (talk)

**First RECOMB Satellite Conference on Bioinformatics Education**

San Diego, California, March 2009

**Alexandrea Alphonso\***, **Chad Villaflores\***, Derek Smith\*, Kam D. Dahlquist, John David N. Dionisio

*Extending XMLPipeDB to Create GenMAPP-compatible Gene Databases for Plants and Microorganisms for the Analysis of DNA Microarray Data* (poster)

**Sigma Xi Annual Meeting**

Washington, D.C., November 2008

**Kara Taylor\***, Wesley T. Citti\*, Jeffrey D. McGowan\*, Kam D. Dahlquist, Carl R. Urbinati  
*Identifying Soil Bacterial and Biochemical Pathways in the Ballona Wetlands* (poster)

**Society for the Advancement of Chicanos and Native Americans in Science National Conference**

Salt Lake City, Utah, October 2008

**Kenny R. Rodriguez\***, Kevin C. Entzminger\*, Stephanie D. Kuelbs\*, Kam D. Dahlquist  
*Phenotypic and Functional Genomic Analysis of Heat and Cold Stress in Transcription Factor Deletion Strains of Saccharomyces cerevisiae* (poster)

**Society for Mathematical Biology Annual Meeting**

Toronto, Ontario, Canada, August 2008

**Stephanie D. Kuelbs\***, Kevin C. Entzminger\*, Kenny R. Rodriguez\*, Ben G. Fitzpatrick, Kam D. Dahlquist*Mathematical Modeling of the Transcriptional Network Controlling the Cold Shock Response in Saccharomyces cerevisiae* (poster)**Yeast Genetics and Molecular Biology**

Toronto, Ontario, Canada, July 2008

**Kevin C. Entzminger\***, Kenny R. Rodriguez\*, Stephanie D. Kuelbs\*, Kam D. Dahlquist*Does Cin5p Regulate the Early Transcriptional Response to Cold Shock in Saccharomyces cerevisiae?* (poster)**West Coast Biological Sciences Undergraduate Research Conference**

Point Loma Nazarene University, San Diego, California, April 2008

**Wesley T. Citti\***, **Jeffrey D. McGowan\***, Kam D. Dahlquist, Carl R. Urbinati*Identification and Diversity Analysis of Soil Bacteria in the Ballona Wetlands* (talk)**Elizabeth M. Liu\***, **Olivia S. Sakhon\***, **Robert Hybki\***, Kam D. Dahlquist*The Global Transcriptional Response of Saccharomyces cerevisiae to Cold Shock and Recovery* (talk)**Kenny R. Rodriguez\***, **Kevin C. Entzminger\***, **Stephanie D. Kuelbs\***, Kam D. Dahlquist*Does the Transcription Factor CIN5 Regulate the Transcriptional Response to Cold Shock in Saccharomyces cerevisiae?* (poster)**Pacific Coast Undergraduate Math Conference**

Loyola Marymount University, Los Angeles, California, April 2008

**Stephanie D. Kuelbs\****Mathematical Modeling of the Transcriptional Network Controlling the Cold Shock Response in Saccharomyces cerevisiae* (talk)**Southern California Conference for Undergraduate Research**

California State University, Los Angeles, November 2007

**Wesley T. Citti\***, **Jeffrey D. McGowan\***, Kam D. Dahlquist, Carl R. Urbinati*Identifying Soil Bacteria and Biochemical Pathways for Bioremediation in Ballona Wetlands* (poster)**Elizabeth M. Liu\***, **Olivia S. Sakhon\***, **Robert Hybki\***, Kam D. Dahlquist*The Global Transcriptional Response of Saccharomyces cerevisiae to Cold Shock and Recovery* (poster)**Kevin C. Entzminger\***, **Stephanie D. Kuelbs\***, **Kenny R. Rodriguez\***, Kam D. Dahlquist*Mathematical Modeling and Biological Analysis of the Transcriptional Response to Cold Shock in Saccharomyces cerevisiae* (poster)**Interdisciplinary Student Research Symposium**

Loyola Marymount University, Los Angeles, California, October 2007

**Wesley T. Citti\***, **Jeffrey D. McGowan\***, Kam D. Dahlquist, Carl R. Urbinati*Identifying Soil Bacteria and Biochemical Pathways for Bioremediation in Ballona Wetlands* (poster)**Kevin C. Entzminger\***, **Stephanie D. Kuelbs\***, **Kenny R. Rodriguez\***, Kam D. Dahlquist*Mathematical Modeling and Biological Analysis of the Transcriptional Response to Cold Shock in Saccharomyces cerevisiae* (poster)**Annual Meeting of the Society for Mathematical Biology**

San Jose, California, August 2007

**Nathan C. Wanner\***, Erika Camacho, Kam D. Dahlquist*Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in Saccharomyces cerevisiae* (poster)**West Coast Biological Sciences Undergraduate Research Conference**

Loyola Marymount University, Los Angeles, California, April 2007

**Wesley T. Citti\***, Kam D. Dahlquist, Carl R. Urbinati

*Identifying Bacteria and Biochemical Pathways for Bioremediation in Ballona Wetlands* (poster)

**Elizabeth M. Liu\***, **Olivia S. Sakhon\***, Kam D. Dahlquist

*The Global Transcriptional Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery* (poster)

#### **Sigma Xi Induction Ceremony and Poster Session**

Loyola Marymount University, Los Angeles, California, April 2007

**Wesley T. Citti\***, Kam D. Dahlquist, Carl R. Urbinati

*Identifying Bacteria and Biochemical Pathways for Bioremediation in Ballona Wetlands* (poster)

**Elizabeth M. Liu\***, **Olivia S. Sakhon\***, Kam D. Dahlquist

*The Global Transcriptional Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery* (poster)

#### **San Diego Systems Biology Symposium: Systems to Synthesis**

Salk Institute, La Jolla, California, January 2007

**Nathan C. Wanner\***, Erika Camacho, Kam D. Dahlquist

*Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in *Saccharomyces cerevisiae** (poster)

*Nathan C. Wanner won the third place poster prize at this symposium.*

#### **Southern California Conference for Undergraduate Research**

Occidental College, Los Angeles, California, November 2006

**Wesley T. Citti\***, Kam D. Dahlquist, Carl R. Urbinati

*Identifying Bacteria and Biochemical Pathways for Bioremediation in Ballona Wetlands* (poster)

#### **Bellarmino Forum on Environmental Responsibility**

Loyola Marymount University, Los Angeles, California, November 2006

**Wesley T. Citti\***, Kam D. Dahlquist, Carl R. Urbinati

*Identifying Bacteria and Biochemical Pathways for Bioremediation in Ballona Wetlands* (poster)

#### **West Coast Biological Sciences Undergraduate Research Conference**

Point Loma Nazarene University, San Diego, California, April 2006

**Wesley T. Citti\***, Heather King\*, and Kam D. Dahlquist

*The Transcriptional Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery* (poster)

*Wesley T. Citti won a poster award at this conference.*

#### **2004 Undergraduate Research Summer Institute Symposium**

Vassar College, Poughkeepsie, New York, September 2004

**Meredith Braymer\***, Eric S. Eberhardt, Kam D. Dahlquist

*Global Changes in Gene Expression during Cold Shock and Recovery in *Saccharomyces cerevisiae** (poster)

**Jessica Heckman\*** and Kam D. Dahlquist

*New Resources for GenMAPP 2.0: A New Gene Database and Pathway MAPs for the Comparison of Changes in Gene Expression due to Environmental Stresses in *Saccharomyces cerevisiae* and *Escherichia coli** (poster)

**Nikoleta Tsvetanova\***, Meredith Braymer\*, Eric S. Eberhardt

*Cold-Shock Response in *Saccharomyces cerevisiae** (poster)

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#### **PROFESSIONAL DEVELOPMENT WORKSHOPS ATTENDED**

##### **BioQUEST Curriculum Consortium Summer Workshop 2011**

June 2011

Undergraduate Biology in the 21<sup>st</sup> Century, Beloit College, Beloit, Wisconsin

##### **Peer Evaluation of Teaching Workshop**

May 2011

Center for Teaching Excellence, Loyola Marymount University, Los Angeles, California

##### **BioQUEST Curriculum Consortium Summer Workshop 2009**

June 2009

Green Architecture – Green Curriculum, Beloit College, Beloit, Wisconsin

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<b>President's Institute</b> Loyola Marymount University, Los Angeles, California	May 2009
<b>BioQUEST Curriculum Consortium Summer Workshop 2007:</b> <b>Exploratory Evolution Education</b> , Beloit College, Beloit, Wisconsin	June 2007
<b>Women in bioScience Conference</b> Association for Women in Science, San Diego, California	May 2007
<b>Pedagogy Workshop for Second-year Faculty</b> Loyola Marymount University, Los Angeles, California	2006–2007
<b>Jesuit and Feminist Education:</b>	October 2006
<b>Transformative Discourses for Teaching &amp; Learning Conference</b> Fairfield University, Fairfield, Connecticut	
<b>Collegium: A Colloquy on Faith and Intellectual Life</b> St. John's University, Collegeville, Minnesota	June 2006
<b>BioQUEST Curriculum Consortium Summer Workshop 2005:</b>	June 2005
<b>Investigating Interdisciplinary Interactions</b> , Beloit College, Beloit, Wisconsin (attended with Erika Camacho who was then in the Department of Mathematics at LMU)	
<b>The Embodied Voice Faculty Workshop</b> Vassar College, Poughkeepsie, New York	Spring 2005
<b>Dartmouth Faculty Summer Institute</b>	July 2004
<b>Ethical, Legal, and Social Implications of the Human Genome Project</b> Dartmouth University, Hanover, New Hampshire	
<b>BEDROCK Workshop–Bioinformatics in Biology Education:</b>	October 2003
<b>Working with Sequence, Structure, and Function</b> Cornell Theory Center, Ithaca, New York	
<b>Analysis of Regulatory Sequences Controlling Expression of Biological Networks;</b> <b>Extracting Biological Information from System-scale Protein Interactome Data</b> Intelligent Systems for Molecular Biology Tutorials, Brisbane, Queensland, Australia	June 2003
<b>Strategies in Gender Equitable Teaching</b> U.C. Berkeley Extension, Berkeley, California	2001–2002
<b>Beginning Dreamweaver 4</b> Ciber Training Center, San Francisco, California	April 2002
<b>Advanced Microsoft Access 97</b> New Horizons Computer Learning Centers, Inc., San Francisco, California	August 2001
<b>Biostatistics 183: Introduction to Statistical Analysis</b> U.C. San Francisco, San Francisco, California	Fall 2001
<b>Art of Lecturing</b> Gladstone Institutes, San Francisco, California	Summer 2001
<b>Scientific Writing</b> Gladstone Institutes, San Francisco, California	Spring 2001
<b>Microarray Academy</b> Genomics Core, Gladstone Institutes, San Francisco, California	Fall 2000

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