# Kam D. Dahlquist, Ph.D.

# Associate Professor and William F. McLaughlin Chair of Biology Loyola Marymount University

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#### **EDUCATION**

B.A.

#### Ph.D. University of California, Santa Cruz

March 2000

Molecular, Cellular, and Developmental Biology Program

Advisor: Joseph D. Puglisi, Ph.D.

Committee: Harry F. Noller, Ph.D., Manuel Ares, Jr., Ph.D. Thesis: Interaction of Translation Initiation Factor IF1 with the E. coli Ribosomal A Site

Pomona College, Claremont, California

May 1993

Biology, cum laude

#### University College, Oxford University, Oxford, England

Fall 1991

Study Abroad Program

Specialized tutorial in Philosophy of Science

# POSITIONS HELD

# William F. McLaughlin Chair of Biology

2010-2012

Associate Professor

Assistant Professor

2009–present
2005–2009

Department of Biology, Loyola Marymount University, Los Angeles, California

Assistant Professor 2003–2005

Department of Biology, Vassar College, Poughkeepsie, New York

Postdoctoral Fellow 2000–2003

Gladstone Institute of Cardiovascular Disease, University of California, San Francisco

Adjunct Lecturer Spring 2000

Department of Biology, Santa Clara University, Santa Clara, California

Visiting Researcher 1997–2000

Department of Structural Biology, Stanford University, Stanford, California

Research Assistant 1994–1997

Department of Biology, University of California, Santa Cruz, California

#### GRANTS, FELLOWSHIPS, HONORS, AWARDS

### NSF-DMS Mathematical Biology, MCB Genes and Genome Systems

2009-2012

\$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 Doezema, 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

#### **Dartmouth Faculty Summer Institute Travel Award and Stipend**

August 2006

ELSI Reunion and Conference, Dartmouth University, Hanover, New Hampshire

### Summer Research Grant for New Faculty, Loyola Marymount University

2006

\$4,000, The Transcriptional and Proteomic Response to Cold Shock and Recovery in Saccharomyces cerevisiae

Merck-AAAS Undergraduate Science Research Program

2005

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

#### RESEARCH EXPERIENCE

Associate Professor2009-presentAssistant Professor2005-2009

Department of Biology, Loyola Marymount University, Los Angeles, California *Current Research Projects:* 

- Creation of MAPPs and Gene Databases for GenMAPP software; XMLPipeDB: A Reusable Open Source Tool Chain for Building Relational Databases from XML Sources
- The Global Transcriptional Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery
- 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 31 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* 

#### 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

- 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 aerugenosa, 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)
- MGMT 498: Technology Ventures (March 2006)
- CMSI 486: Introduction to Database Systems (October 2005)

Kam D. Dahlquist, Ph.D.

Curriculum Vitae

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

#### <u>K-12</u>

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

# SERVICE & PROFESSIONAL INVOLVEMENT

<u> </u>	
Loyola Marymount University	
<b>University-wide</b>	

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

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Pre-tenure Faculty	<b>Guidance Committee</b>	;		2010–2011
Information Techn	ology Committee			2005, 2009–2010
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Search Committee for Presidential Professorship

in Computational Biology 2008–2010

Search 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

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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**

West Coast Biological Sciences Undergraduate Research Conference

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

**Open Bioinformatics Foundation** 

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
Genome Consortium for Active Teaching (GCAT)	2000-present
Alternate scanning center for DNA microarrays	2010-present
Grants and Publishing	2010 present
Review Panel, National Science Foundation	June 2009, December 2011
Associate Editor, International Journal of Computational Bioscience	
Peer-reviewer	
Journal of Computational Science Education	2011
CBE – Life Sciences Education	2003, 2006, 2008, 2009
Bioinformatics	2003, 2009
EURASIP Journal on Advances in Signal Processing	2009
PLoS ONE	2009
Briefings in Functional Genomics and Proteomics	2008
Molecular and Cellular Proteomics	2004
Chapter Reviewer, Watson et al., Recombinant DNA, 3rd edition	2006
Association for Women in Science (AWIS)	
Chair, Programs Committee, Palo Alto Chapter	2001–2003
<ul> <li>Organized and led monthly chapter meetings attended by 50-</li> </ul>	75 people
<ul> <li>Invited speakers (women scientists, career development)</li> </ul>	
Postdoctoral Women Peer-mentoring Group, U.C. San Francisco	2001–2003
Alumni Volunteer Admissions Interviewer, Pomona College	1995–1998, 2001
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 aerugenosa* 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

#### **PRESENTATIONS**

#### **External Talks**

# 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**

#### 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 Upperdivision 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

Curriculum Vitae

### 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)

#### **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, Alexandrea 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 Upperdivision 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)

### 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 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

Saccaromyces 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)

#### **Annual Meeting of the Society for Mathematical Biology**

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)

# **Annual Meeting of the Society for Mathematical Biology**

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)

#### **Bellarmine 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 MAPPs 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)

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