

Assistant Professor
Department of Biology
Loyola Marymount University
1 LMU Drive, MS 8220
Los Angeles, CA 90045-2659

Tel: 310-338-7697
Fax: 310-338-4479
kdahlquist@lmu.edu
<http://myweb.lmu.edu/kdahlquist/>
Last modified: January 19, 2009

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| Ph.D. | University of California, Santa Cruz 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: Interaction of Translation Initiation Factor IF1</i> <i>with the E. coli Ribosomal A Site</i> | March 2000 |
| B.A. | Pomona College, Claremont, California Biology, <i>cum laude</i> | May 1993 |
| | University College, Oxford University, Oxford, England Study Abroad Program <i>Specialized tutorial in Philosophy of Science</i> | Fall 1991 |

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| Assistant Professor | 2005–present |
| 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-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***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***W.M. Keck Foundation** 2007\$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**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*

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| Merck-AAAS Undergraduate Science Research Program | 2005 |
| <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] | |
| Mellon Faculty Conversations Award , Vassar College | 2004–2005 |
| \$2,000, <i>Effective Grading: A Tool for Learning and Assessment</i> | |
| Dartmouth Faculty Summer Institute Travel Award and Stipend | July 2004 |
| <i>Ethical, Legal, and Social Implications of the Human Genome Project</i> 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 <i>Balanced Posture</i> for <i>Introduction to Biological Thought: The Human Genome</i> 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

Assistant Professor 2005–present

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

Current Research Projects:

- 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*
- XMLPipeDB: A Reusable Open Source Tool Chain for Building Relational Databases from XML Sources
- Identifying Soil Bacterial and Biochemical Pathways in the Ballona Wetlands for the Bioremediation of Organic Pollutants

Research advisor for a total of 15 undergraduates and 1 Master's level student

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

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 the gymnosperm,
*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****Assistant Professor**

2005–present

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 398/Computer Science 398/Honors 398-01: 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*, *Pseudomonas putida* KT2440, *Sinorhizobium meliloti*, and *Vibrio cholerae* using XMLPipeDB open source software
- Students maintained online laboratory notebooks using MediaWiki software

Biology 398-03: Bioinformatics Laboratory

- Project-based computer laboratory using GenMAPP, MAPPFinder, and other bioinformatics software
- Projects included sequence and structural analysis of the gp120 protein of HIV and analysis of DNA microarray experiments
- Students maintained online laboratory notebooks using Google Sites.

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
- DNA microarray 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

- 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)

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
- Quoted (anonymously) in book based on Triad program (in press)

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**Internal****Loyola Marymount University****University-wide**

Interviewer of candidates for Director of Sponsored Projects Office Summer 2008

Scholarship of Teaching and Learning Working Group 2005–present

Frank R. Seaver College of Science and Engineering

Information Technology Committee 2005, 2009–present

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

APRC Review, Student-centered goals subcommittee 2006–present

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**West Coast Biological Sciences Undergraduate Research Conference**

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

Open Bioinformatics Foundation

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| At-large Member, Board of Directors | 2008–present |
| Chair, Bioinformatics Open Source Conference (BOSC) | June 27–28, 2009 |
| Chair, Bioinformatics Open Source Conference (BOSC) | July 18–19, 2008 |

International Society for Computational Biology

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| Member, Education Committee | 2006–present |
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Scientific Publications

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| Associate Editor , <i>International Journal of Computational Bioscience</i> | 2009–present |
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Peer-reviewer

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| <i>Briefings in Functional Genomics and Proteomics</i> | 2008 |
| <i>CBE – Life Sciences Education</i> | 2003, 2006, 2008 |
| <i>Molecular and Cellular Proteomics</i> | 2004 |
| <i>Bioinformatics</i> | 2003 |

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

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| Chair, Programs Committee, Palo Alto Chapter | 2001–2003 |
| <ul style="list-style-type: none"> Organized and led monthly chapter meetings attended by 50-75 people Invited speakers (women scientists, career development) | |

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

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

Memberships

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| 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

- Dionisio, J.D.N. and **Dahlquist, K.D.** (2008) Improving the Computer Science in Bioinformatics Through Open Source Pedagogy *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.** (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://sourceforge.net/projects/xmlpipedb>

Web site: <http://xmlpipedb.cs.lmu.edu>

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

Project Manager, 2000–2003

Metabolic Pathway MAPP Archive for *Saccharomyces cerevisiae*, 2005

Gene Database for *Escherichia coli* K12, 2006

Metabolic Pathway MAPP Archive for *E. coli* K12, 2008

Gene Database for *Arabidopsis thaliana*, 2007

Availability: <http://www.GenMAPP.org>

PRESENTATIONS

External Talks

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

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)**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 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)**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***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****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****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*?*

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***Elizabeth M. Liu***, **Olivia S. Sakhon***, **Robert Hybki***, Kam D. Dahlquist*The Global Transcriptional Response of Saccharomyces cerevisiae to Cold Shock and Recovery***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?***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***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***Elizabeth M. Liu***, **Olivia S. Sakhon***, **Robert Hybki***, Kam D. Dahlquist*The Global Transcriptional Response of Saccharomyces cerevisiae to Cold Shock and Recovery***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***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***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***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*

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***Elizabeth M. Liu***, **Olivia S. Sakhon***, Kam D. Dahlquist*The Global Transcriptional Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery***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***Elizabeth M. Liu***, **Olivia S. Sakhon***, Kam D. Dahlquist*The Global Transcriptional Response of *Saccharomyces cerevisiae* to Cold Shock and Recovery***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***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***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***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**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***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***Nikoleta Tsvetanova***, Meredith Braymer*, Eric S. Eberhardt*Cold-Shock Response in Saccharomyces cerevisiae***PROFESSIONAL DEVELOPMENT WORKSHOPS ATTENDED**

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| BioQUEST Curriculum Consortium Summer Workshop 2007: Exploratory Evolution Education Beloit College, Beloit, Wisconsin | June 2007 |
| Women in bioScience Conference Association for Women in Science, San Diego, California | May 2007 |
| Pedagogy Workshop for Second-year Faculty Loyola Marymount University, Los Angeles, California | 2006–2007 |
| Jesuit and Feminist Education: Transformative Discourses for Teaching & Learning Conference Fairfield University, Fairfield, Connecticut | October 2006 |
| Collegium: A Colloquy on Faith and Intellectual Life St. John's University, Collegeville, Minnesota | June 2006 |
| BioQUEST Curriculum Consortium Summer Workshop 2005: Investigating Interdisciplinary Interactions Beloit College, Beloit, Wisconsin (attended with Erika Camacho who was then in the Department of Mathematics at LMU) | June 2005 |
| The Embodied Voice Faculty Workshop Vassar College, Poughkeepsie, New York | Spring 2005 |
| Dartmouth Faculty Summer Institute Ethical, Legal, and Social Implications of the Human Genome Project Dartmouth University, Hanover, New Hampshire | July 2004 |
| BEDROCK Workshop–Bioinformatics in Biology Education: Working with Sequence, Structure, and Function Cornell Theory Center, Ithaca, New York | October 2003 |
| Analysis of Regulatory Sequences Controlling Expression of Biological Networks; Extracting Biological Information from System-scale Protein Interactome Data Intelligent Systems for Molecular Biology Tutorials, Brisbane, Queensland, Australia | June 2003 |
| Strategies in Gender Equitable Teaching U.C. Berkeley Extension, Berkeley, California | 2001–2002 |

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| 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 |
| Gladstone Institutes, San Francisco, California | |
| Microarray Academy | Fall 2000 |
| Genomics Core, Gladstone Institutes, San Francisco, California | |