**Curriculum vitae of MARY LOU GUERINOT**

 Ronald and Deborah Harris Professor in the Sciences

 Department of Biological Sciences

 Dartmouth College

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**Education**

 1975 B.S. Biology: with distinction. Cornell University, Ithaca, NY

 1979 Ph.D. Biology: Dalhousie University, Halifax, Nova Scotia

 David G. Patriquin, advisor

1979-81 Postdoctoral Fellow, Microbiology Department, University of Maryland,

College Park, MD Rita R. Colwell, advisor

1981-85 Postdoctoral Fellow, DOE-Plant Research Laboratory, Michigan State University, East Lansing, MI Barry K. Chelm, advisor

**Scholarships and Honors**

1971-72 Panhellenic Association Scholarship

 1971-75 New York State Regents Scholarship

 1971-75 Cornell University Scholarship

 1974-75 Jessie Noyes Foundation Scholarship

 1975 Mortar Board, National Senior Women Honorary

 Ho-nun-de-kah, Cornell University’s College of Agricultural and Life

 Sciences Senior Honorary

 1975-79 Dalhousie University Graduate Fellowship

 1976-79 Izaak Walton Killam Memorial Scholarship

 1989 Dartmouth College Junior Faculty Fellowship

 1996 Award for Special Creativity, National Science Foundation

 2000 Honorary Master of Arts, Dartmouth College

1. Honorary membership, Phi Beta Kappa

2000 Women in Science Project, Special Contribution Award

2005 Ronald and Deborah Harris Professor in the Sciences

2006 Women in Science Project, Recognition Award: 15 years as a WISP sponsor

2007 Fellow, American Association for the Advancement of Science

2008 Presidential Lecture, Dartmouth College

2009 Fellow, American Society of Plant Biologists

2009 Graduate Mentoring Award, Dartmouth College

2009 Dartmouth Senior Faculty Fellowship

**Professional Positions**

1985-91 Assistant Professor, Department of Biological Sciences, Dartmouth College

1990 Visiting Assistant Professor, Department of Genetics, Harvard Medical School & Department of Molecular Biology, Massachusetts General Hospital

1991-97 Associate Professor, Department of Biological Sciences, Dartmouth College

1994-98 Chair, Department of Biological Sciences, Dartmouth College

1997- Professor, Department of Biological Sciences, Dartmouth College

1998-01 Associate Dean of Faculty for the Sciences, Dartmouth College

1999 Visiting Professor, Université de Nice Sophia-Antipolis

2001-04 Vice Provost, Dartmouth College

2005 Ronald and Deborah Harris Professor in the Sciences

2009 Visiting Scientist, Center for Genomics and Systems Biology, NYU

2010 Visiting Scientist, Salk Institute for Biological Studies

**Professional Activities** **(last 10 years)**

**Advisory Boards**

1995 - Member, Steering Committee, Iron Nutrition and Interactions in Plants

1999-06 Member, Multinational Arabidopsis Steering Committee

2002-09 Member, Advisory Committee for Biological Sciences Directorate,

 National Science Foundation

2003- Member, Dartmouth/Montshire Institute Advisory Committee

2005 Member, Committee of Visitors, Molecular and Cellular Biosciences Division, NSF

2004-11 Board of Directors, TAIR (The Arabidopsis Information Resource)

2008-11 Member, Dartmouth Ethics Institute Faculty Advisory Board

2008-11 Member-at-Large, Gordon Research Conferences Council

2008-11 Member, Scientific Advisory Board, Donald Danforth Plant Science Center

2011-14 Member, Scientific Advisory Board, The Institute for Quantitative Biomedical Sciences at Dartmouth

**Editorial Boards**

1996-05 Editorial Board member, Journal of Bacteriology

1998-07 Editorial Board member, International Journal of Phytoremediation

1999-09 Associate Editor, Plant Molecular Biology

2002-09 Faculty of 1000 member

2005- Associate Editor, Plant, Cell and Environment

2006-11 Editorial Board member, Applied and Environmental Microbiology

**Grant Panels**

1995 -09 Panel member, American Society for Microbiology Undergraduate Research Fellowship (URF) Program

2006 Panel member, USDA/CREES National Research Initiative Competitive Grants Program “Biology of Plant-Microbe Associations”

2006- Member, K99 Pathways to Independence Study Section, NIGMS

2007 Chair, K99 Pathways to Independence Study Section, NIGMS

2009 Member, ARRA Faculty Recruitment Study Section, NIGMS

**Meeting Organizer**

2000 Co-organizer, 11th International Conference on Arabidopsis Research, Madison, WI

2001 Co-organizer, 12th International Conference on Arabidopsis Research, Madison, WI

2007 Session chair, 14th International Workshop on Plant Membrane Biology,

 Valencia, Spain.

2008 Co-organizer, FASEB Meeting on Trace Metal Metabolism: from Model Organisms to Humans, Snowmass, CO.

2009 Co-organizer, Plant Genomes: Gene Networks and Applications, Cold Spring Harbor, NY

2011 Co-organizer, Plant Genomes: Gene Networks and Applications, Cold Spring Harbor, NY

 **Professional Offices**

2000-05 Awards Selection Committee, Gibbs Medal, American Society of Plant Biologists

2002-03 President-Elect, American Society of Plant Biologists

2002-03 Member, Program Committee, American Society of Plant Biologists

2002-05 Member, Executive Committee, American Society of Plant Biologists

2002-05 Member, Nominating Committee, American Society of Plant Biologists

2002- Member, Education Foundation Board of Directors, American Society of Plant Biologists

2003-04 President, American Society of Plant Biologists

2003-04 Member, Search Committee for Executive Director, American Society of Plant Biologists

2004-05 Immediate Past President, American Society of Plant Biologists

2004-05 Member, Public Affairs Committee, American Society of Plant Biologists

2005-06 Member, Board of Trustees, American Society of Plant Biologists

2009-11 Chair, Board of Trustees, American Society of Plant Biologists

2010-13 Chair, Biological Sciences Section, American Association for the Advancement of Science

**Current Grant Support**

7/07-7/14 NSF (DBI 0701119): TRMS: Ionome to Genome: Mapping the Gene Networks Controlling Nutrient Content in Rice Grain. PI David Salt, Purdue University, co-PIs Shannon R. Pinson Texas A &M University, Mary Lou Guerinot. $1,745,120 total costs.

6/11-5/15 NIH (R01 GM78536): The Genetic Basis of Natural Ionomic Variation; co-PI David Salt. $1, 403,748 total costs.

4/08-3/13 NIESH (5 P42 ES007373): Toxic Metals in the Northeast: From Biological to Environmental Implications. Program Project Grant, Bruce Stanton, PI. Guerinot is PI on Project #9: Arsenic Uptake, Transport and Accumulation in Plants. $189,706 direct costs in year 4.

8/09-7/12 DOE (DE-FG02-06ER15809): From the soil to the seed: Metal transport in Arabidopsis. $500,000 total costs.

8/09-7/12 NSF (IOS-0919941): NSF Collaborative Research: Integrating iron uptake and distribution in plants; with Erin Connolly, University of South Carolina $310,000 total costs to each institution.

8/09-7/12 NSF (DBI-0923008): MRI: Acquisition of Next Generation DNA Sequencing Equipment; with Craig Thomlinson, Rob McClung, Mark McPeek and George O’Toole. $690,110 total costs.

**Previous Grant Support**

Research Grants received:

8/83-8/85 USDA (83-CRCR-1-1307): Genetic Regulation of the *Rhizobium*/Legume

 Symbiosis, $76,000 total costs. Co-PI with B.K. Chelm

3/87-9/90 NSF (DMB-8615190): Iron Uptake and Metabolism in the *Bradyrhizobium-*

Soybean Symbiosis, $232,000 total costs

3/88 NSF REU (Research Experience for Undergraduates) supplement for

 DMB-8615190 $8000

6/89 NSF REU supplement for DMB-8615190 $4000

9/90-10/94 NSF (IBN-9005421): Iron uptake and metabolism in the

 *Bradyrhizobium*/soybean symbiosis, $240,000 total costs

1/91 NSF REU supplement for IBN-905421 $8,300

7/9-8/93 NSF (IBN-9110080): Iron uptake in *Arabidopsis thaliana*.

 Career Advancement Award, $60,000 total costs

3/92 NSF (IBN-9246770): REU supplement for IBN-910080, $5000

8/92 NSF (IBN-9270233): REU supplement for IBN-910080, $5000

9/91-8/94 USDA (91-37100-6722): Iron uptake in *Arabidopsis* *thaliana,*

$85,900 total costs

6/9-5/95 Department of Energy (DE-FG02-91ER20032) Regulation of gene expression in the *Bradyrhizobium*/soybean symbiosis, $267,000 total costs

7/94-6/98 NSF (IBN-9318093): Iron uptake in *Arabidopsis thaliana*.

 $395,956 total costs

7/94 NSF (IBN-9442876): REU supplement for IBN-9318093, $5000

1/95 NSF (IBN-9540907): Equipment supplement for IBN-9318093, $9150

3/95 NSF (IBN-9541583): REU supplement for IBN-9318093, $5000

9/96-6/99 NSF (IBN-9643998): Creativity Extension for “Iron uptake in *Arabidopsis thaliana*”, $216,000 total costs, bringing award total to $631,106

 "Based on outstanding scientific/technical progress achieved under this grant."

9/96-8/98 USDA (9603243): Iron metabolism in *Bradyrhizobium japonicum*.

 $96,994 total costs

3/97-2/98 NREL, Department of Energy (XCG-7-17015-01): Pathway engineering to improve ethanol production by thermophilic bacteria. co-PI with Lee Lynd, Thayer School of Engineering. $190,000 total costs

9/97-8/01 Department of Energy (07-97ER20292): Characterization of a new family of metal transporters. co-PI with David Eide, University of Missouri.

 $600,000 total costs

9/99-8/03 NSF (IBN-9974837): Metal Uptake in *Arabidopsis thaliana*

 $375,000 total costs

1/99-11/03 USDA (99-03686): Iron Metabolism in the *Bradyrhizobium japonicum/*

 Soybean Symbiosis. $240,000 total costs

4/00 NSF REU supplement for IBN-9974837 $10,000 total costs

9/00-8/05 NSF (DBI 0077378): Gene Discovery in Aid of Plant Nutrition, Human

 Health and Environmental Remediation, co-PIs David Eide, University of

 Missouri; Jeffrey Harper, The Scripps Research Institute; David Salt,

 Purdue University; Julian Schroeder, UCSD. $4,414,644 total costs

7/02 NSF Supplement for DBI 0077378 $134,628 total costs

9/02-8/05 NIH (1 S07 RR018181-01 & 1 S07 RR018181-02) The Networked IRB

 database. $600,000 total costs

6/04-11/08 NSF (IBN 0344305): Metal Uptake in *Arabidopsis thaliana,* co-PI Erin Connolly, University of South Carolina. $500,000 total costs

8/06-7/09 DOE Energy Biosciences (DE-FG-2-06ER15809): From the Soil to the Seed: Metal Transport and Homeostasis in Arabidopsis. $390,000 total costs.

9/04-8/10 NSF (IBN-0419695): The Ionome, co-PIs Jeffrey Harper, University of Nevada, Reno; David Salt, Purdue University; Julian Schroeder, UCSD; John Ward, University of Minnesota. $3,490,000 total costs.

3/07-2/11 NIH (R01 GM78536): The Genetic Basis of Natural Ionomic Variation. PI David Salt, Purdue University, co-PI Mary Lou Guerinot. $262,744 total costs.

Education grants received:

7/95-6/98 Department of Education (P200A50008): Graduate Assistance in Areas of National Need, co-PI with Carol Folt, Department of Biological Sciences. $501,753 total costs

9/9 -8/00 Department of Education (P200A70107): Graduate Assistance in Areas of National Need (GAANN), co-PI with Carol Folt, Department of Biological Sciences. $366,765 total costs

3/99-8/00 Beckman Scholars Program $33,300 total costs.

8/00-7/03 Department of Education (P200A000105) Graduate Assistance in Areas of National Need, co-PI with Carol Folt, Department of Biological Sciences,

 $459,000 total costs

5/00-5/01 DOE (DE-FG02-00ER1505): 11th International Conference on Arabidopsis Research. co-PI with Detlef Weigel, Salk Institute. $4960 total costs

6/00-5/01 NSF (IBN-0081048): 11th International Conference on Arabidopsis

 Research. co-PI with Detlef Weigel. $15,000 total costs

11/00-11/01 USDA (2001-35318-09906): 11th International Conference on Arabidopsis

 Research. co-PI with Detlef Weigel, Salk Institute. $10,000 total costs

3/01-8/03 Beckman Scholars Program $56,750 total costs.

5/01 NSF supplement for DBI 0077378 $64,385 total costs. Sub-contract to the Montshire Museum of Science for Summer Institute: Environmental Detectives.

5/08-4/09 NSF (IOS-0820095): Conference - Trace Element Metabolism: From Model Organisms to Humans, held at Snowmass, Colorado June 15 - 20, 2008.

 $14,250 total costs.

5/08-4/09 USDA: Conference - Trace Element Metabolism: From Model Organisms to Humans, held at Snowmass, Colorado June 15 - 20, 2008. $5,000 total costs.

5/09-4/10 NSF (IOS-0927928): 3rd Pan American Membrane Biology Workshop to be held in Puebla, Mexico May 27-30,2009. $10,000 total costs.

**Teaching Experience at Dartmouth**

1985-86 Bio 106: Genetic Control Mechanisms. Bio 20: Genetics.

 1986-87 Bio 64: Microbiology. Bio 20: Genetics. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised one Honors thesis.

 1987-88 Bio 64: Microbiology. Bio 20: Genetics. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised two Honors theses.

 1988-89 Bio 64: Microbiology. Bio 20: Genetics. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised one Honors thesis.

 1989-90 Bio 64: Microbiology. Bio 87: Supervised one Honors thesis.

 1990-91 Bio 64: Microbiology. Bio 16: Genetics. Bio 87: Supervised one Honors thesis.

 1991-92 Bio 64: Microbiology. Bio 16: Genetics. Bio 87: Supervised one Honors thesis.

 1992-93 Bio 64: Microbiology. Bio 110: Plant-Microbe Interactions. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised one Honors thesis.

 1993-94 Bio 64: Microbiology. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised three honors theses. Bio 101.

 1994-95 Bio 64: Microbiology. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised two honors theses. Bio 101.

 1995-96 Bio 64: Microbiology. Bio 78: Biochemistry. Bio 87: Supervised two honors theses. Bio 101.

 1996-97 Bio 64: Microbiology. Bio 78: Biochemistry. Bio 87: Supervised one honors thesis. Bio 101.

 1997-98 Bio 64: Microbiology. Bio 87: Supervised two honors theses. Bio 101.

 1998-99 Bio 64: Microbiology. Bio 87: Supervised one honors thesis. Bio 101.

 1999-00 Bio 64: Microbiology. Bio 87: Supervised one honors thesis. Bio 101.

 2000-01 Bio 64: Microbiology. Bio 87: Supervised one honors thesis. Bio 101.

 2001-02 Bio 64: Microbiology. Bio 87: Supervised one honors thesis. Bio 101.

 2002-03 Bio 64: Microbiology. Bio 87: Supervised one honors thesis. Bio 101.

 2003-04 Bio 64: Microbiology. Bio 87: Supervised two honors theses. Bio 101.

 2005-06 Bio 64: Microbiology. Bio 61: Molecular Genetics of Prokaryotes and Lower Eukaryotes. Bio 87: Supervised one honors thesis.

 2006-07 Bio 46: Microbiology. Bio 11: Emerging Infectious Diseases. Bio 269: Plant Molecular Biology. Bio 97: Supervised two honors theses.

 2007-08 Bio 46: Microbiology. Bio 11: Emerging Infectious Diseases. Bio 269: Plant Molecular Biology. Bio 97: Supervised one honors thesis.

 2008-09 Bio 46: Microbiology. Bio 11: Emerging Infectious Diseases. Bio 269: Plant Molecular Biology. Bio 97: Supervised one honors thesis.

 2009-10 Bio 97: Supervising three honors theses.

 2010-11 Bio 46: Microbiology. Bio 11: Emerging Infectious Diseases. Bio 269: Plant Molecular Biology. Bio 97: Supervised one honors thesis.

 2011-2012 Bio 46: Microbiology. Bio 11: Emerging Infectious Diseases. Bio 269: Plant Molecular Biology.

**Brief description of courses taught:**

• Bio 11 is the introductory course for all students interested in pursuing study in biology.

 The course has two main goals: stimulate interest in the science of life and encourage

 critical thinking in the life sciences. Expected enrollment: 120 students.

• Bio 16 was an entry-level course in Genetics. I team taught this course to enrollments

 of 300 students.

• Bio 61 is an upper level course in Molecular Genetics that is taken mainly by seniors

 and first year graduate students. Enrollments of 30 to 40 students.

• Bio 64/46 is an upper level Microbiology course with an intensive laboratory.

 I team teach this course with faculty members from the Microbiology Department

 at DMS. Enrollments have varied over the years from 25 to 60 students. I give 14

 lectures in this course and oversee the labs.

• Bio 78 was the second term of a two term, upper level biochemistry course. Enrollments of 60 to 70 students.

• Bio 101 is the first term of a three term, graduate core course in Cell and Molecular

 Biology. I gave 3 hours of lecture on prokaryotic transcription.

• Bio 106 and 110 were small enrollment, graduate courses in my specialty area.

* Bio 269 is a journal-based class for graduate students.

**Teaching other than at Dartmouth**

The Scientist as Humanist Project (summer course for high school teachers), sponsored by the National Endowment for the Humanities and NSF Lecturer, St. Paul’s School, Concord, NH Summer, 1991; summer 1992.

Physiology course, Marine Biology Laboratory, Woods Hole, MA Course instructor, summer, 1994; summer 1995.

DOE/NSF Plant Biochemistry course, Washington State University, Pullman, WA.

 Guest lecturer, summer, 1995; summer, 1997.

Arabidopsis Molecular Genetics course, Cold Spring Harbor, NY.

 Guest lecturer, summer, 1997.

NATO Advanced Study Institute “Plant responses to biotic and abiotic stress: molecular

 mechanisms and implications for agriculture”, Roscoff, France

 Course instructor, May, 2000.

Environmental Detectives (program for middle school students and teachers), sponsored by the Montshire Museum of Science with support from NIEHS and NSF. Summer, 2002; summer 2003. Lectured to teachers attending the summer institute and interacted over the school year to provide support to teachers.

**Postdoctoral Research Associates Trained and their current positions**

[1] Ora Plessner. 1988-90. Instructor, Hebrew University, Rehovot, Israel

[2] Harry Kurtz. November, 1991 to August, 1994. Recipient, USDA postdoctoral

 fellowship. Assistant Professor, Genetics, Biochemistry and Life Sciences,

Clemson University, Clemson, SC.

[3] Jenny Saleeba. January, 1992 to January, 1994. Lecturer, School of Biological Sciences,

 University of Sydney, Sydney, Australia.

[4] Janette Fett. January, 1995 to February, 1997. Associate Professor, Departmento de

 Botanica, Universidad Federal do Rio Grande do Sul, Porto Alegre, Brazil

[5] Quentin Groom. November, 1996 to March, 1997.

[6] Dave Westenberg. August, 1993 to July, 1997. Recipient, USDA postdoctoral

 fellowship. Associate Professor, Department of Biological Sciences, Missouri University of Science and Technology, Rolla, MO.

[7] Tama Fox. August, 1996 to August, 1998.

[8] Erin Connolly. February, 1997 to August, 2000. Recipient, USDA postdoctoral

fellowship. Associate Professor and Associate Department Chair, Department of Biological Sciences, University of South Carolina, Columbia, SC

[9] David Stevenson. August, 1997 to August, 1999. Microbiologist, USDA-ARS, US Dairy Forage Research Center, Madison, WI.

[10] Elizabeth Rogers. September, 1997 to August, 2001. Recipient of Life Sciences

 Postdoctoral Fellowship. Research Molecular Biologist, Agricultural Research Service, USDA, Parlier, CA.

[11] Eric Boncompagni. January, 1998 to August, 2000. Maître de conférences, Université de

 Nice-Sophia Antipolis, Nice, France.

[12] Sophie Marquis. May, 2002 to November, 2003. Postdoctoral fellow, Physiology Department, Dartmouth Medical School, Hanover, NH

[13] Suman Rawat. May, 2002 to August, 2004. Research Associate, Department of Biochemistry, Robert Wood Johnson Medical School, New Jersey

[14] Sun A Kim. January, 2001 to present.

[15] Natasha Grotz. Croasdale teaching fellow. Department of Biological Sciences, Dartmouth College. May, 2004 to April, 2006. Lecturer, Department of Biological Sciences, Dartmouth College.

[16] Tracy Punshon. July, 2005 to present.

[17] Sichul Lee. March, 2010 to present.

[18] Hélène Zuber. May, 2010 to December, 2010.

[19] Heng Hsuan Chu. May, 2010 to present.

[20] Alicia Sivitz. October, 2011 to present.

**Graduate Students trained and their current positions**

[1] Karen Page. Ph.D. 6/94. The effect of iron, oxygen and heme on the expression of the

*Bradyrhizobium japonicum hemA* gene. Currently, Senior Staff, Glycofi, Lebanon, NH.

[2] Ying Yi. Ph.D. 1/95. Iron uptake in *Arabiodpsis thaliana*. Currently, Research Associate, University of Cincinnati, Cincinnati, OH.

[3] Kristin LeVier. Ph.D. 6/96. Iron acquisition in *Bradyrhizobium japonicum*. Currently, on maternity leave. Formerly, senior scientist, Pfizer, Inc.

[4] Heather Prince Benson. Ph.D. 6/03. Iron uptake in *Bradyrhizobium japonicum*. NIAID trainee. Recipient, NIH NRSA postdoctoral fellowship. Currently on maternity leave.

[5] Natasha Grotz. Ph.D. 6/04. Metal distribution in Arabidopsis. Recipient of the Amy Lutz Rechel Award for an outstanding student in the field of Plant Biology, Association of Women in Science. Currently, Lecturer, Department of Biological Sciences, Dartmouth College.

[6] Brenda Parson Hall. Ph.D. 2/05. Molecular characterization of ZIP metal transporters in *Arabidopsis thaliana*. Department of Education GAANN fellow. Currently, on maternity leave.

[7] Elizabeth Colangelo – Ph.D. 5/06. NIGMS Trainee. Ruth L. Kirschstein National Research Service (NRSA) postdoctoral fellow, Salk Institute for Biological Studies. Currently on maternity leave.

[8] Aaron Atkinson – Ph.D. 8/06. Recipient of the Young Scientist Award, Council for Biotechnology Information. Department of Education GAANN fellow. Currently, postdoctoral fellow, University of Utah Medical School.

[9] Stephanie Batchelet - Ph.D. 5/08. NIGMS Trainee. Department of Education GAANN fellow. Currently, assistant professor, James Madison University, VA.

[10] Jeeyon Jeong – Ph.D. 8/08. Currently, postdoctoral fellow, University of Wisconsin.

[11] Joohyun Lee – Ph.D. 1/09. ASPB student Ambassador. Currently, postdoctoral fellow, University of Wisconsin.

[12] Joseph Morrissey – Ph.D. 10/10. Currently postdoctoral fellow, Ecole Normale Supérieure, Paris.

[13] Christine Palmer –Ph.D. 5/11. Department of Education GAANN fellow. NIGMS trainee. Currently, postdoctoral fellow, UC Davis.

[14] Jessica Weng – 3nd year student.

[15] Maria Hindt – 3nd year student. Recipient of NSF predoctoral fellowship.

[16] Amanda Socha – 2nd year student. Department of Education GAANN fellow

**Undergraduate Students trained**

Undergraduate Honors thesis students:

[1] Erik J. Meidl ‘87. M.D., University of Pennsylvania.

[2] Barbara Anne Morisseau ‘88. M.D , Syracuse University.

[3] Molly Hoult ‘88. NSF REU awardee. M.B.A., Stanford University.

[4] Rick Furman ‘89. M.D.

[5] Erin Connolly ‘90. NSF REU awardee. Ph.D. UC Davis.

[6] Michael Nead ‘91. Presidential Scholar. M.D./Ph.D., University of Rochester.

[7] Gregory York ‘92. Ph.D., MIT; Law student, University of Michigan

[8] Carolyn Riley ‘93. NSF REU awardee. Ph.D. Harvard University.

[9] Alex Szidon ‘94. NSF REU awardee. Ph.D., Harvard University.

[10] Sangwoo Lee ‘94. Presidential Scholar. M.D., Brown University.

[11] Ellen Friday ‘94. M.S., Clinical Genetics, University of Texas, Houston

[12] Brooke Anne Parry ‘95. Presidential Scholar. M.S. University of Melbourne, Australia.

 Ph.D., Yale University.

[13] Justin Genant ‘95. Presidential Scholar. American Society for Microbiology

 Undergraduate Research Intern. M.D., Stanford University

[14] Sarasa Kimata ‘96. Presidential Scholar. NSF REU awardee. M.D., Brown University.

[15] Newrhee Kim ‘96. M.D., Syracuse University.

[16] Beth Marston ‘97. Presidential Scholar. Howard Hughes intern. American Society for

 Microbiology Undergraduate Research Intern. NSF REU awardee. M.D., University of Maryland, Baltimore County.

[17] Laura Guogas ‘98. Women in Science intern. Presidential Scholar. Howard Hughes

 Intern. Ph.D., Harvard University. Postdoctoral research, MIT.

[18] Erica McAuliffe ‘98. Presidential Scholar. M.D., Harvard University.

[19] Jennifer Blair ‘99. Women in Science Intern. Presidential Scholar intern. M.D.,

Columbia University.

[20] Shreeram Akilesh ‘00. M.D./Ph.D., Washington University.

[21] Andrew Gray ‘01. Presidential Scholar. American Society for Microbiology Undergraduate Research Intern. Ph.D., Harvard Medical School.

[22] Laura Rogers ’02. Women in Science Intern. Presidential Scholar. Ph.D. student, Cornell University.

[23] Ramona Hoh ’02. Ph.D. student, Stanford University.

[24] Peter Colabuono ’04. Analyst, Frazier Healthcare Ventures.

[25] Ryan Braun ’04. Masters student, Columbia University.

[26] Sara Thiebaud ’06. Women in Science Intern. Presidential Scholar. Ph.D. student, Harvard University.

[27] Rachel Ruiz ’07. Women in Science Intern. Presidential Scholar. Medical student, Vanderbilt University.

[28] Kelli Hvorecny ’07. Ph.D. student, MCB Program, Dartmouth.

[29] Jimmy Zhuang ’08. Beckman Scholar. Ph.D. student, Harvard University.

[30] Carla Williams ’09. Women in Science Intern. HHMI intern. Presidential Scholar. Beckman Scholar. Medical student, Johns Hopkins University.

[31] Tomi Jun ’08. Presidential Scholar. Valedictorian. Medical student, Harvard Medical School.

[32] Adi Rattner ’10. Women in Science Intern. HHMI intern. Presidential Scholar.

[33] Zieanna Chang ’10. Women in Science Intern. Intramural Research Training Award (IRTA) Program, NIH.

[34] Ilda Bajraktari ’11. Women in Science Intern. HHMI intern. Intramural Research Training Award (IRTA) Program, NIH.

Undergraduate independent study projects (in addition to honors theses listed above):

[1] Kelley Miller. ‘87. Mount Holyoke College. Independent study, Summer, 1986.

[2] George Farmer ‘87. Independent Study (for credit as Bio 85).

[3] Tim Lukovits ‘88. Independent Study. NSF REU awardee.

[4] Marc Farraye ‘89. Independent Study (for credit as Bio 85).

[5] Craig Spencer ‘89. Independent Study (for credit as Bio 85)..

[6] Stephanie Ann Williams ‘92. Independent Study.

[7] John Bagnal ‘92. Presidential Scholar Intern. Fall, 1990.

[8] Beth Parento ‘94. Women in Science Intern. Fall, 1990; Winter, 1991

 NSF REU awardee.

[9] Richelle DeMayo ‘92. Fall, 1991.

[10] Gillian Jacob ‘95. Women in Science Intern. Winter, Spring 1992.

[11] Sonal Patel ‘95. Women in Science Intern. Winter, Spring 1992.

[12] Joanne Roy ‘95. Summer, Fall, 1992.

[13] Sacha Rajack ‘96. Women in Science Intern, Winter, Spring, 1993.

[14] Melissa Strafford ‘97. Women in Science Intern. Winter, Spring 1994.

[15] Karen Tompsett ‘95. Summer, Fall 1994. NSF REU awardee.

[16] Steven Haddad ‘96. Presidential Scholar intern. Fall, 1994; Spring, 1995.

[17] Julie Herron ‘98. Women in Science intern. Winter, Spring, Fall 1995.

[18] Michelle Lee ‘99. Women in Science intern. Winter, Spring, Fall 1996; Winter, 1997.

[19] Jill Anne Perring ‘99. Research assistant, Fall 1996; Winter, Summer, 1997.

[20] Amy Thomas ‘99. Women in Science intern. Winter, Spring, 1997. Research assistant, Summer, 1997.

[21] Elizabeth Morgan ‘00. Women in Science intern. Winter, Spring, 1997.

[22] Arthur Desrosiers ‘99. Research assistant, Spring, 1997.

[23] Angela Darko ‘99. Howard University, Leadership Alliance Intern. Summer, 1997.

[24] Benita Perch ‘01. Women in Science intern. Winter, Spring, 1998.

[25] Eva Liu ‘01. Women in Science intern. Winter, Spring, 1998.

[26] Susan Tucker ‘02. Women in Science Intern. Winter, Spring, 1999.

[27] Kapua Medeiros ‘03. Women in Science Intern. Winter, Spring, 2000. Research assistant, Winter 2001.

[28] Jennifer Ross ‘03 Women in Science Intern. Winter, Spring, 2000. Research assistant,

 Winter, 2001. Presidential Scholar intern, Summer, Fall, 2001.

[29] Katie Walters ‘04 Women in Science Intern. Winter, Spring, 2001. Research assistant,

 Fall, 2001.

[30] Lisa O’Connor ‘04. Women in Science Intern. Winter, Spring, 2001.

[31] Jenna Holmen ‘02. Research assistant, Summer, Fall, 2001; Winter, 2002.

 Independent study (for credit as Bio 85). Spring, 2002.

[32] Jessica Wang ‘05. Women in Science Intern. Winter, Spring, 2002.

[33] Kathryn Christensen ‘05. Women in Science Intern. Winter, Spring, 2002.

[34] Allan Mabardy ‘02. Independent study (for credit as Bio 85). Winter, 2002.

[35] Hannah Byrne ’04. Presidential scholar, Summer, 2002.

[36] Rashmi Jain ’06. Women in Science Intern. Winter, Spring, 2003. Research assistant, Fall, 2003, Spring, Summer 2004.

[37] Chad Valderrama ’05. Presidential scholar, Summer, Fall 2003.

[38] Julia Treseder ’07. Women in Science Intern. Winter, Spring, 2004.

[39] Kristin Hayden ’05. Research Assistant, Winter, Spring 2005.

[40] Ka Yan Luk ’09. Women in Science Intern. Winter, Spring 2006.

[41] Stephanie Hu ’11. Women in Science intern. Winter, Spring, 2008. HHMI Intern, Spring, Summer 2009.

[42] Carmit Schatz. SURF program, Summer 2008.

[43] Larry Bowman ’11. HHMI Intern. Fall, 2008; Winter 2009.

[44] Jennifer Bares ’12. Women in Science Intern. Winter, Spring 2009.

[45] Tara Henn ’12. Women in Science Intern. Winter, Spring 2009.

[46] Joie D. Cooper ’11. HHMI Intern, Spring, Summer 2009.

[47] Greg Challener ’12. Presidential Scholar, Summer 2010; Winter 2011.

[48] Sage Dalton ’12. Presidential Scholar, Fall 2010; Winter 2011.

[49] Patriot Yang ’13. HHMI Intern Fall, 2010; Summer 2011.

[50] Maria Hernandez ’14, Women in Science Intern, Winter 2011.

[51] Jennifer Estrada ’14, Women in Science Intern, Winter, Spring, 2011. Research Assistant, Summer 2011.

[52] Sean Beckwith. SURF program, Summer 2011.

**Membership on Graduate Advisory Committees (Dartmouth unless noted)**

[1] Tom Templeman. Ph.D. 1987. Thesis advisor: Gus Demaggio

[2] Jon Dinsmore. Ph.D. 1988. Thesis advisor: Roger Sloboda

[3] Bob Corell. Ph.D. 1990. Thesis advisor: Bob Gross

[4] Lynn Sheldon. Ph.D. 1990. Thesis advisor: Ed Berger

[5] Sam Friedlander. M.S. 1991. Thesis advisor: Bob Gross

[6] James DeCamp. Ph.D. 1991. Thesis advisor: Gus Demaggio

[7] Natarajan Venkataraman. M.S. 1990. Thayer School of Engineering. Thesis advisor: Lee Lynd

[8] Nafsika Kronidou. Ph.D. 1991. Thesis advisor: Roger Sloboda

[9] Peter Clancy. Ph.D. 1991. Thayer School of Engineering. Thesis advisor: Lee Lynd

[10] Peter Eden. Ph.D. 1991. University of New Hampshire. Thesis Advisor: Richard Blakemore

[11] Lenny Dobens. Ph.D. 1991. Thesis advisor: Ed Berger

[12] Karen Rudolph. Ph.D. 1992. Thesis advisor: Ed Berger

[13] Jennifer Johnston. Ph.D. 1992. Thesis advisor: Roger Sloboda

[14] Marsha Pilgrim. Ph.D. 1993. Thesis advisor, Rob McClung

[15] Peter Thygesen. Ph.D. 1993. External Examiner. Australian National University. Thesis advisor: David Day.

[16] Cindy Davis. Ph.D. 1994. Thesis advisor: Rob McClung

[17] Tayrn Klapatch. Ph.D. 1994. Thesis advisor: Lee Lynd

[18] Jane Ye. Ph.D. 1996. Thesis advisor: Roger Sloboda

[19] Hai Hong Zhong. Ph.D. 1997. Thesis advisor: Rob McClung

[20] Amponash Fordjour. M.S. 1997. Thesis advisor: Ed Berger

[21] Julie Frugoli. Ph.D. 1998. Thesis advisor, Rob McClung

[22] Jane Marsh. Ph.D. 1998. Thesis advisor: Ron Taylor

[23] Dan Stevens. M.S. 1999. Thayer School of Engineering. Thesis Advisor: Lee Lynd.

[24] Christine Mathieu, Ph.D. examination committee, 1999. Université de Nice-Sophia Antipolis. Thesis advisor: Alain Puppo

[25] Christian LaPointe. Ph.D. 2001. Thesis advisor: Ron Taylor

[26] Brian Waters. Ph.D. 2002. University of Missouri. Thesis Advisors: Dale Blevins

 and David Eide

[27] Mindy Nye, Ph.D. 2003. Thesis advisor: Ron Taylor

[28] Tom Kirn, Ph.D. 2003 Thesis advisor: Ron Taylor

[29] Yingzhen Yang, Ph.D. 2003. Thesis advisor: Tom Jack

[30] Sunil Desai, Ph.D. 2003. Thayer School of Engineering. Thesis Advsor: Lee Lynd

[31] John P. Connolly, M.S. 2004. Thesis advisor: George O’Toole

[32] Shannon Hinsa, Ph.D. 2005. Thesis advisor: George O’Toole

[33] Robin Hulbert, Ph.D. 2005. Thesis advisor: Ron Taylor

[34] Jay Sutherland, M.S. 2005. Thesis advisor: Ron Taylor

[35] Dan MacEachran, Ph.D. 2008. Thesis advisor: George O’Toole

[36] Emily Stonehouse. Ph.D. 2008. Thesis advisor: Ron Taylor

[37] Judy Merritt, Ph.D. 2009. Thesis advisor: George O’Toole

[38] Carla Cugini, Ph.D. 2009. Thesis Advisor: Deborah Hogan

[39] Pete Newell, Ph.D. 2010. Thesis Advisor: George O’Toole

[40] Raquel Martinez, Ph.D. 2009. Thesis Advisor: Ron Taylor

[41] Timothy Carlton, External Examiner, Ph.D. thesis, 2006. University of Otago,

 Dunedin, New Zealand

[42] Jarrad Marles, currently enrolled. Thesis Advisor: Ron Taylor

[43] Adel Malek. Qualifying exam committee. Thesis Advisor: Deborah Hogan

[44] Kyle Cady, currently enrolled. Qualifying exam committee and Ph.D thesis committee. Thesis Advisor: George O’Toole

[45] Patrick Loughlin, External Examiner, Ph.D. thesis, 2008. The University of Adelaide, Australia.

[46] Diana Morales, currently enrolled. Qualifying exam committee and Ph.D. thesis committee. Thesis advisor, Deb Hogan

[47] Chelsea Boyd, currently enrolled. Qualifying exam committee and Ph.D. thesis committee. Thesis Advisor: George O’Toole

[48] Alicia Ballok, currently enrolled. Qualifying exam committee and Ph.D. thesis committee. Thesis Advisor: George O’Toole

[49] Elizabeth Barrett, currently enrolled. Qualifying exam committee and Ph.D. thesis committee. Thesis Advisor: Lee Lynd

[50] Devin Currie, currently enrolled. Qualifying exam committee. Thesis Advisor: Lee Lynd

[51] Dae Gon Ha, currently enrolled. Qualifying exam committee and Ph.D. thesis committee. Thesis Advisor: George O’Toole.

[52] Caitlyn Hauke, currently enrolled. Qualifying exam committee and Ph.D. thesis committee. Thesis advisor: Ron Taylor.

**College Committees (last 15 years; member unless noted)**

 1992-02 Chair, Presidential Scholars Committee

 1995 -03 Molecular Biology Core Advisory Committee

 1995 -02 Center for Biological and Biomedical Computing Advisory Committee

 1996 -98 Montgomery Endowment Steering Committee

 1996 -98 Faculty representative to the Alumni Council

 1998 Presidential Search Committee

 1997- 04 WISP Advisory Board

 1998-02 Council on Sponsored Activities

 1998-02 Chair, Science Division Council

 1998-01 Committee on Withdrawals

 1998-03 Chair, Dartmouth Max Planck Institute Internship Program

 1998- Governance Committee, NIAID Molecular Pathogenesis Training grant “Host-Microbe Interactions”

 1998- MCB Training Grant Executive Committee, NIGMS Training Grant

 1999 Search Committee for Genetics Department Chair, DMS

 1999 Steering Committee for Accreditation of Dartmouth College by the

 New England Association of Schools and Colleges (NEASC)

 1999 Chair, Self Study on Undergraduate Research at Dartmouth

 (for NEASC Accreditation)

1999-03 Executive Steering Committee, Humanitates Vitae Program

1999-03 Director, Beckman Scholars Program

 2001-04 Institute for Security Technology Studies (ISTS) Advisory Committee

 2001-04 Academic Affairs Committee, Dartmouth Alumni Council

 2001-04 Dartmouth Hitchcock Medical Center Board of Trustees (Ex officio)

 2001-04 Emergency Management Group

 2001-04 Provost’s Council

 2001-04 Academic Planning Committee

 2001-04 Dartmouth Medical School Board of Overseers (Ex officio)

 2001-04 Thayer School of Engineering Board of Overseers (Ex officio)

 2001-02 Search Committee for Associate Provost for Research

 2002-03 Search Committee for Executive Vice-President

 2002-04 Search Committee for Director of Foundation Relations

 2003 Review Committee for the Women in Science Project

 2005-09 Molecular and Cellular Biology Graduate Committee

 2005- Life Sciences Building Steering Committee

 2006-09 Council on Academic Freedom and Responsibility

 2006-07 Search Committee for Dean of the College

 2008-10 Member, Committee on Standards

 2010-11 Member, Committee on Undergraduate Research

 2010-11 Chair, Search Committee, Vice President for Development

 2010-13 Member, Review Committee

 2011-12 Member, Research, Scholarship & Creativity Working Group

 2011- Member, Montgomery Endowment Steering Committee

**Professional Societies**

 American Association for the Advancement of Science

 American Society for Microbiology

 American Society of Plant Biologists

 Association for Women in Science (local chapter executive board, 1987-89; 1991-92)

 Genetics Society of America

 International Society for Molecular Plant-Microbe Interactions

 The International BioIron Society

**Invited Lectures (last 10 years)**

2001 Metals and Cells, Society for Experimental Biology, Canterbury, UK

2001 Plenary Speaker, Northeast Regional Plant Physiology meeting, Worcester Polytechnic Institute, Worcester, MA.

2001 Dept. of Biochemistry and Molecular Biology, University of Kansas Medical Center, Kansas City, KS

2001 12th International Plant Membrane Transport Meeting, Madison, WI

2001 Plant Environment Interactions: Genes, Proteins, and Biotechnology. Taipei, Taiwan

2002 Department of Biochemistry, University of Nebraska, Lincoln, Nebraska

2002 Department of Biochemistry and Cell Biology, Rice University, Houston, TX

2002 New England Arabidopsis Meeting, MIT, Boston, MA.

2002 Department of Biochemistry, UCLA, Los Angeles, CA

2002 Biometals 2002, King’s College, London, UK

2002 Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA

2002 XI International Symposium on Iron Nutrition and Interactions in Plants, Udine, Italy

2002 9th New Phytologist Symposium, Heavy Metals and Plants. University of Pennsylvania, Philadelphia, PA

2002 NSF workshop: Microbial and Plant Metabolism - Function through Genomics. Maui, Hawaii

2003 Invited Speaker, Plant Winter Conference, Postech University, Pohang, South Korea

2003 Tools for Environmental Cleanup: Engineered Plants for Phytoremediation. University of Washington, Seattle, WA

2003 Donald Danforth Plant Science Center, St. Louis, MO

2003 PHYTAC/METALHOME meeting, Amsterdam, Netherlands

2003 Invited Speaker, 1st Pan American Plant Membrane Biology Workshop, Cuernavaca, Mexico

1. Keynote speaker, XXI Congress of the Scandinavian Plant Physiology Society. Bornholm, Denmark
2. Mid-Atlantic section, American Society of Plant Biologists, College Park, MD

2004 Plant Biology, Penn State University, State College, PA

2004 Plenary Speaker, 12th International Symposium on Iron Nutrition and Interactions in Plants, Tokyo, Japan

2004 Invited Speaker, Metals in Biology, University of Utah, Salt Lake City, UT

2004 Invited Speaker, FASEB, Trace Element Metabolism, Snowmass, CO

2004 Plenary Speaker, 13th International Workshop on Plant Membrane Biology, Montpellier, France

2004 Invited Speaker, International Conference on Arabidopsis Research 2004, Berlin, Germany

2004 President’s Symposium, Plant Biology 2004, Orlando, FL

2004 Invited Speaker, ComBIO 2004, Perth, Australia

2004 Invited Speaker, 1st Annual ACPFG (Australian Center for Plant Functional Genomics) Research Symposium, Adelaide, Australia

2004 Queensland Institute of Medical Research, Brisbane, Australia

2005 Interdisciplinary Life Sciences Graduate Program, Purdue University

2005 Invited Speaker, 22nd Annual Missouri Symposium, University of Missouri-Columbia

2005 The Salk Institute, La Jolla, California

2005 Invited Speaker, Gordon Research Conference on Cell Biology of Metals, Lewiston, ME

2005 Plant Biology 2005 Career Workshop on “Getting and Keeping a Job”

2005 Sigma Xi Distinguished Lecturer, Clemson University

2005 Department of Plant Biology, Carnegie Institution, Stanford, California

2006 Plenary speaker, Norwegian Biochemical Society, Storefjell, Norway

2006 Colloquium in the Life Sciences, Colorado State University, Fort Collins, CO

2006 Department of Biology, Washington University, St. Louis, MO

2006 23rd Annual Missouri Symposium entitled “Plant Roots: From Genes to Form & Function,” Columbia, MO

2006 Invited speaker, FASEB conference "Trace Element Metabolism: Integrating Basic and Applied Research" Snowmass, CO

2006 Plenary speaker, XIIIth International Symposium on Iron Nutrition and Interactions in Plants, Montpellier, France

2006 Invited speaker, President’s Symposium, Plant Biology 2006, Boston, MA

2007 Invited speaker, Plant Genomes meeting, Cold Spring Harbor Laboratory

2007 Invited speaker, Microbiology Department, University of New Hampshire, Durham, NH

2007 Invited speaker, Horticulture Department, Purdue University, West Lafayette, IN

2007 Invited speaker, Microbial and Plant Genomes Institute, University of Minnesota, St. Paul, MN

2007 Invited speaker, 18th International Conference on Arabidopsis Research, Beijing, China

2007 Invited speaker, Gordon Research Conference on Cell Biology of Metals, Newport, RI

2007 Invited speaker, Gordon Research Conference on Plant Metabolic Engineering, Tilton, NH

2007 Genetics and Genomics Program, Duke University, Durham, NC

2007 Invited speaker, HarvestPlus Rice meeting, Bangkok, Thailand

2007 Invited speaker, BioAsia, Bangkok, Thailand

2008 Invited speaker, Genetic Analysis: Model Organisms to Human Biology, Genetics Society of America. San Diego, CA.

2008 Invited Speaker, Crop Biofortification and Human Nutrition, Ohio State University, Columbus, Ohio.

2008 Invited Speaker, HarvestPlus technical meeting on Improving Bioavailability of Minerals from Biofortified Staple Food Crops, Washington, DC.

2008 Invited Speaker, Gordon Research Conference on Plant Molecular Biology, Holderness School, NH

2008 Invited Speaker, Banbury Conference on “Nutrient Sensing in Plants”, Cold Spring Harbor, NY

2008 Invited Speaker, 2008 Donald Danforth Plant Science Center Fall Symposium

2008 Invited Speaker, 14th International Sympoisum on Iron Nutrition and Interactions in Plants, Beijing, China

2009 HHMI Workshop on Future Horizons in Plant Science, Chevy Chase MD

2009 Pathology Department, Dartmouth Medical School

2009 Invited Speaker, Plant Genomes: Genes, Networks and Applications, Cold Spring Harbor Laboratory

2009 Invited Speaker, BioIron, Porto, Portugal

2009 Invited Speaker, Women in Plant Biology, ASPB Plant Biology 2009 meeting

2009 Invited Speaker, Biology Department, New York University

2009 Invited Speaker, 9th International Plant Molecular Biology Congress, St. Louis MO

2010 Invited Speaker, III Pan American Plant Membrane Biology Workshop, Puebla, Mexico

2010 Invited Speaker, La Jolla Symposium, La Jolla, CA

### 2010 Instituto de Biotecnologia/Universidad Nacional Autonoma de Mexico (UNAM), Cuernavaca, Morelos, Mexico

 2010 Institute for Integrative Genome Biology, UC Riverside

2010 Invited Speaker, International Conference on Arabidopsis Research, Yokohama, Japan

 2010 Invited Speaker, FASEB meeting, Snowmass, CO

2010 Keynote Speaker, 15th International Symposium on Iron Nutrition and Interactions in Plants, Budapest, Hungary

2010 Plenary Speaker, Plant Biology 2010, Montreal, Quebec

2010 Invited speaker, University of Massachusetts, Amherst.

2011 Invited speaker, Cal State Northridge

2011 Invited speaker, International Conference on Arabidopsis Research, Madison, WI

2011 Keynote Speaker, Gordon Research Conference on Cell Biology of Metals, Newport, RI

**Public Understanding of Science**

Speaker in the “Frontiers of Knowledge” series on “The mixed blessing of genetic research.” “Is there a genetically engineered food on your menu?” Concord, NH 11/8/98

Panel member, “Genetically modified food crops: playing god or feeding the world?”

 Public Forum sponsored by the Environmental Studies Program, the

 Department of Biological Sciences and the Ethics Institute at Dartmouth

 College. 2/24/00

Symposium speaker, “Genetically Modified Foods: Benefits and Risks,” Science Center

 of Eastern Connecticut, New London, CT. 2/17/01

Symposium speaker, “Gene Hysteria,” Dartmouth Club of Chicago 3/3/01

Speaker in the 6-week series “Heal thyself” offered by Dartmouth Community Medical

 School: “The secret lives of vitamins, drugs, supplements and genetically

 modified foods,” Hanover, NH 4/10/01.

Speaker in the 6-week series “Heal Thyself” offered by Dartmouth Community Medical

 School: “Nutrition and the secret lives of genetically modified foods,”

 Manchester, NH 10/24/01

Women’s Network of the Upper Valley, 11/13/01. Genetically modified foods.

My article “The green revolution strikes gold,” originally published in Science (2000; 287:241-243), was reprinted in “Genetically Modified Foods: Debating Biotechnology”, edited by Michael Ruse and David Castle. Prometheus Books, 2002.

Participant, 12th Annual Coalition for National Science Funding, Capitol Hill, June, 2005

 <http://www.aspb.org/publicaffairs/briefing/>

Demonstrator for hands-on activities at the American Society for Plant Biologists Education booth. AAAS Family Science Days, San Diego CA 2/20/10-2/21/10

**Patents**

Guerinot, M.L. and D.J. Eide. 1998. Metal-regulated metal transporters and uses thereof. U.S. Patent #5,846,821.

Guerinot, M.L. and D.J. Eide. 2000. Metal-regulated metal transporters and uses thereof. U.S. Patent #6,162,900.

Guerinot, M.L. and D.J. Eide. 2003. Metal-regulated metal transporters and uses thereof. U.S. Patent #6,590,140.

Guerinot, M.L. and E.E. Rogers. 2007. Isolated ferric reductase defective polypeptides and uses thereof. U.S. Patent # 7,189,891

**Publications**

[1] Guerinot, M.L., W. Fong and D.G. Patriquin. 1977. Nitrogen fixation (acetylene reduction) associated with sea urchins (*Strongylocentrotus* *droebachiensis*) feeding on seaweeds and seagrasses. J. Fish. Res. Board Can. 34: 416-420.

[2] Guerinot, M.L., and D.G. Patriquin. 1981. The association of nitrogen-fixing bacteria with sea urchins. Marine Biol. 62:197-207.

[3] Guerinot, M.L., and D.G. Patriquin. 1981. Nitrogen-fixing vibrios isolated from the gastrointestinal tract of sea urchins. Can. J. Microbiol. 27:311-317.

[4] Guerinot, M.L., P.A. West, J.V. Lee and R.R. Colwell. 1982. *Vibrio diazotrophicus*, sp. nov., a marine nitrogen-fixing bacterium. Int. J. Syst. Bacteriol. 32:350-357.

[5] Carlson, T.A., M.L. Guerinot and B.K. Chelm. 1983. Isolation of *Rhizobium* *japonicum* glutamine synthetase genes. pp 291-302. *In* Plant Molecular Biology, R.B. Goldberg (ed.), UCLA Symp. Molec. Biol., New Series, vol. XII. A.R. Liss Inc., New York, N.Y.

[6] Guerinot, M.L., and B.K. Chelm. 1984. Isolation and expression of the *Bradyrhizobium* *japonicum* adenylate cyclase gene (*cya*) in *Escherichia* *coli*. J. Bacteriol. 159:1068-1071.

[7] Carlson, T.A., M.L. Guerinot and B.K. Chelm. 1985. Characterization of the gene encoding glutamine synthetase I (*glnA*) from *Bradyrhizobium* *japonicum*. J. Bacteriol. 162:698-703.

[8] Guerinot, M.L., and R.R. Colwell. 1985. Enumeration, isolation and characterization of nitrogen-fixing bacteria from seawater. Appl. Environ. Microbiol. 50:350-355

[9] Guerinot, M.L., and B.K. Chelm. 1986. Bacterial 5-aminolevulinic acid synthase activity is not essential for leghemoglobin formation in the soybean/*Bradyrhizobium* *japonicu* symbiosis. Proc. Natl. Acad. Sci. U.S.A. 83:1837-1841.

[10] Guerinot, M.L., and B.K. Chelm. 1986. Molecular aspects of the physiology of symbiotic nitrogen fixation in legumes. pp 103-146. *In* Plant-Microbe Interactions, vol. 2, T. Kosuge and E.W. Nester (eds.), MacMillan Pub. Co., New York, N.Y.

[11] McClung, C.R., J.E. Somerville, M.L. Guerinot and B.K. Chelm. 1987. Structure of the *Bradyrhizobium* *japonicum* gene *hemA* encoding 5-aminolevulinic acid synthase. Gene 54: 133-139.

[12] Jacobs, N.J., S.E. Borotz and M.L. Guerinot. 1989. Protoporphrinogen oxidation, a step in heme synthesis in soybean root nodules and free-living rhizobia. J. Bacteriol. 171:573-576.

[13] Guerinot, M.L., E. J. Meidl and O. Plessner. 1990. Citrate as a siderophore in *Bradyrhizobium* *japonicum*. J. Bacteriol. 172:3298-3303.

[14] Guerinot, M.L., B.A. Morisseau and T.Klapatch. 1990. Electroporation of *Bradyrhizobium* *japonicum*. Mol. Gen. Genet. 221:287-290.

[15] Jacobs, J.M., N.J. Jacobs, S.E. Borotz and M.L. Guerinot. 1990. Effects of the photobleaching herbicide, acifluorfen-methyl, on protoporphyrinogen oxidation in barley organelles, soybean root mitochondria, soybean root nodules and bacteria. Archiv. Biochem. Biophys. 280:369-375.

[16] Scott-Craig, J., M.L. Guerinot and B.K. Chelm. 1991. Isolation of *Bradyrhizobium japonicum* DNA sequences that are transcribed specifically in bacteroids. Mol. Gen. Genet. 228:356-360.

[17] Guerinot, M.L. 1991. Iron uptake and metabolism in the rhizobia/legume symbioses. Plant Soil 130: 199-209.

[18] Guerinot, M.L. 1991. Iron in the rhizobia/legume symbioses. pp 239-249. *In* Iron Nutrition and Interaction in Plants, Y. Chen and Y. Hadar, (eds.), Martinus Nijhoff Publishers.

[19] Plessner, O., T. Klapatch and M.L. Guerinot. 1993. Siderophore utilization in *Bradyrhizobium* *japonicum*. Appl. Environ. Microbiol. 59: 1688-1690.

[20] Guerinot, M.L. 1993. Iron and the nodule. pp 197-217. *In* Iron Chelation in Plants and Soil Microorganisms, L.L. Barton and B. Hemming, (eds.), Academic Press, New York.

[21] Yi, Y. and M.L. Guerinot. 1994. A new member of the small GTP-binding protein family in *Arabidopsis thaliana*. Plant Physiol. 104:295-296

[22] Page, K.M., E.L. Connolly and M.L. Guerinot. 1994. The effect of iron availability on expression of the *Bradyrhizobium japoncium hemA* gene. J. Bacteriol. 176: 1535-38

[23] Guerinot, M.L. and Y. Yi . 1994. Iron: nutritious, noxious and not readily available. Plant Physiol. 104: 815-820.

[24] Guerinot, M.L., Y. Ying and J. Saleeba. 1994. Iron uptake in *Arabidopsis* *thaliana*. pp. 295-307. *In* Biochemistry of Metal Micronutrients in the Rhizosphere, J. Manthey and D. Luster, (eds.), Lewis Publishers, Inc.

[25] Guerinot, M.L. 1994. Microbial Iron Transport. Ann. Rev. Microbiol. 48: 743-72.

[26] Page, K.M., and M.L. Guerinot. 1995. Oxygen control of the *Bradyrhizobium japonicum hemA* gene. J. Bacteriol. 177: 3979-3984.

[27] Saleeba, J.A. and M.L. Guerinot. 1995. Induction of ferric reductase activity in response to iron deficiency in *Arabidopsis*. Biometals 8: 297-300

[28] Eide, D., M. Broderius, J. Fett and M.L. Guerinot. 1996. A novel, iron-regulated transporter from plants identified by functional expression in yeast. Proc. Natl. Acad. Sci. U.S.A. 93: 5624-5628.

[29] LeVier, K., D. Day and M.L. Guerinot. 1996. Iron uptake by symbiosomes from soybean nodules. Plant Physiol. 111: 893-900.

[30] Klapatch, T.R., M.L. Guerinot and L.R. Lynd. 1996. Electrotransformation of *Clostridium thermosaccharolyticum*. J. Industrial Microbiol. 16: 342-347.

[31] Yi, Y. and M.L. Guerinot. 1996. Genetic evidence that induction of Fe(III) chelate reductase activity is necessary for iron uptake under iron deficiency. Plant J. 10: 835-844.

[32] LeVier, K. and M.L. Guerinot. 1996. The *Bradyrhizobium japonicum fegA* gene encodes an iron-regulated outer membrane protein with similarity to hydroxamate-type siderophore receptors. J. Bacteriol. 178: 7265-7275.

[33] Westenberg, D.J. and M.L. Guerinot. 1997. Regulation of bacterial gene expression by metals. Adv. Genet. 36:187-238.

[34] Eide, D. and M.L. Guerinot. 1997. Metal ion uptake in eukaryotes. ASM News. 63:199-205.

[35] Grotz, N., T. Fox, E. Connolly, W. Park, M.L. Guerinot and D. Eide. 1998. Identification of a family of zinc transporter genes from Arabidopsis that respond to zinc deficiency. Proc. Natl. Acad. Sci. U.S.A. 95: 7220-7224.

[36] Eng, B., M.L. Guerinot, D. Eide and M.H. Saier. 1998. Sequence analysis and phylogenetic characterization of the ZIP family of metal ion transport proteins. J. Membr. Biol. 166: 1-7.

[37] Fox, T. and M.L. Guerinot. 1998. Molecular biology of cation transport in plants. Annu. Rev. Plant Physiol. Plant Mol. Biol. 49: 669-96.

[38] Fett, J., K. LeVier and M.L. Guerinot. 1998. Soil microorganisms and iron uptake by higher plants. pp. 187-214. *In* Metal Ions in Biological Systems, vol. 35, Iron Transport and Storage in Microorganisms, Plants and Animals, A. Sigel and H. Sigel, (eds.), Marcel Dekker, Inc.

[39] Connolly, E.L. and M.L. Guerinot. 1998. Reduction and uptake of iron in plants. pp. 179-192. *In* Plasma Membrane Redox Systems, H. Asard and R. Caulbergs, (eds.), Kluwer Academic Publishers.

[40] Robinson, N., C. Procter, E.C. Connolly and M.L. Guerinot. 1999. A ferric-chelate reductase for iron uptake from soil. Nature 397: 694-697.

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[42] Westenberg, D.J. and M.L. Guerinot. 1999. Succinate dehydrogenase (Sdh) from *Bradyrhizobium japonicum* is closely related to mitochondrial Sdh. J. Bacteriol. 181:4676-9.

[43] Guerinot, M.L. and D. Eide. 1999. Zeroing in on zinc uptake in yeast and plants. Curr. Opin. Plant Biol. 2: 244-249.

[44] Gasser, C.S. and M.L. Guerinot. 1999. Arabidopsis in Australia: back to the future. Trends Plant Sci. 4: 381-382.

[45] Rogers, E.R., D.J. Eide and M.L. Guerinot. 2000. Altered selectivity in an Arabidopsis metal transporter. Proc. Natl. Acad. Sci. U.S.A. 97: 12356-12360.

[46] Guerinot, M.L. 2000. The green revolution strikes gold. Science 287:241-243.

[47] Guerinot, M.L. 2000. The ZIP family of metal transporters. Biochim. Biophys. Acta. 1465: 190-198.

[48] Guerinot, M.L. 2000. Molecular mechanisms of ion transport in plant cells. *In* Phytoremediation of Toxic Metals: Using Plants to Clean Up the Environment, B.D. Ensley and I. Raskin, (eds.), John Wiley & Sons, Inc., New York. pp. 271-285.

[49] Chory, J., J. R. Ecker, S. Briggs, M. Caboche, G. M. Coruzzi, D. Cook, J. Dangl, S. Grant, M. L. Guerinot, S. Henikoff, R. Martienssen, K. Okada, N. V. Raikhel, C. R. Somerville, and D. Weigel. 2000. National Science Foundation-Sponsored Workshop Report: “The 2010 Project”Functional Genomics and the Virtual Plant. A Blueprint for Understanding How Plants Are Built and How to Improve Them. Plant Physiol. 123: 423-426.

[50] Guerinot, M.L. 2000. To improve nutrition for the world’s population. Science 288:1966-1967.

[51] Boncompagni, E. and M.L. Guerinot. 2000. A requirement for the iron-regulated outer membrane protein FegA in the *Bradyrhizobium japonicum*/soybean symbiosis. pp. 479-480. *In* Nitrogen Fixation: From Molecules to Crop Productivity, F.O. Pedrosa, M. Hungria, M.G. Yates, and W.E. Newton (eds.), Kluwer Academic Publishers.

[52] Ozkan, M., S.G. Desai, Y. Zhang, D.M. Stevenson, J. Beane, M.L. Guerinot and L.R. Lynd. 2001. Characterization of 13 newly isolated strains of anaerobic, cellulolytic, thermophilic bacteria. J. Industr. Microbiol. Biotechnol. 26:1-6.

[53] Mässer, P., S. Thomine, J.I. Schroeder, K Hirschi, J. Ward, H. Sze, A. Amtmann, F.J.M. Maathuis, I.N. Talke, D. Sanders, M. Gribskov, M.W. Persans, D.E. Salt, S.A. Kim, and M.L. Guerinot. 2001. Phylogenetic relationships within cation-transporter families of *Arabidopsis thaliana*. Plant Physiol. 126: 1646-1667.

[54] Guerinot, M.L. and D.E. Salt. 2001. Fortified foods and phytoremediation: two sides of the same coin. Plant Physiol. 125: 164-167

[55] Guerinot, M.L. 2001. Improving rice yields: ironing out the details. Nature Biotechnol. 19: 417-418.

[56] Moreau, S., R.W. Thomson, B.N. Kaiser, B. Trevaskis, M.L. Guerinot, M.K. Udvardi, A. Puppo, and D.A. Day. 2002. GmZIP1 encodes a symbiosis specific zinc transporter in soybean. J. Biol. Chem. 277: 4738-4746 (published online November 12, 2001)

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