

Geoffrey Paul Lin-Cereghino, Ph.D.

Associate Professor

Department of Biological Sciences

University of the Pacific

3601 Pacific Avenue

Stockton, CA 95211

Phone: (209) 946-2988

FAX: (209) 946-3022

glincere@pacific.edu

Lab website: <http://www1.pacific.edu/~jlincere/thelab/index.htm>

Education:

B.S. 1989, Biochemistry, University of California, Davis
Ph.D. 1995, Biology, University of California, San Diego

Honors, Awards, and Grants:

Collegiate: Graduation with Highest Honors
Award of Distinction, Department of Biochemistry
Outstanding Junior Award, College of Agriculture
University of California Regents Scholar
Outstanding Inductee, Golden Key National Honor Society

Graduate: National Science Foundation Predoctoral Fellowship, 1990-1993
Departmental Excellence in Teaching Award, 1993 and 1994

Postdoctoral: National Institute of Environmental Health Sciences National Research
Service Award ES05759 (1997-99)

Professional:

Intramural

Scholarly and Artistic Activity Grant, University of the Pacific, 2000
Holmok Cancer Research Grant, University of the Pacific, 2001
Academic Facilities Improvement Grant, University of the Pacific, 2003
Sponsor, Dreyfus Research Award, student Matthew Hashimoto, 2004
Outstanding Student Organization Advisor, University of the Pacific, 2005

Extramural

Contract for recombinant protein production, Dr. Andrew Singson, 2001 (\$5,000)
National Institutes of Health-AREA Grant, 1R15 GM065882, J Lin-Cereghino J (PI)/ GP
Lin-Cereghino (co-PI) "Analysis of Protein Secretion in *Pichia pastoris*", 2002-2005
(\$121,500); Renewed for 2005-2007 (\$163,000)
National Science Foundation Instrument Acquisition Grant, Acquisition of DNA Microarray
Technology for Biological Research, C. Vierra PI (group grant) 2003-2005 (\$66,725)
Contracts for protein expression, Protein Scientific Corp, 2002-3, 2003-4, 2006-7
(\$26,200)
Whos' Who Among American Teachers, 2003-2005

Professional Experience

8/00-present Associate Professor (Joint appointment with wife Joan Lin-Cereghino),
Department of Biological Sciences, University of the Pacific

- Teaching the following courses: Principles of Biology I and II, Microbiology, Gene Expression Technology, Undergraduate Research
- Jointly supervising the research projects of graduate and undergraduate students, focusing on the improvement of the yeast *Pichia pastoris* as a host for foreign protein expression
- Advising biological science majors and pre-dental students (about 30/year)

- 4/97-7/00 Postdoctoral Research Associate/Acting co-Principal Investigator (8/99-5/00),
Advisor: James M. Cregg
Department of Biochemistry and Molecular Biology
Oregon Graduate Institute of Science and Technology
• Studied the *cis*- and *trans*-acting factors that regulate the expression of the alcohol oxidase 1 gene of the methylotrophic yeast *Pichia pastoris*
• Co-managed laboratory operations (purchasing, equipment maintenance, etc.)
- 7/96-4/97 Postdoctoral Research Associate, Advisor: Michael H. Gold
Department of Biochemistry and Molecular Biology
Oregon Graduate Institute of Science and Technology
• Investigated the transcriptional regulation of the manganese peroxidase genes and the overexpression of the quinone reductase gene of the lignin-degrading fungus *Phanerochaete chrysosporium*
- 7/95-6/96 Visiting Assistant Professor, Department of Biology, Haverford College
• Instructed the following courses: Cell Structure and Function, Laboratory in Immunology, Senior Seminar in Gene Expression, Advanced Protein Structure
• Supervised the thesis research projects of senior undergraduates in the field of regulated mRNA turnover in *Saccharomyces cerevisiae*
• Coordinated resources for summer research opportunities for undergraduates at outside institutions
- 9/89-5/95 NSF Predoctoral Fellow, Advisor: Dr. Immo E. Scheffler
Department of Biology
University of California, San Diego
• Investigated the mechanism by which the expression of the genes of the succinate dehydrogenase complex is regulated in *Saccharomyces cerevisiae* in response to changes in carbon source.
• Served as a teaching assistant for: Laboratory in Biochemical Techniques, Introductory Biochemistry, Cell Biology, and Human Genetics.
- 3/89-8/89 Intern/Biologist, Syntex Pharmaceuticals, Palo Alto, CA
• Assayed the effects of various immunological reagents on the growth and secretion of B and T cells in culture
- 9/88-3/89 Research Technician, Department of Avian Sciences
University of California, Davis
• Analyzed mRNA levels and specific activities of enzymes associated with fatty liver hemorrhagic disease in chickens
- 1/88-3/89 Counselor/Resident Advisor, Upward Bound Project
University of California, Davis
• Provided tutoring and advising to underprivileged high school students to motivate them to attend college
- 7/87-9/87 Research Intern, Heublein Wines, Madera, CA
• Assessed losses incurred by ion exchange chromatography in the production of grape concentrate

Peer Reviewed Publications (* = University of the Pacific students)

Yount, B. A*, J. Lin-Cereghino, **G.P. Lin-Cereghino**, and M.M. Fox. 2006. Preparation of the yeast *Pichia pastoris* for transmission electron microscopy. *Microscopy Today* 14(5):36-7.

Lin-Cereghino, G.P., L. Godfrey, B.J. De la Cruz, S. Khouangsathiene, S. Johnson*, I. Tolstorukov, M. Yan, J. Lin-Cereghino, M. Veenhuis, S. Subramani, and J. M. Cregg. 2006. Mxr1p, a key regulator of the methanol-utilization-pathway and peroxisomal genes in *Pichia pastoris*. *Mol. Cell. Biol.* 26(3):883-897.

Thor, D.*, S. Xiong*, C.C. Orazem*, A. Kwan*, J.M. Cregg, J. Lin-Cereghino, and **G.P. Lin-Cereghino**. 2005. Cloning and characterization of the *Pichia pastoris* MET2 gene as a selectable marker. *FEMS Yeast Res.* 5:935-942.

Lin-Cereghino J., W.W. Wong*, S. Xiong*, W. Giang*, L.T. Luong*, J. Vu*, S.D. Johnson*, and **G.P. Lin-Cereghino**. 2005. Condensed protocol for competent cell preparation and transformation of the methylotrophic yeast *Pichia pastoris*. *BioTechniques* 38:44-48.

Orazem C.C. *, C. Oshiro*, S. Urbano*, B.A. Yount*, P.A. Richmond, G.P. **Lin-Cereghino**. and J Lin-Cereghino. 2004. Expression and localization of the enhanced green fluorescent protein in the peroxisomes of the methylotrophic yeast *Pichia pastoris*. *Bios* 75(4): 147-154.

Serrano, A., **G.P. Lin Cereghino**, P. Ferrer, J.M. Cregg, and F. Valero. 2001. Overexpression of a *Rhizopus oryzae* lipase in *Pichia pastoris* strains containing multiple copies of the target gene. In Recombinant Protein Production with Prokaryotic and Eukaryotic Cells-a Comparative View on Host Physiology, O-W. Merten et al. (Ed.)

Cereghino, G.P.L., J.L. Cereghino, A.J. Sunga, M.A. Johnson, M. Lim, M. Gleeson, and J.M. Cregg. 2001. New selectable marker/auxotrophic host combinations for molecular genetic manipulation of *Pichia pastoris*. *Gene* 263(1-2): 159-169.

Sollewijn Gelpke, M., M. Mayfield-Gambill, **G. P. L. Cereghino**, and M. H. Gold. 1999. Homologous expression of lignin peroxidase in *Phanerochaete chrysosporium*. *Appl. Environ. Microbiol.* 65(4):1670-1674.

Cereghino, G.P. and I.E. Scheffler. 1996. Genetic analysis of glucose regulation in *S. cerevisiae*: control of transcription versus mRNA turnover. *EMBO Journal* 15:363-374.

Cereghino, G.P., D.P. Atencio, M. Saghbini, J. Beiner, and I.E. Scheffler. 1995. Glucose-dependent turnover of the mRNAs encoding succinate dehydrogenase peptides in *S. cerevisiae*: sequence elements in the 5' untranslated region of the lp mRNA play a dominant role. *Mol. Biol. Cell* 12:1125-1143.

Lombardo, A., **G.P. Cereghino**, and I.E. Scheffler. 1992. The control of mRNA turnover as a means of glucose repression in *S. cerevisiae*. *Mol. Cell. Biol.* 12:2941-2948.

Invited Reviews, Book Chapters and Other Publications

Lin-Cereghino, GP and Lin-Cereghino J. 2007. Expression of protein in *Pichia pastoris* in M. R. Dyson and Y. Durocher (Eds.) *Expression Systems-Methods*. Submitted.

Lin-Cereghino, J and **G. P. Lin-Cereghino**. 2006. Vectors and Strains in J. M. Cregg (Ed.) *Pichia Protocols*. Academic Press. In Press.

Lin Cereghino, G. P., J. Lin Cereghino, C. Ilgen, and J.M. Cregg. 2002. Production of recombinant proteins in fermenter culture of the yeast *Pichia pastoris*. *Curr. Opin. Biotech.* 13:329-332.

Cereghino, G.P.L., A.J. Sunga, J.L. Cereghino, and J.M. Cregg. 2001. Expression of foreign genes in the yeast *Pichia pastoris*. In Genetic Engineering, J. K. Setlow (Ed.) vol. 23: 157-170.

Cereghino, G.P.L. and J.M. Cregg. 1999. Applications of yeast in biotechnology: protein production and genetic analysis. *Curr. Opin. Biotechnol.* 10(5): 422-427.

Cereghino, G. P. 1995. The control of mRNA turnover as a mechanism of glucose repression in *Saccharomyces cerevisiae*. Ph.D. Dissertation, University of California, San Diego.

Poster Presentations

Thirteen posters presented by Pacific students from our lab, Pacific Undergraduate Research and Creativity Conference, 2002-2006 (Abstracts available upon request)

Hartner, FS, Ruth, C, **Lin-Cereghino, GP**, Lin-Cereghino, J, Cregg, J and Glieder, A. 2006. Synthetic *Pichia pastoris* promoters based on *AOX1* regulatory elements. Poster, *Pichia* Protein Expression Conference, October 8-11, 2006 (San Diego, California).

Johnson, S., L. Godfrey, J. Lin Cereghino, S. Khouangsathiene, Cregg, J. M., Lin-Cereghino, J, and **G. P. Lin-Cereghino**. 2003. Analysis of the Alcohol Oxidase I promoter of *Pichia pastoris*. Poster, Current Topics in Gene Expression Systems Meeting (San Diego, California).

Cereghino, G.P.L., J.L. Cereghino, M.A. Johnson, M. Lim, A.J. Sunga, D. Raghavan, M. Gleeson, and J.M. Cregg. 1999. New selectable marker/auxotrophic host combinations for molecular genetic manipulation of *Pichia pastoris*. Poster, Current Topics in Gene Expression Systems Meeting (San Diego, California).

Cereghino, G.P., J. Lee, M. Saghbini, J. Beiner, and I.E. Scheffler. 1994. The control of mRNA turnover as a means of glucose repression for the components of the succinate dehydrogenase complex in *S. cerevisiae*. Poster, Proceedings of the 1994 Yeast Genetics and Molecular Biology Annual Meeting (Seattle, Washington).

Cereghino, G.P., M. Saghbini, J. Beiner, and I.E. Scheffler. 1993. Glucose regulated turnover of the mRNAs of the iron protein and flavoprotein subunits of succinate dehydrogenase in yeast: identification of the cis-acting elements. Poster, Proceedings of the 1993 American Society for Biochemistry and Molecular Biology Annual Meeting (San Diego, California).

Lombardo, A., **G.P. Cereghino**, and I.E. Scheffler. 1992. Glucose modulates the turnover of the iron and flavoprotein mRNAs of the succinate dehydrogenase complex in *S. cerevisiae*. Poster, Proceedings of the 1992 Arrowhead Genetics Conference (Lake Arrowhead, California).

Professional Activities

Consultant, Phytex LLC, 2004-
Associate Editor, *Protein Expression and Purification*, 2001-
Member, Institutional Review Board, Dameron Hospital, 2004-
Member, American Society for Microbiology, 2004
Reviewer, *Biotechniques*, 1999-
Team leadership member, Advocates for Women in Science, Engineering & Mathematics, 1999-2000
Guest Speaker, Washington County School-to-Work Series 1998-1999
Member and Co-Chair, Departmental Recruitment/Hospitality Committees, U.C. San Diego, 1990-1994

Service Activities

Faculty Advisor, Pacific Italian Student Alliance, 2005-
Faculty Advisor, Pacific Beta Beta Beta Biology Honor Society, 2002-
Faculty Advisor, Pacific Hmong Student Association, 2002-
Advisor, Freshman Summer Orientation, 2002
Appearance in video "Investing in Excellence: The Campaign for Pacific", 2003
Co-founder and chair, Pacific Community Microbiology Advisory Committee, 2003-
Pre-tenure Advisor, University of the Pacific, 2002-
Member, Student Academic Grievance Board, University of the Pacific, 2002-4

Member and Chair, Student Judicial Review Board, University of the Pacific 2004-6
 Member, Convocation Speaker Committee, University of the Pacific, 2004-
 Member, Experiential Learning Oversight Committee, University of the Pacific, 2004-
 Member, Drafting Committee for Pacific Mission Values Priorities (*Pacific Rising*) 2008-2015, 2005-2006

Collaborators and Other Affiliations

(i) Collaborators:

Alicia Serrano, Scientist, Biokit Corporation, Barcelona, Spain, 1999-2001
 David Thomas, Assistant Professor of Pharmacy, University of the Pacific, 2001-2003
 Andy Singson, Assistant Professor of Genetics, Rutgers University, 2001-2003
 James Cregg, Professor, Keck Graduate Institute of Applied Life Sciences, 2000-
 Frank Ruch, Senior Scientist, Phytex LLC, 2002-
 Roshanik Rahiminian, Associate Professor of Pharmacy, University of the Pacific, 2004-
 Nejat Dezgunes, Professor, University of the Pacific Arthur A. Dugoni Dental School
 2005-
 Anton Glieder, Professor, Technical University of Graz, Austria, 2005-

(ii) Laboratory students mentored:

Alex Amby	Master's Student (2001-2002, entered medical school)
Heather Grove	Master's Student (2001-2005, granted Masters October 2005)
Sabrina Johnson	Master's Student (2001-2003; granted Masters July 2003)
Allison Moy	Master's Student (2006-)
Amy Nguyen	Master's Student (2006-)
Jack Nguyen	Master's Student (2003-2005; granted Masters July 2005)
Chris Staley	Master's Student (2004-)
Der Thor	Master's Student (2001-2002; granted Masters October 2002)
Ben Yount	Master's Student (2005-2006, entered dental school)

Colin Au	Undergraduate student (2001-2003)
Nicole Barkhordar	Undergraduate student (2005-6)
James Castello	Undergraduate student (2000-2002)
Vincis Casuga	Undergraduate student (2004-2005)
Alan Chan	Undergraduate student (Summer, 2003)
Alex Chan	Undergraduate student (2000-2002)
Irene Chen	Undergraduate student (2006-)
Antoinette Chiu	Undergraduate student (Summer, 2002)
Carolyn Dam	Undergraduate student (2006-)
William Giang	Undergraduate student (2002-2004)
Matthew Hashimoto	Undergraduate student (2003-2005)
Chris Hatae	Undergraduate student (2003-2005)
Huong Huynh	Undergraduate student (2003)
Kris Kawamoto	Undergraduate student (2002-2003)
Kimberly Kaya	Undergraduate student (2003-2004)
Blake Kitamura	Undergraduate student (2004-2005)
Peter Kuo	Undergraduate student (2005-6)
An-Chun Kwan	Undergraduate student (2003-2005)
Phuc Le	Undergraduate student (2003)
Victoria Leong	Undergraduate student (2003)
Linda Luong	Undergraduate student (2003-2004)
Wilson Leung	Undergraduate student (2004-6)
Jerome Mallari	Undergraduate student (2005-6)
Elizabeth Manov	Undergraduate student (Summer, 2002)
Caryn Ng	Undergraduate student (2004)
An Ngo	Undergraduate student (2002-2003)
Jack Nguyen	Undergraduate student (2001-2002)
Jon Nguyen	Undergraduate student (2006-)

Phuong Nguyen	Undergraduate student (2003-2004)
Claire Orazem	Undergraduate student (2001-2003)
Cheryl Oshiro	Undergraduate student (2000-2001)
Jnana Patel	Undergraduate student (2005-6)
Vincent Perez	Undergraduate student (2006-)
Laura Ray	Undergraduate student (2006-)
Richard Rojas	Undergraduate student (Summer, 2002)
Kamaldeep Singh	Undergraduate student (2006-)
Sarabjit Sandhu	Undergraduate student (Summer, 2005)
Kirti Sohal	Undergraduate student (2005-)
Christina Tran	Undergraduate student (2006-)
Beau Ulrich	Undergraduate student (2005-6)
Sharon Urbano	Undergraduate student (2000-2001)
Monika Verma	Undergraduate student (2005-6)
Jane Vu	Undergraduate student (2003-2004)
William Wong	Undergraduate student (2003-2004)
Amy Yon	Undergraduate student (2004-2005)
See Xiong	Undergraduate student (2004-2005)
Ben Yount	Undergraduate student (2002-2005)