JOAN LIN-CEREGHINO
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University of the Pacific
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Education:

A.B.	1987, Molecular Biology, Princeton University
Ph.D.	1992, Biology, University of California, San Diego

Experience:

9/06- present Associate Professor (Joint appointment with spouse, Geoffrey P. Lin-Cereghino)
Department of Biological Sciences, University of the Pacific

- Teaching: Principles of Biology II (BIOL 61), Microbiology (BIOL 145), Gene Expression (BIOL 293), Mentor III (Spring 2006)
- Research: Joint supervision of graduate and undergraduate research projects focusing on the improvement of the methylotrophic yeast, *Pichia pastoris*, as a host for heterologous protein expression
- Service: Committee on Courses and Standards, Curriculum Committee, Diversity Task Force, Athletics Advisory Board, Ad-hoc Committee to improve advising of first-year students, Co-advisor for Hmong Student Association, Beta Beta Beta Biological Honor Society

8/00- 9/06 Assistant Professor (Joint appointment with spouse, Geoffrey P. Lin-Cereghino)
Department of Biological Sciences, University of the Pacific

4/97-8/00 Postdoctoral Research Fellow, American Heart Association (7/98-6/99)
Department of Biochemistry & Molecular Biology Oregon Graduate Institute of Science and Technology, Principal Investigator: Professor James M. Cregg

- Project: membrane protein targeting to the peroxisome in *Pichia pastoris* and development of *Pichia pastoris* as a model system for heterologous protein expression
- Co-Laboratory Manager. Responsible for purchasing of laboratory supplies, general equipment maintenance, and supervision of graduate students
- Vice Chair of OGI Staff Association, Staff Senator to the Academic Senate (7/99-5/00)
- Team Leadership Member, AWSEM (Advocates for Women in Science, Engineering and Mathematics). Led middle and high school students through experiments in molecular biology

7/95-7/96 Visiting Assistant Professor, Department of Biology, Haverford College, Haverford, PA

- Teaching: Instructed laboratory courses in microscopy and biochemistry, and lecture courses in general biology and advanced cell biology.
- Research: Joint supervision of senior research projects in yeast cell biology and molecular genetics with Geoff Lin-Cereghino
- Service: Assistant coach of women's field hockey team (NCAA Division III), Resource for minority students and invited speaker at the Haverford Women's Center

1/93-7/95 NIH Postdoctoral Fellow, Division of Cellular and Molecular Medicine, Howard Hughes Medical Institute, University of California at San Diego, Principal Investigator: Professor Scott D. Emr

- Project: protein trafficking in the yeast *Saccharomyces cerevisiae*.

Experience (cont):

9/87-12/92 Graduate Student, Department of Biology, University of California, San Diego
Thesis Advisor: Professor Donald R. Helinski
- Research: Plasmid replication initiation in Gram-negative bacteria
- Teaching: Graduate teaching assistant for Bacteriology, Biochemical Basis of Cancer and Myocardial Infarction, Introduction to Genetics, and Laboratory in Biochemical Techniques
- Service: Department of Biology Graduate Admissions Committee (1990)

6/87-8/87 Teaching Intern in Experimental Biology, Massachusetts Advanced Studies Program
- Teaching: Experimental Biology for advance high school students
- Served as dorm resident advisor, supervised extra-curricular activities

9/85-6/87 Independent Study Program, Department of Molecular Biology, Princeton University, Senior Thesis Advisor: Arnold J. Levine
- Project: RNA levels of selected oncogenes in the tumors of SV11 transgenic mice

6/82-8/85 Laboratory Assistant (summers only), Department of Chemistry, Boston College, Principal Investigator: Evan R. Kantrowitz
Project: Generation, purification and analysis of aspartate transcarbamoylase mutants

Grants and Honors Awarded:

1/06-1/09 NIH-AREA grant 2R15 GM-065882, Co-PI with Geoff, total award $160,000
5/05 Outstanding Student Organization Advisor of the Year, University of the Pacific
9/02-9/05 NIH-AREA grant 1R15 GM-065882, Co-PI with Geoff, total award $121,500
6/01-5/02 Holmok Cancer Research Grant, University of the Pacific
1/01-9/01 Scholarly/Artistic Activity Grant (SAAG), University of the Pacific
7/98-6/99 American Heart Association, Oregon Affiliate, Inc., Postdoctoral Fellowship
1/93-1/96 Postdoctoral Fellowship, Individual National Research Service Award
National Institutes of Health, Division of General Medical Sciences (GM15638-01)

Peer Reviewed Publications:

Marks, J., **J. Lin**, D. Miller, G. Lozano, J. Herbert, and A. J. Levine. 1988. The expression of viral and cellular genes in papillomas of the choroid plexus induced in transgenic mice. In Cellular Factors in Development and Differentiation: Embryos, Teratocarcinomas, and Differentiated Tissues. Series: Progress in Clinical and Biological Research **284:**163-186.

Saier, M. H., Jr., G. A. Daniels, P. Boerner, and **J. Lin**. 1988. Neutral amino acid transport systems in animal cells: potential targets of oncogene action and regulators of cellular growth. J. Membrane Biol. **104**:1-20.

Marks, J. R., **J. Lin**, P. Hinds, D. Miller, and A. J. Levine. 1989. Cellular gene expression in papillomas of the choroid plexus from transgenic mice that express the simian virus 40 large T antigen. J. Virol. **63**:790-7.

Riggs, C. D., D. C. Hunt, **J. Lin**, and M. J. Chrispeels. 1989. Utilization of luciferase fusion genes to monitor differential regulation of phytohemagglutinin and phaseolin promoters in transgenic tobacco. Plant Science **63**:47-57.

Lin, J. and D. R. Helinski. 1992. Analysis of defective mutations in *trfA*: The replication initiation gene of the broad host-range plasmid RK2. J. Bacteriol. **172**:4110-4119.

Lin Cereghino, J., and D. R. Helinski. 1993. The essentiality of the three carboxy-terminal amino acids of the plasmid RK2 replication initiation protein TrfA for DNA-binding and replication activity. J. Biol. Chem. **268**:24926-24932.

Lin Cereghino, J., D. R. Helinski, and A. E. Toukdarian. 1994. An *in vivo* binding assay for the isolation and characterization of DNA-binding mutants of TrfA, the replication initiation protein of plasmid RK2. Plasmid. **31**:89-99.

Marcusson, E. G., B. F. Horazdovsky, **J. Lin Cereghino**, E. Gharakhanian, and S. D. Emr. 1994. The sorting receptor for yeast vacuolar carboxypeptidase Y is encoded by the *VPS10* gene. Cell **77**:579-586.

Lin Cereghino, J.*, E. G. Marcusson*, and S. D. Emr. 1995. The cytoplasmic tail domain of the vacuolar protein sorting receptor Vps10p and a subset of *VPS* gene products regulate receptor stability, function, and localization. Mol. Biol. Cell **6**:1089-1102.

Marcusson, E. G.*, M. N. J. Seaman*, **J. Lin Cereghino***, and S. D. Emr. 1997. Endosome to golgi retrieval of the vacuolar protein sorting receptor Vps10p requires the function of the *VPS29*, *VPS30*, and *VPS35* gene products. J. Cell Biol. **137**:79-92

Akileswaran, L., B. J. Brock, **J. Lin Cereghino**, and M. H. Gold. 1999. 1,4-Benzoquinone reductase from *Phanerochaete chrysosporium*: cDNA cloning and regulation of expression. Appl. Environ. Microbiol. 65(2):415-421.

Johnson, M. A., H. R. Waterham, G. P. Ksheminska, L. R. Fayura, **J. Lin Cereghino**, O. V. Stasyk, M. Veenhuis, A. R. Kulachkovsky, A. A. Sibirny, and J. M. Cregg. 1999. Positive selection of novel peroxisome biogenesis-defective mutants of the yeast *Pichia pastoris*. Genetics **151**:1379-1391.

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**: 159-169.

Johnson, M. A., W. B. Snyder, **J. L. Cereghino**, M. Veenhuis, S. Subramani, and J. M. Cregg. 2001. Pichia pastoris Pex14p, a phosphorylated peroxisomal membrane protein, is part of a PTS-receptor docking complex and interacts with many peroxins. Yeast **18**:621-641.

Thor D, Xiong S, Orazem CC, Kwan A, Cregg JM, **Lin-Cereghino J**, and Lin-Cereghino GP. 2005. Cloning and characterization of the *Pichia pastoris MET2* gene as a selectable marker. FEMS Yeast Research 5: 935-942.

Lin-Cereghino J, Wong WW, Xiong S, Giang W, Luong LT, Vu J, Johnson SD, and Lin-Cereghino GP. 2005. Condensed protocol for competent cell preparation and transformation of the methylotrophic yeast *Pichia pastoris*. . BioTechniques 38:44-48

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

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.

*These authors contributed equally to this work.

Invited Reviews and Other Publications:

Lin, J. 1987. The expression of selected oncogenes in the tumors of SV11 transgenic mice. A.B. Thesis, Princeton University.

Lin, J. and D. R. Helinski. 1991. Mutational analyses of TrfA, the replication initiation protein of RK2. From: Proceedings of the Fallen Leaf Lake Conference on Promiscuous Plasmids in Gram-negative and -positive bacteria. Plasmid **25**:229.

Toukdarian, A., **J. Lin**, and D. R. Helinski. 1992. TrfA initiator protein mutants altered for binding to plasmid RK2 origin. Proceedings of the 1992 Keystone Symposium: Molecular Mechanisms in DNA Replication and Recombination.

Lin Cereghino, J. 1992. Structure-function analyses of a broad host-range plasmid replication initiation protein. Ph.D. Thesis, University of California, San Diego.

Toukdarian, A. E., **J. L. Cereghino**, and D. R. Helinski. 1994. An *in vivo* assay for a plasmid replication initiation protein. In Methods in Molecular Genetics, Volume 3: Molecular Microbiology Techniques, pp. 359-369.

Stack, J. H., P.K. Herman, D. B. DeWald, E. G. Marcusson, **J. L. Cereghino**, B. F. Horazdovsky, and S. D. Emr. 1996. Novel protein kinase/phosphatidylinositol 3-kinase complex essential for receptor-mediated protein sorting to the vacuole in yeast. In Cold Spring Harbor Symposium on Quantitative Biology LX: The Dynamics of Protein Trafficking and Stability, pp.157-170.

Lin Cereghino, J. and J. M. Cregg. 2000. Heterologous protein expression in the methylotrophic yeast *Pichia pastoris*. FEMS Microbiology Reviews **24**:45-66.

Cregg, J. M., Lin Cereghino, J., Shi, J. and D. R. Higgins. 2000. Recombinant protein expression in Pichia pastors. Molecular Biotechnology **16**: 23-52.

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.) Volume 23:157-170.

Lin-Cereghino, G. P., **J. Lin-Cereghino**, C. Ilgen, and J. M. Cregg. 2002. Production of recombinant proteins in fermenter cultures of the yeast *Pichia pastoris*. Curr. Opin. Biotech. **13:**329-33

Ilgen C, **Lin-Cereghino J**, and Cregg JM. 2005. Pichia pastoris in Gellissen G (Ed), *Production of Recombinant Proteins: Novel Microbial and Eukaryotic Expression Systems*. Wiley and Sons, pp. 143-162.

Lin-Cereghino, J and G. P. Lin-Cereghino. 2007. Vectors and Strains in J. M. Cregg (Ed.) *Pichia Protocols*. Academic Press. In Press.

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.