

*Curriculum Vitae*  
DEBORAH ENGH LYCAN

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**Education**

Scripps College, Claremont, CA 1971-1973  
B.A. Biology, Magna Cum Laude, University of California San Diego (Revelle College), La Jolla, CA 1975.  
Ph.D. Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, CO 1983

**Professional Experience**

**1983-1986** NIH Postdoctoral Fellow, Department of Microbiology and Genetics, Harvard Medical School.  
**1987-1995** Assistant Professor, Biology Department, Lewis & Clark College. (one year maternity leave)  
**1996-2005** Associate Professor, Biology Department, Lewis & Clark College  
**1997-1999** Chair, Biochemistry and Molecular Biology Program, Lewis and Clark College  
**2002-2006** Chair, Biochemistry and Molecular Biology Program, Lewis and Clark College  
**2006-** Full Professor, Joint appointment in Biology Department and Biochemistry/Molecular Biology Program, Lewis and Clark College  
**2006-2008** Chair, Biology Department, Lewis and Clark College  
**2008-2010** Director, Lewis and Clark's Howard Hughes Medical Institute Undergraduate Science Education program

**Other Professional Activities and Awards**

**1991** Burlington Northern Faculty Achievement Award for Teaching-Finalist. Lewis and Clark College.  
**1996** Project Kaleidoscope Faculty for the 21<sup>st</sup> Century for faculty leaders in science teaching innovation  
**1991** Junior Sabbatical Visiting scientist in Dr. Linda Breeden's lab, Fred Hutchinson Cancer Research Ctr, Seattle, WA.  
**1996-1997** Sabbatical Visiting Scientist in Dr. Michael Liskay's lab, Department of Molecular and Medical Genetics, Oregon Health Sciences University, Portland, OR.  
**2005** Project Kaleidoscope (PKAL) Summer Leadership Institute for Chairs and Deans  
**2010** Visiting Researcher in Prof. Arlen Johnson's lab, Molecular Genetics & Microbiology, University of Texas, Austin, TX.

**Grants and Fellowships**

**2010-** National Institutes of Health (General Medicine) AREA Grant. "Nuclear Export of the Small Ribosomal Subunit" \$250,000. Principle Investigator.  
**2008-2012** Howard Hughes Medical Institute Undergraduate Science Education Award. Lewis and Clark Institutional grant. \$1.3 million. Contributing author.  
**2006-2010** National Institutes of Health (General Medicine) AREA Grant. "Investigation of the Role of Ltv1 in ribosome biogenesis and export in yeast". \$206,000. Principle Investigator  
**2002-2005** National Institutes of Health (General Medicine) AREA Grant. "Investigating the ankyrin protein Yar1 in yeast stress response" \$144,000. Principle Investigator.  
**1998-2001** Murdock Charitable Trust: College Research Program for Life Sciences. "Investigation of the interaction between the yeast ankyrin repeat protein Yar1 and ribosomal protein S3". \$37,250. Principal Investigator  
**1994-1997** National Institutes of Health, AREA Grant. "The Mechanism of *SWI4/SWI6* Regulated Transcription." \$94,000. Principal Investigator.  
**1997** National Science Foundation, ROA Grant. "Genetic Analysis of Eukaryotic DNA Mismatch Repair Pathways. \$13,708. Co-Principal Investigator with R.M. Liskay.  
**1993-1995** National Science Foundation, ILI Grant. "Development of a project based laboratory sequence in Molecular Biology and Biochemistry." \$93,860. Co-Principal Investigator with J. Lochner.  
**1993-1994** Murdock Foundation Research Grant. "Suppressors of *swi4*." \$22,500. Principal Investigator.  
**1991-1993** National Science Foundation Research Planning Grant. "Negative Control of the Yeast *HO* Gene." \$18,000. Principal Investigator.

**1983-86** National Institutes of Health Postdoctoral Fellowship. "Post-transcriptional Regulation of Histone Gene Expression in Yeast.

### **Research Publications**

Scazzocchio, C., **Lycan, D.**, Hennigan, E., and Taylor, S. (1978). The structural gene for purine hydroxylase II of *Aspergillus nidulans* is adjacent to its cognate regulatory gene. *Heredity* **41**:128.

Sealy-Lewis, H.M., **Lycan, D.**, and Scazzocchio, C. (1979). Product induction of purine hydroxylase II in *Aspergillus nidulans*. *Mol. Gen. Genet.* **174**:105.

**Lycan, D.E.** and Danna, K.J. (1983). Characterization of the 5' termini of purified nascent SV40 late transcripts. *J. Virol.* **45**:264-274.

**Lycan, D.E.** and Danna, K.J. (1984). S1 mapping of purified nascent transcripts of Simian Virus 40. *Mol. Cell. Biol.* **4**:625-633.

**Lycan, D.E.**, M. Osley, and L. Hereford. (1987) Role of transcriptional and post-transcriptional regulation in expression of histone genes in *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* **7**:614-621.

M.A. Osley, J. Gould, S. Kim, **D. Lycan**, and L. Hereford. (1987) Regulation of histone gene transcription in *S. cerevisiae*. In D. Gallwitz and W. Tanner (ed.), *Cell Cycle and Orogenesis*. Springer-Verlag, Heidelberg.

Mary Ann Osley and **Deborah Lycan**. (1987) Trans-acting regulatory mutations that alter transcription of *Saccharomyces cerevisiae* histone genes. *Mol. Cell. Biol.* **7**:4204-4210.

**Deborah Lycan**, Glen Mikesell, Maureen Bunger\* and Linda Breeden. (1994) Differential effects of *Cdc68* on cell cycle-regulated promoters in *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* **14**:7455-7465.

**Deborah Lycan**, Kimberlee Stafford\*, William Bollinger\* and Linda Breeden. (1996) A new *Saccharomyces cerevisiae* ankyrin repeat-encoding gene required for a normal rate of cell proliferation. *Gene* **171**:33-40.

Sandra P. Ewaskow, Julia M. Sidarova, **Deborah Lycan**, J. Craig Emery\* Jorg Hendle, Kam Y.J. Zhang and Linda L. Breeden. (1998) Mutation and Modeling Analysis of the *Saccharomyces cerevisiae* Swi6 Ankyrin Repeats. *Biochemistry* **37**:4437-4450.

Jesse W. Loar\*, Robert M. Seiser, Alexandra E. Sundberg\*, Holly J. Sagerson\*, Nasreen Ilias\*, Pamela Zobel-Thropp, Elizabeth A. Craig, and **Deborah E. Lycan**. (2004) Genetic and biochemical interactions among *Yar1*, *Ltv1* and *Rps3* define novel links between environmental stress and ribosome biogenesis in *Saccharomyces cerevisiae*. *Genetics* **168**:1877-89.

Robert M. Seiser, Alexandra Sundberg\*, Bethany J. Wollam\*, Pamela Zobel-Thropp, Katherine Baldwin\*, Maxwell D. Spector\* and **Deborah Lycan**. (2006) *Ltv1* is required for efficient nuclear export of the ribosomal small subunit in *Saccharomyces cerevisiae*. *Genetics* **174**: 679-691.

Claire A. Fassio\*, Brett J. Schofield\*, Robert M. Seiser, Arlen W. Johnson and **Deborah E. Lycan** (2010) Dominant Mutations in the late 40S biogenesis factor *Ltv1* Affect Cytoplasmic Maturation of the small ribosomal subunit in *S. cerevisiae*. *Genetics* **185**: 199-209.

\*undergraduate co-authors

### **Other Publications**

**Deborah Lycan**. (1998) "The Small College Job: Getting It and Keeping It." *CUR Quarterly*, June issue, 1998.

Michelle N. Bushey, **Deborah E. Lycan** and Patricia E. Videtich. (2001) "How to Get a Tenure-Track Position at a Predominantly Undergraduate Institution." Published by CUR (Council on Undergraduate Research) as the third booklet in their "How To" Series. (750 copies sold as of 4/04). Second printing.

## **National and International Scientific Presentations (last 10 years)**

Brett Schofield<sup>1</sup>, Claire Fassio<sup>1</sup>, Robert M. Seiser<sup>2</sup>, Arlen W. Johnson<sup>3</sup> and Deborah Lycan<sup>1</sup> (2008) Specific mutations in Ltv1 affect 40S ribosome subunit export and cytoplasmic maturation. American Society for Cell Biology, International Meeting, Dec. 2008 in San Francisco, CA

Robert Seiser, Alexandra Sundberg\*, Katherine Baldwin\* and Deborah Lycan (2006) Localization of the yeast protein Ltv1 and its involvement in 40S subunit nuclear export. 7<sup>th</sup> International Conference on Ribosome Synthesis, Warrenton, Virginia.

Robert Seiser, Jesse Loar\* Alex Sundberg\* and Deborah Lycan (2004) Potential roles for Yar1 and Ltv1 proteins in ribosome biogenesis. Yeast Genetics and Molecular Biology Meeting July, 2004. Seattle, WA

Jesse Loar\* and Deborah Lycan. (2003). Genetic and biochemical interactions link the yeast ankyrin repeat protein Yar1 to the stress response and the ribosome. American Society for Biochemistry and Molecular Biology, San Diego, CA International Meeting

Deborah Lycan, Jake Fathman\*, Nasreen Ilias\* and Jesse Loar\* (2001) "The small ankyrin repeat protein Yar1 functions in the yeast stress response". Gordon Research Conference on Stress Induced Gene Expression at Connecticut College

D.E. Lycan, N. Ilias\*, Y. Mishina\* (2000). The *S. cerevisiae* ankyrin repeat protein Yar1p and stress response. American Society for Cell Biology, International Meeting, Dec., 2000 in San Francisco, CA

Nasreen Ilias\* and Deborah E. Lycan. (2000). Investigation of the function of the Yar1p in yeast. Abstract in Proceedings of the Oregon Academy of Sciences.

## **Courses developed at Lewis and Clark**

### **Molecular Biology 311**

Fall 1990 Molecular Biology-this course has undergone numerous revisions

### **Molecular Biology 312 Recombinant DNA Lab Course**

Fall 1994 (project based lab developed with NSF support)

Fall 2003-major revision (development of open-ended independent projects for students derived from projects ongoing in my research lab. Development of poster presentations of student projects)

### **Developmental Biology 412**

Spring 1996

### **Investigations in Cell and Molecular Biology 200 (Intro Bio)**

Spring 1999-Investigations in Cell and Molecular Biology Laboratory- development of 3 open-ended investigative projects (in biochemistry, cell biology and molecular biology)

Spring 2002- development of new lecture content organized around several questions of relevance to students-HIV, genetically modified organisms, obesity and nutrition, health effects of herbicides

### **Human Genes and Disease Biology 320**

Spring 2003 Complete redesign of course to emphasize development of library research and oral presentation skills. Student independent projects investigating published research on a disease of their choice that culminates in a group presentation and a written paper.

## **Non-research Presentations**

- "Job Searches at Small Liberal Arts Colleges." Speaker at Professional Skills Workshop at OHSU. January, 1997.
- Workshop Panelist:" Career issues for new tenure track faculty". CUR National Meeting, June 1998
- "Science in the Liberal Arts Environment." Invited speaker at OHSU Molecular Microbiology and Immunology Dept. Retreat. Columbia River Gorge, October 14, 1999
- Panelist in "Alternative Careers in Science". Yeast Genetics and Molecular Biology Meeting, Seattle WA. July, 2001.
- Panelist 2004 Career Fair, NIH and University of North Carolina, Chapel Hill, North Carolina 2004
- Life at Research-Active Liberal Arts Colleges. Biology Department, UC Santa Cruz. 2010

### **Significant Service (last 10 years)**

**2002-06** Chair: Biochemistry and Molecular Biology Program, Lewis and Clark College

**2005-07** PKAL Leadership Initiative at Lewis and Clark College

**2006-** Institutional Bio-safety Committee

**2006-08** Chair: Biology Department, Lewis and Clark College

**2008-10** Director: HHMI undergraduate education grant to Lewis and Clark College Budget: \$1.3 million

**2009-11** American Society for Cell Biology (ASCB) International Affairs Committee: Chair of Roundtable subcommittee

### **Selected External Reviewing and Consulting Activities (last 10 years)**

- Howard Hughes Medical Institute Predoctoral Fellowship Review Panel: Genetics and Molecular Biology Panel. February 2000.
- External reviewer of faculty scholarship for tenure: multiple files
- Ad hoc Reviewer of various research grant proposals
- External reviewer: Biochemistry Program, Otterbein College, Westerville, Ohio. November 2004
- External reviewer: Biochemistry/Molecular Biology Program, Gustavus Adolphus College, MN. March 2010
- External reviewer: Biochemistry Program, Occidental College, Los Angeles, CA. October 2010

### **Professional Societies**

American Society for Cell Biology (ASCB) (Member for 15 years)

Genetics Society of America (GSA) (Member for 15 years)