

Luz Beatriz (Betty) Gilbert
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OBJECTIVE:

To receive my doctorate within the next year and continue my work in evolutionary genomics.

WORK HISTORY

PhD candidate in the Plant and Microbial Biology Department at U.C. Berkeley, P.I. John Taylor, August 2001-present. My current work involves comparative genomic hybridizations (CGH) in the genus *Neurospora*. Using both experimental and *in silico* methods I evaluated the use of CGH for phylogenetic analysis. I also am analyzing genes found divergent between species by two different microarray platforms.

Research Associate, Salk Institute; Laboratory of Genetics, P.I. Matthew Weitzman, July 1999 to July 2001

I worked as a laboratory technician in Matthew Weitzman's laboratory studying Adeno Assisted Virus (AAV) for gene therapy applications. As the only technician in the lab I assisted graduate students and post-doctoral fellows on many of their projects and trained six undergraduate assistants from the UCSD Department of Biology in basic laboratory techniques. Work I was involved with included two yeast hybrid screens; a one-hybrid screen and a modified two hybrid screen. Other work involved chemi-luminescent detection of viral nucleic, quantitative PCR using SYBR Green chemistry, viral purification, and incorporation of tumor-targeting peptides into recombinant viral capsids.

Harvard University Herbaria, P.I. Michael J. Donoghue, Supervisor: David S. Hibbett, Fall 1997-6/10/99

Performed many laboratory techniques associated with phylogenetic research. Experience with fungal culture techniques, DNA isolation, PCR, sequencing, gel electrophoresis and cloning methods. Trained to use an ABI377 automated sequencer. Familiar with sequence editing procedures and Sequencher editing program.

Summer Research Fellowship; Dept. of Pharmacology, UCSD, June 1997-Sept. 1997. Completed comprehensive cloning project of Phase II Enzyme NAD(P)H Quinoneoxidoreductase2. Experienced with techniques for isolation of RNA, cDNA preparation, PCR, and cloning techniques.

Harvard University Biological Laboratories, Zebrafish Dept., Oct. 1996-May 1997, Part time position with a diverse number of duties mainly involved in the maintenance of the laboratory and care of live specimens exposed to mutagens.

EDUCATION

PhD candidate in Microbiology, Department of Plant and Microbial Biology, U.C. Berkeley, Current.

Harvard University; Bachelors degree in Biology with Honors, Sept. 1995-June 1999.

The Faculty of Arts and Sciences degree in Biology program integrates essential knowledge from the fields of Inorganic and Organic Chemistry, Physics, and Mathematics in addition to Biology. Laboratory experience acquired in a work setting was supplemented and expanded by intensive lab exercises in Inorganic and Organic Chemistry, Molecular Biology, Introductory Genetics, and Experimental Ecology.

SKILLS

Strong analytic and organization skills. I am proficient in Unix and R, the statistical programming language and have some familiarity with Perl. I am also fluent in Spanish.

HONORS AND AWARDS

Ford Foundation Dissertation Fellowship
MSA Alexopoulos Travel Award

NRC Research Council
Mycological Society of America

Current
Aug 2005

Ford Foundation Pre-Doctoral Fellowship	NRC Research Council	Aug 2002-2005
Eugena Cota-Robles Fellowship	U.C. Berkeley	2001-2002
Undergraduate Research Fellowship, Dept. of Biology	Harvard University	Fall 1998
Summer Research Fellowship; Dept. of Pharmacology	UCSD	summer 1997
BECA Foundation Scholarship Recipient		1995-1999

PUBLICATIONS

- 1) David S. Hibbett, Luz Beatriz Gilbert, Michael J. Donoghue(2000). Evolutionary instability of ectomycorrhizal symbioses in basidiomycetes. *Nature*, 407(6803):506-8, 2000 Sep 28
- 2) Grifman, M, Trepel, M, Speece, P, Gilbert, LB, Arap, W, Pasqualini, R and Weitzman, MD (2001). Incorporation of tumor-targeting peptides into recombinant adeno-associated virus capsids. *Mol Therapy*, 3, 964-975.
- 3) Cathomen, T, Stracker, T, Gilbert, L, and Weitzman, MD (2001) A genetic screen identifies a cellular regulator of adeno-associated virus. *Proc Natl Acad Sci U S A*. 2001 Dec 18;98(26):14991-6. Epub 2001 Dec 4.
- 4) Kasuga, T., Townsend, J., Tian, C., Gilbert, L., Mannhaupt, G., Taylor, J., Glass, N.L. Long-oligomer microarray profiling in *Neurospora crassa* reveals the transcriptional program underlying biochemical and physiological events of conidial germination, *Nucleic Acids Research* 33(20): 6469–6485.
- 5) Array Comparative Genomic Hybridizations: Assessing the Ability to Recapture Evolutionary Relationships Using an *In Silico* Approach. Luz B Gilbert, Lee Chae, Charles Yong, Takao Kasuga, John W. Taylor¹. In preparation
- 6) Experimental array CGH Phylogeny: How accurate are Comparative Genomic Hybridization-based trees? Luz B Gilbert, Takao Kasuga, John W. Taylor. Writing in progress
- 7) Identification of divergent genes using two microarray platforms for the genus *Neurospora*. Research in progress.

POSTERS PRESENTED

- 1) *Neurospora* Conference, Asilomar CA March 2002, Construction of *Neurospora* microarray and its Application for Evolutionary Study, Kasuga, T., Gilbert, L.B., Jacobson, D.J., Natvig, D., Glass, L., Taylor, J.W.
- 2) MSA Conference, Asilomar CA July 2003, Comparative Genomics within the Genus *Neurospora* , Luz B. Gilbert, Takao Kasuga, Jeff Townsend, Louise Glass, and John W. Taylor
- 3) Ford Fellows Conference, San Juan, PR October 2003, Comparative Genomics within the Genus *Neurospora* , Luz B. Gilbert, Takao Kasuga, Jeff Townsend, Louise Glass, and John W. Taylor
- 4) *Neurospora* Conference, Asilomar CA March 2004, Comparative Genomics within the Genus *Neurospora*, Luz B. Gilbert, Takao Kasuga, Jeff Townsend, Louise Glass, and John W. Taylor
- 5) Fungal Genetics Meeting, Asilomar CA March 2005, Comparative Genomics within the Genus *Neurospora*: Lessons from Experimental and Simulated Data, Luz B. Gilbert, Lee Chae, Takao Kasuga, Louise Glass, and John W. Taylor
- 6) Ford Fellows Conference, Washington D.C., October 2006, Comparative Genomics within the Genus *Neurospora*: Assessing the Ability to Recapture Evolutionary Relationships, Luz B. Gilbert, Lee Chae, Takao Kasuga, Louise Glass, and John W. Taylor

TALKS:

- 1) Fungal Genetics Meeting, Asilomar CA March 2005, Comparative Genomic Hybridizations: Assessing the Ability to Recover Evolutionary Relationships
- 2) Mycological Society of America and Japan joint meeting, Hilo Hawaii July 2005, Comparative Genomic Hybridizations: Assessing the Ability to Recover Evolutionary Relationships