

# ERIC LYONS

## CURRICULUM VITAE

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### Education

<i>Doctor of Philosophy</i>	Plant Biology, UC Berkeley	2008
	Insights into the evolution of plant genomes	
<i>Masters of Arts</i>	Microbial Biology, UC Berkeley	1999
	Characterizing microbial communities in human cerumen	
<i>Bachelor of Arts</i>	Molecular and Cell Biology: Immunology	1997

### Research Interests

- Genome evolution and dynamics
- Genomics computational systems
- Advanced visualization of genomic data

### Professional Experience

<i>Postdoctoral Research</i>	UC Berkeley, Plant and Microbial Biology	2009-
<i>Graduate Student Research</i>	UC Berkeley, Plant and Microbial Biology	2006-2008
<i>Programmer/Analyst III</i>	UC Berkeley, Plant and Microbial Biology	2005
<i>Senior Scientific Developer</i>	Biotique Systems, Inc.	2004
<i>Computational Biologist</i>	Berlex Biosciences	2002-2003
<i>Research Associate, Bioinformatics</i>	Genencor International, Inc.	2001
<i>Computational Biology Associate</i>	The Molecular Sciences Institute, Berkeley	2000-2001
<i>Graduate Student Research</i>	Pace Lab., University of California, Berkeley	1997-1999
<i>Lab Assistant</i>	Volkman Lab., University of California, Berkeley	1995-1997

### Publications

Paterson AH, et al. (**Lyons E**) The Sorghum bicolor genome and the diversification of grasses. *Nature*. 457(7229):551-556 (2009)

**Lyons E**, Pedersen B, Kane J, Alam M, Ming R, Tang H, et al. Finding and Comparing Syntenic Regions among Arabidopsis and the Outgroups Papaya, Poplar, and Grape: CoGe with Rosids. *Plant Physiol*. 148(4): 1772-1781. (2008)

**Lyons E**, Pedersen B, Kane J, Freeling M. The Value of Nonmodel Genomes and an Example Using SynMap Within CoGe to Dissect the Hexaploidy that Predates the Rosids. *Tropical Plant Biology*. 1(3): 181-190. (2008)

Freeling M, **Lyons E**, Pedersen B, Alam M, Ming R, Lisch D. Many or most genes in Arabidopsis transposed after the origin of the order Brassicales. *Genome Res*. 18: 1924-1937(2008)

Ming, Ray, Shaobin Hou, Yun Feng, et al. (**Lyons E**). The draft genome of the transgenic tropical fruit tree papaya (*Carica papaya* Linnaeus). *Nature* 45: 991-996. (2008)

**Lyons E**, Freeling M. How to usefully compare homologous plant genes and chromosomes as DNA sequences. *The Plant Journal* 53: 661-673 (2008)

Freeling, M., Rapaka, L., **Lyons, E.**, Pedersen, B. and Thomas, B.C. G-boxes, Bigfoot genes and environmental response: characterization of conserved noncoding sequences in Arabidopsis. *The Plant Cell Online* 19, no. 5: 1441. (2007)

Thomas, B.C., Rapaka, L., **Lyons, E.**, Pedersen, B. and Freeling, M. Arabidopsis intragenomic conserved

noncoding sequences. *Proc. Natl. Acad. Sci*, 104, 3348. (2007)

Leung S, et al. (**Lyons E**) Differential inhibition of inducible T cell cytokine secretion by potent iron chelators. *J. Biomol Screen* 10(2):157-67 (2005)

Frank DN, Spiegelman GB, Davis W, Wagner E, **Lyons E**, Pace NR. Culture-independent molecular analysis of microbial constituents of the healthy human outer ear. *J Clin Microbiol*. 41(1):295-303. (2003)

Washburn JO, **Lyons EH**, Haas-Stapleton EJ, Volkman LE. Multiple nucleocapsid packaging of *Autographa californica* nucleopolyhedrovirus accelerates the onset of systemic infection in *Trichoplusia ni*. *J Virol*. 73(1):411-6. (1999)

### **Professional Talks and Lectures**

**Invited Seminar**, Iowa State University, Computational and Systems Biology Summer Institute (2009)

**Invited Seminar**, Iowa State University, Department of Genetics, Development and Cell Biology (2008)

**Ph. D. Finishing Talk, Plant Seminar Series**. University of California, Berkeley (2008)

**Invited Talk**, Specht Laboratory, University of California, Berkeley (2008)

**Invited Seminar**, USDA Western Regional Research Center, Albany (2008)

**Invited Seminar**, The Molecular Sciences Institute (2008)

**Invited Seminar**, Department of Biological Sciences, California State University, Long Beach (2008)

**Selected Talk**, International Maize Meeting (2008)

**Guest Lecturer**, Plant Evolution, UC Berkeley. (2006)

**Invited Seminar**, Hebei Academy of Agricultural and Forestry Sciences, China (2005)

**Invited Lecturer**, Amrita Vishwa Vidyapeetham Center for Biotechnology Kerala, India (2005)

**Guest Lecturer**, Medical Virology, UC, Berkeley extension. (2003)

**Selected Talk**, International Society of Virology (1997)

### **Teaching and Educational Outreach**

*Comparative Genomics Workshop* Iowa State University 2009

*Docent* University of California, Botanical Garden 2008-

*Scientific Reviewer*. UC Berkeley Lawrence Hall of Science 2007

**Science in Global Issues: Genetics**. Science Education for Public Understanding Program.

*Comparative Genomics Workshop* University of California, Berkeley 2006/2007/2008

*Co-Instructor Medical Virology* Extension, University of California, Berkeley Fall 2004/2005/2006

*Perl Programming Workshop* University of California, Berkeley 2005/2006

*Advisor Masters Program  
In Bioinformatics* Amarita Vishwa Vidyapeetham, Kerala India Academic 2005/2006  
School of Applied Science, Centre For Biotechnology

*Mentor for interns* The Molecular Sciences Institute, Berkeley Summer 2002

*Teaching Assistant* University of California, Berkeley 1999

### **Awards and Patents**

CITE award Berlex Biosciences. "Recognition of exemplary contributions to the success of Berlex Biosciences" -- outstanding employee of the year award. (2002)

Methods for modulating proteins not previously known as proteases. Provisional patent granted. Genecore international (2001)

### **Example Web-Based Computational Biology Programs**

CoGe: A new kind of Comparative Genomics <http://synteny.cnr.berkeley.edu/CoGe/>