

Principal Investigator (Last, First, Middle): Purvis, Jeremy E

BIOGRAPHICAL SKETCH

NAME Purvis, Jeremy E		POSITION TITLE Postdoctoral Fellow		
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)				
INSTITUTION AND LOCATION		DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Florida	Gainesville, FL	B.S.	2002	Microbiology and Cell Science
University of Florida	Gainesville, FL	M.S.	2004	Microbiology and Cell Science
University of Pennsylvania	Philadelphia, PA	Ph.D.	2009	Genomics and Computational Biology
Harvard Medical School	Boston, MA	N/A	2010	Systems Biology

POSITIONS AND HONORS:

ACTIVITY/OCCUPATION	BEGINNING DATE (mm/yy)	ENDING DATE (mm/yy)	FIELD	INSTITUTION/COMPANY	SUPERVISOR/ EMPLOYER
Teaching Assistant	01/03	05/03	Microbiology	University of Florida	Dr. Madeline Rasche
Guest Lecturer	01/03	01/03	Microbiology	University of Florida	Dr. Julie Maupin-Furlow
Public School Teacher	08/04	08/05	Mathematics	Manatee County School Board	Nancy High
Guest Lecturer	12/08	12/08	Bioengineering	Univ. of Pennsylvania	Dr. Paul Janmey
Section Leader	06/09	06/09	Systems Biology	Univ. of Pennsylvania	Dr. Scott Diamond
Teaching Fellow	09/09	12/10	Systems Biology	Harvard Medical School	Dr. Peter Sorger

ACADEMIC AND PROFESSIONAL HONORS

2010-2013	Ruth L. Kirschstein National Research Service Award (NIH/NIGMS)
2008-2009	NHGRI Computational Genomics Graduate Fellowship
2008	Computational Molecular Science and Engineering Forum (CoMSEF) Graduate Student Award
2004	James Davidson Graduate Travel Scholarship
2004	American Society for Microbiology Travel Award
2003	President's Award, American Society for Microbiology
1997-2001	Robert C. Byrd Honors Scholarship
1997-1999	University of Florida Honors Program

PEER-REVIEWED PUBLICATIONS:RESEARCH PAPERS

- Gonzalez R, Tao H, **Purvis JE**, York SW, Shanmugam KT, Ingram LO. Gene array-based identification of changes that contribute to ethanol tolerance in ethanologenic *Escherichia coli*: comparison of KO11 (parent) to LY01 (resistant mutant). *Biotechnology Progress* 2003 19:612-23.

2. **Purvis JE**, Yomano LP, Ingram LO. Enhanced trehalose production improves growth of *Escherichia coli* under osmotic stress. *Applied and Environmental Microbiology* 2005 71:3761-9.
3. Liu Y*, **Purvis J***, Shih A, Weinstein J, Agrawal N, Radhakrishnan R. A multiscale computational approach to dissect early events in the Erb family receptor mediated activation, differential signaling, and relevance to oncogenic transformations. (2007). *Annals of Biomedical Engineering* 35(6):1012-25. *equal contribution
4. **Purvis J**, Liu Y, Ilango V, Radhakrishnan R. Efficacy of tyrosine kinase inhibitors in the mutants of the epidermal growth factor receptor through a multiscale molecular/systems model for phosphorylation and inhibition. *Proceedings of Foundations of Systems Biology in Engineering*. 2007.
5. Shah PP, Myers MC, Beavers MP, **Purvis JE**, Jing H, Grieser HJ, Sharlow ER, Napper AD, Huryn DM, Cooperman BS, Smith AB, Diamond SL. Kinetic Characterization and Molecular Docking of a Novel, Potent, and Selective Slow-binding Inhibitor of Human Cathepsin L. (2008) *Molecular Pharmacology* 74(1):34-41.
6. **Purvis J**, Ilango V, Radhakrishnan R. Role of Network Branching in Eliciting Differential Short-Term Signaling Responses in the Hyper-Sensitive Epidermal Growth Factor Receptor Mutants Implicated in Lung Cancer. (2008) *Biotechnology Progress* 24(3):540-53.
7. **Purvis JE**, Chatterjee MS, Brass LF, Diamond SL. A molecular signaling model of platelet phosphoinositide and calcium regulation during homeostasis and P2Y1 activation. (2008) *Blood* 112(10):4069-79.
8. **Purvis JE**, Radhakrishnan R, Diamond SL. Steady-state kinetic modeling constrains cellular resting states and dynamic behavior. (2009) *PLoS Computational Biology* 5(3):e1000298.
9. Chatterjee MS, **Purvis JE**, Brass LF, Diamond SL. Pairwise Agonist Scanning of human platelets reveals the high-dimensional calcium response to combinatorial mediators of thrombosis. (2010) *Nature Biotechnology* 28(7):727-32.
10. Shah PP, Wang T, Kaletsky RL, Myers MC, **Purvis JE**, Jing H, Huryn DM, Greenbaum DC, Smith III AB, Bates P, Diamond SL. A small molecule oxocarbazate inhibitor of human cathepsin L blocks SARS and Ebola pseudotype virus infection into HEK 293T cells. (2010) *Molecular Pharmacology* 78(2):319-24.
11. **Purvis JE**, Karhohs KW, Batchelor E, Loewer A, Lahav G. p53 dynamics control cell fate. *In revision*.

REVIEW ARTICLE

12. Shih A, **Purvis J**, Radhakrishnan R. Molecular Systems Biology: Bridging the Gap through Multiscale Modeling and High-Performance Computing. (2008) *Molecular BioSystems* 4:1142.

BOOK CHAPTER

13. **Purvis JE**, Shih AJ, Liu Y, Radhakrishnan R. Cancer Cell: Linking Oncogenic Signaling to Molecular Structure. (2009) in *Multi-Scale Cancer Modeling*, ed. Deisboeck T. (Chapman & Hall).

PATENT:

Diamond SL, Chatterjee, MS, **Purvis JE**. Methods for Predicting Cellular Signaling Responses to Combinatorial Stimuli. No. PCT/US11/40712, filed June 16, 2011.