CURRICULUM VITAE
ELIZABETH A. PROCTOR

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Education

2013 (expected)	Ph.D., Bioinformatics and Computational Biology with Specialization in Molecular and Cellular Biophysics, University of North Carolina at Chapel Hill
2008	B.S., Honors Physics, Purdue University
2008	B.A., Honors Russian Language and Literature, Purdue University
2006	Summer Study Abroad, Novgorod State University, Russia

Research Experience

2008 - present	Graduate Research Assistant, Department of Biochemistry and Biophysics, University of North Carolina at Chapel Hill Supervisor: Dr. Nikolay V. Dokholyan
2007 - 2008	Undergraduate Researcher, Department of Biology, Purdue University Supervisor: Dr. William A. Cramer
2004 - 2006	Undergraduate Researcher, Department of Chemistry, Purdue University Supervisor: Dr. Jennifer Hovis
2004	Ascarelli Fellow, Department of Physics, Purdue University Supervisor: Dr. Wei Cui

Teaching experience

Spring 2010	Teaching Assistant, GNET 641: Bioinformatics: A Practical Introduction
Fall 2010	Teaching Assistant, BIOC 652: Macromolecular Equilibria

Mentoring

First-year graduate student rotation mentor:
- Adam Friedman, Spring 2011
- Christine Kim, Spring 2012
- Patrick McCarter, Spring 2012
- Rachel Cohen, Summer 2012

HHMI-FSC mentor:
- Jordan Texier, Summer 2012

Undergraduate mentor:
- Jordan Texier, Spring 2013

Honors and Activities

2010 - 2013	Ruth L. Kirschstein National Research Service Award Predoctoral Fellowship, National Institute of Health
2012	F1000Prime Associate Faculty Member Travel Grant, Faculty of 1000
2012	NSF-MCC Travel Award, National Science Foundation and the Materials Computation Center, University of Illinois Urbana-Champaign

2011	Second place poster prize, Colorado Protein Stability Conference
2009 - 2010	Predoctoral Training Fellowship, Curriculum in Bioinformatics and Computational Biology, University of North Carolina at Chapel Hill
2008 - 2009	Program for Molecular and Cellular Biophysics Trainee, University of North Carolina at Chapel Hill
2008	Director's Award for top candidates, Biological and Biomedical Sciences Program, University of North Carolina at Chapel Hill
2008	Student Speaker for 2008 Purdue University Graduation, Section II
2008	Dobro Slovo Slavic Language Honors Society member
2008	Outstanding Senior Award, Department of Foreign Language and Literature (Russian section), Purdue University
2006 - 2008	Purdue University Department of Mathematics tutor
2006 - 2008	Purdue University Department of Physics tutor
2006	Purdue University Department of Foreign Language and Literature (Russian section) tutor
2003 - 2005	Purdue Varsity Track and Field Team (pole vault)
2004	NCAA Big Ten Conference Track and Field All-Academic Team
2003 - 2004	Ascarelli Fellowship, Physics Department, Purdue University
2003 - 2007	National Merit Scholar, Purdue University

Publications

1. **E. A. Proctor**, P. Kota, S. J. Demarest, J. A. Caravella, N. V. Dokholyan. "Highly covarying residues have a functional role in antibody constant domains," *Proteins: Structure, Function, and Bioinformatics*, *in press* (2012).
2. **E. A. Proctor**, P. Kota, S. J. Demarest, J. A. Caravella, N. V. Dokholyan. "Metric to distinguish closely related domain families using sequence information," *Journal of Molecular Biology*, 425: 475-478 (2013).
3. H. Hadi-Alijanvand, **E. A. Proctor**, B. Goliaei, N. V. Dokholyan, A. A. Moosavi-Mohavedi. "Thermal unfolding pathway of PHD2 catalytic domain in three different PHD2 species: Computational approaches," *Public Library of Science ONE*, 7:e47061 (2012).
4. **E. A. Proctor**, S. Yin, A. Tropsha, and N. V. Dokholyan. "Discrete molecular dynamics simulations distinguish the native and native-like binding poses from decoys in difficult drug targets," *Biophysical Journal* 102: 144-151 (2012).
5. O. Dagliyan, **E. A. Proctor**, K. M. D'Auria, F. Ding, and N. V. Dokholyan. "Structural and dynamic determinants of protein-peptide recognition," *Structure* 19: 1837-1845 (2011).
6. R. L. Redler, K. C. Wilcox, **E. A. Proctor**, L. Fee, M. Caplow, and N. V. Dokholyan. "Glutathionylation at Cys 111 triggers dissociation of wild type and FALS mutant SOD1 dimers," *Biochemistry* 50: 7057-7066, (2011).
7. **E. A. Proctor**, F. Ding, and N. V. Dokholyan. "Structural and thermodynamic effects of post-translational modifications in mutant and wild-type Cu, Zn superoxide dismutase," *Journal of Molecular Biology*, 408: 555-567, (2011).
8. H. Hadi-Alijanvand, M. Rouhani, **E. A. Proctor**, N. V. Dokholyan, and A. A. Moosavi-Mohavedi. "A folding pathway-dependent score to recognize membrane proteins," *Public Library of Science ONE*, 6:e16778 (2011).
9. **E. A. Proctor**, F. Ding, and N. V. Dokholyan. "Discrete Molecular Dynamics," *Wiley Interdisciplinary Reviews: Computational Molecular Science*, 1: 80-92 (2011).
10. S. Yin, **E. A. Proctor**, A. A. Lugovskoy, and N. V. Dokholyan. "Fast screening of protein surfaces using geometric invariant fingerprints," *Proceedings of the National Academy of Sciences USA*, 106: 16622-16626, (2009).

11. K. J. Seu, A. P. Pandey, F. Haque, **E. A. Proctor**, A. A. Ribbe, and J. S. Hovis. "Effect of surface treatment on diffusion and domain formation in supported lipid bilayers," *Biophysical Journal*, 92: 2445-2450, (2007).

Poster Presentations

1. **E. A. Proctor**, F. Ding, N. V. Dokholyan. "Structural and thermodynamic effects of post-translational modifications in mutant and wild-type Cu, Zn superoxide dismutase." Colorado Protein Stability Conference, July 19-21, 2011; Breckenridge, Colorado.
2. **E. A. Proctor**, S. Yin, and N. V. Dokholyan. "Ultra-fast screen for protein similarity using geometric fingerprints." From Computational Biophysics to Systems Biology, June 6-8, 2010; Traverse City, Michigan.

Talks

1. UNC Department of Biochemistry and Biophysics Retreat (October 2012)
2. Exploring Protein Interactions through Theory and Experiments Workshop, Lausanne, Switzerland (September 2012)
3. Physics of Protein Folding and Aggregation Workshop, Bressanone, Italy (February 2012)
4. Science in Progress Seminar, University of North Carolina at Chapel Hill, Department of Biochemistry and Biophysics (January 2012)

Professional Service

2012 - present Associate Faculty Member, Faculty of 1000
2011 - present Reviewer for *Public Library of Science Computational Biology*
2011 - present Reviewer for *Proteins: Structure, Function, and Bioinformatics*