

JAMES C. ROBERTSON
Philadelphia Area, PA USA jcrobertsonphd.com
jamescampbellrobertson@gmail.com (541) 227-9540

EXPERIENCE

Research Scientist in Computational Chemistry **2019 - current**
Janssen Research and Discovery, Spring House, PA

NIH IRACDA NY-CAPS Postdoctoral Scholar **2016 - 2019**
Protein Folding Simulations
Laufer Center for Physical and Quantitative Biology, Stony Brook University
Advisor: Ken A. Dill

EDUCATION

Ph.D. Medicinal Chemistry **May 2016**
Molecular Dynamics Simulations of DNA: Force Field Evaluation and Backbone Substate Dynamics In Free and Protein-Bound DNA
University of Utah College of Pharmacy
Advisor: Thomas E. Cheatham, III

B.S. Chemistry with ACS Certificate in Biochemistry **June 2011**
Southern Oregon University, Ashland, OR
Graduated Cum Laude

PUBLICATIONS

- Robertson JC, Perez A, Dill KA. MELD x MD Folds Nonthreadables, Giving Native Structures and Populations. **2018**, *J. Chem. Theory Comput.*, DOI: 10.1021/acs.jctc.8b00886
- Galindo-Murillo R*, Robertson JC*, Zgarbová M, Šponer J, Otyepka M, Jurečka P, Cheatham III, TE. Assessing the Current State of AMBER Force Field Modifications for DNA. **2016**, *J. Chem. Theory Comput.*, 12 (8), 4114-4127. (***co-first authors**)
- Robertson JC, Cheatham III, TE. DNA Backbone BI/BII Distribution and Dynamics in E2 Protein-Bound Environment Determined by Molecular Dynamics Simulations, **2015**, *J. Phys. Chem. B*, 119, 14111-14119.
- Robertson JC, Hurley N, Tortorici M, Ciossani G, Borrello MT, Vellore NA, Ganesan A, Mattevi A, Baron R. Expanding the Druggable Space of the LSD1/CoREST Epigenetic Target: New Potential Binding Regions for Drug-Like Molecules, Peptides, Protein Partners, and Chromatin, **2013**, *PLoS Comp. Biol.*, 9(7):e1003158. doi:10.1371/journal.pcbi.1003158
- Dixon AS, Miller GD, Bruno BJ, Constance JE, Woessner DW, Fidler TP, Robertson JC, Cheatham III TE, Lim CS. Improved Coiled-Coil Design Enhances Interaction with Bcr-Abl and Induces Apoptosis, **2012**, *Mol. Pharm.*, 9, 187-195.

NATIONAL PRESENTATIONS & POSTERS

Presentations:

- “Landing a Tenure Track Faculty Position” **Stony Brook University Center for Inclusive Education Faculty Career Month** Stony Brook, NY *April 2019*

- “Bringing Better Physics to Protein Structure Prediction with MELD-accelerated Molecular Dynamics” **American Physical Society March Meeting** Boston, MA *March 2019*
- “BI/BII Backbone Sub State Dynamics in Protein-bound DNA” **American Chemical Society Spring Meeting** San Diego, CA *Spring 2016*
- “Using Configurational Ensembles to Expand LSD1/CoREST Druggability” **94th Annual AAAS Pacific Division Meeting** Las Vegas, NV *June 2013*
- “Ensemble-Based Virtual Screening of LSD1/CoREST” **SC12 Early Research Showcase, SC12** Salt Lake City, UT *Nov 2012*

Posters:

- “Protein Structures and Populations with MELD x MD” **CASP13** Riviera Maya, MX *December 2018*
- “MELD Folds Nonthreadable Proteins” **IRACDA** Atlanta, GA *July 2018*
- “MELD Folds Nonthreadable Proteins” **Blue Waters Symposium** Sunriver, OR *June 2018*
- “MELD Threads the Needle: Physics-Based Simulations Fold Nonthreadable Proteins” **IRACDA** Birmingham, AL *June 2017*
- “Assessing the Current State of AMBER Force Field Modifications for DNA” **American Chemical Society Spring Meeting** San Diego, CA *Spring 2016*
- “Human Low Molecular Weight Protein Tyrosine Phosphatases: Molecular Dynamics of A and B Isoforms” **International Society of Quantum Biology and Pharmacology President’s Meeting** Telluride, CO *June 2014*
- “Molecular Dynamics Generated Ensemble for Structure-Based Drug Design” **Biophysical Society 58th Annual Meeting** San Francisco, CA *Feb 2014*
- “Ensemble-Based Virtual Screening of LSD1/CoREST” **SC12 Early Research Showcase, SC12** Salt Lake City, UT *Nov 2012*
- “Ensemble-Based Virtual Screening of LSD1/CoREST” **Utah Bioscience Symposium** Salt Lake City, UT *Sep 2012*
- “Primer-Directed Biocement and Kinase Searches from *Phragmatopoma lapidosa* and *Pectinaria gouldii* cDNA” **American Chemical Society Spring Meeting** Anaheim, CA *Spring 2011*

TEACHING EXPERIENCE

Instructor Research and Discovery in STEM for Women in Science and Engineering, Stony Brook University	Fall 2018 Stony Brook, NY
Adjunct Assistant Professor Principles of Chemistry II, SUNY Old Westbury	Spring 2018 Old Westbury, NY
Curriculum Committee College Chemistry I and II, Suffolk County Community College	Spring 2018 Selden, NY
Teaching Assistant Physical and Quantitative Biology, Stony Brook University	Fall 2016 Stony Brook, NY

Teaching Assistant **Spring 2014**
Physiological Chemistry II, University of Utah College of Pharmacy Salt Lake City, UT

Guest Lecturer **Fall 2014**
Organic Medicinal Chemistry, University of Utah College of Pharmacy Salt Lake City, UT

Peer Led Team Learning **2009-2010**
Organic Chemistry, Southern Oregon University Ashland, OR

Pedagogy Workshops and Courses Completed **2014-present**

- Scientists Teaching Science: A Short Course in Best Practices in Science Education • Alan Alda Center for Communicating Science Boot Camp: Improvisation for Scientists & Distilling Your Message • Flipping the Classroom • Building a Fool-Proof Syllabus • Evidence-based Instructional Practices: Process Oriented Guided Inquiry Learning • Evidence-based Instruction: Active Learning/Effective Questioning/Clickers • Overview of Scientific Teaching • Establishing Rapport: Secret Ingredient for Successful Teaching • Active Learning • Classroom Civility • Multimedia in Canvas • Spicing Up Your Lecture

LEADERSHIP, SERVICE, OUTREACH & AWARDS

- \$100 3rd Place: Postdoc Spotlight *Stony Brook University* Fall 2018
- \$5000 Wolf Prize: Excellence in teaching, research, and service *University of Utah* May 2016
- Instructor: Academic Writing Workshops *Stony Brook University* June 2017
- Member and Chair: Student Advisory Committee for Retention, Promotion, and Tenure *University of Utah College of Pharmacy* 2014-2016
- President: Chemistry Club *Southern Oregon University* 2010-2011 (Member 2009-2011)
- National Science Foundation Research Experience for Undergraduates *Coe College* 2010
- AAAS Pacific Division Student Travel Grant 94th *Annual AAAS Pacific Division Meeting Las Vegas, NV* June 2013
- Coyner Graf Memorial Scholarship (1 year of tuition) *Southern Oregon University* 2010-2011
- National Science Foundation Research Experience for Undergraduates Chemistry Leadership Group Travel Award *ACS Spring Meeting* 2011
- Department of Chemistry Outstanding Service Award *Southern Oregon University* 2010-2011
- Department of Chemistry Award in Inorganic Chemistry *Southern Oregon University* 2010-2011

TECHNICAL SKILLS & EXPERTISE

- Molecular dynamics simulations and data analysis primarily with AMBER software; additional experience with computational chemistry packages including OpenMM, NAMD, Gromacs, Gaussian, and the Schrödinger suite
- Utilizing High Performance Computing resources including Blue Waters at NCSA, and the following through XSEDE: Stampede, Maverick, Gordon, Comet, Keeneland, and Kraken
- Proficient in Linux, Python, bash, LaTeX, and tcl
- Familiarity with C++, R, html, perl, SQL, git, and methods in machine learning and data science
- Familiarity with instrumentation: NMR, GC-MS, FT-IR, ICP-OES, UV-Vis, capillary DNA

sequencer, and thermal cyclers

MEMBERSHIPS & AFFILIATIONS

- American Chemical Society
- American Chemical Society Computers in Chemistry Division
- American Physical Society
- Biophysical Society
- American Association for the Advancement of Science
- New York Academy of Sciences