James C. Robertson

CONTACT INFORMATION

Laufer Center for Physical and Quantitative Biology, Stony Brook University
Stony Brook, NY 11794
jamesr@mind.net
www.linkedin.com/in/jamescrobertson1

EXPERIENCE

NIH IRACDA NY-CAPS Postdoctoral Scholar **Since June 2016**
Laufer Center for Physical and Quantitative Biology, Stony Brook University
Advisor: Ken Dill

EDUCATION

Ph.D., Medicinal Chemistry, *Biomolecular Simulations* **May 2016**
University of Utah College of Pharmacy
Advisor: Thomas E. Cheatham, III

B.S. Chemistry with American Chemical Society Certificate in Biochemistry **2011**
Southern Oregon University, Ashland, OR
Graduated Cum Laude

PUBLICATIONS

4. 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. *J. Chem. Theory Comput.*, Just Accepted Manuscript, DOI: 10.1021/acs.jctc.6b00186
3. 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.
2. 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
1. 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.

TEACHING EXPERIENCE

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

- Prepared and taught 5 lectures on transcription, translation, DNA replication, and viruses
- Graded assignments and exams; helped write exam questions
- Instructed students on difficult concepts and course material during office hours

Guest Lecturer **Fall 2014**
Organic Medicinal Chemistry, University of Utah College of Pharmacy Salt Lake City, UT
- Delivered two lectures on cholinergics

Student Mentor **2009-2010**
Organic Chemistry, Southern Oregon University Ashland, OR
- Led workshops to solve organic chemistry review problems
- Selected by faculty to lead the workshops

Workshop Participant **Fall 2014**
Center for Teaching and Learning Excellence Annual Teaching Symposium, University of Utah Salt Lake City, UT
- Active Learning • Classroom Civility • Multimedia in Canvas • Spicing Up Your Lecture

NATIONAL PRESENTATIONS & POSTERS

- Presentation: "BI/BII Backbone Sub State Dynamics in Protein-bound DNA" **American Chemical Society Spring Meeting** San Diego, CA, *Spring 2016*
- Poster: "Assessing the Current State of AMBER Force Field Modifications for DNA" **American Chemical Society Spring Meeting** San Diego, CA, *Spring 2016*
- Poster: "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*
- Poster: "Molecular Dynamics Generated Ensemble for Structure-Based Drug Design" **Biophysical Society 58th Annual Meeting** San Francisco, CA, *Feb 2014*
- Presentation: "Using Configurational Ensembles to Expand LSD1/CoREST Druggability" 94^{th} **Annual AAAS Pacific Division Meeting** Las Vegas, NV, *June 2013*
- Presentation and Poster: "Ensemble-Based Virtual Screening of LSD1/CoREST" **SC12 Early Research Showcase, SC12** Salt Lake City, UT, *Nov 2012*
- Poster: "Ensemble-Based Virtual Screening of LSD1/CoREST" **Utah Bioscience Symposium** Salt Lake City, UT, *Sep 2012*
- Poster: "Primer-Directed Biocement and Kinase Searches from *Phragmatopoma lapidosa* and *Pectinaria gouldii* cDNA" **American Chemical Society Spring Meeting** Anaheim, CA, *Spring 2011*

HONORS & AWARDS

- Wolf Prize for excellence in teaching, research, and service, University of Utah, **May 2016**
- AAAS Pacific Division Student Travel Grant, 94^{th} Annual AAAS Pacific Division Meeting, Las Vegas, NV, **June 2013**
- Coyner Graf Memorial Scholarship, Southern Oregon University, **2010-2011**
- National Science Foundation Research Experience for Undergraduates Chemistry Leadership Group Travel Award, **Spring 2011**
- Southern Oregon University Department of Chemistry Outstanding Service Award, **2010-2011**
- Southern Oregon University Department of Chemistry Award in Inorganic Chemistry, **2010-2011**

LEADERSHIP & SERVICE

- Student Advisory Committee for Retention, Promotion, and Tenure; University of Utah College of Pharmacy, *Member and Chair* **2014-2016**
- Tutoring PharmD Students for Physiological Chemistry II (MDCH 5120); University of Utah, **Spring 2014**
- Biological Chemistry Student Retreat Organizing Committee; University of Utah, **2012-2013**
- Chemistry Club President; Southern Oregon University, **2010-2011** *(Member 2009-2011)*

TECHNICAL SKILLS & EXPERTISE

- Molecular dynamics simulations and data analysis primarily with the AMBER software suite; additional experience with NAMD and Gromacs
- Utilizing HPC resources including Blue Waters at NCSA, and the following through XSEDE: Stampede, Maverick, Gordon, Comet, Keeneland, and Kraken
- Proficient in bash, awk, VMD, xmgrace, LaTex, and tcl
- Familiarity with C++, python, html, perl, R, SQL, git, and parallel programming

ADDITIONAL RESEARCH EXPERIENCE

Baron Lab **2012-2014**
University of Utah, Department of Medicinal Chemistry Salt Lake City, UT
Advisor: Riccardo Baron

- Biomolecular Simulations, Computational Drug Discovery

Biological Chemistry Program 1^{st} Year Rotations **2011-2012**
University of Utah Biological Chemistry Graduate Program Salt Lake City, UT

- Cheatham Lab • Rainier Lab • Sigman Lab • Ireland Lab • Baron Lab

National Science Foundation Research Experience for Undergraduates Summer 2010
Coe College Chemistry Department Cedar Rapids, IA
Advisor: Maria A. Dean

- Investigating marine worm protein bio-cement using bioinformatics and scanning electron microscopy

Senior Capstone Research Project **2010-2011**
Southern Oregon University Ashland, OR
Advisor: Hala G. Schepmann

- Natural product extraction and characterization from *Mahonia aquifolium*

Lab Assistant **2008-2009**
Southworth Mycorrhizae Lab, Southern Oregon University Ashland, OR
Advisor: Darlene Southworth

- Sample collection, DNA amplification via PCR, DNA sequencing and analysis

MEMBERSHIPS & AFFILIATIONS

- American Chemical Society, **Since 2008**
- American Chemical Society Computers in Chemistry Division, **Since 2012**
- Biophysical Society, **Since 2013**
- American Association for the Advancement of Science, **Since 2013**