Dima A. Sabbah, B. Pharm., Ph.D.

986025 Nebraska Medical Center, Omaha, Nebraska, 68198-6028
University of Nebraska Medical Center, College of Pharmacy, Department of Pharmaceutical Sciences
Tel: 402-559-4302 (lab), 313-717-2834 (cell phone)
Email: dsabbah@unmc.edu , dima_sabbah@yahoo.com

Professional Experience

I look for a research and development position in the pharmaceutical industry that takes the advantages of extensive experience in computational chemistry and drug design.

Graduate Research Assistant, Aug 2007- May 2012, University of Nebraska Medical Center

- Homology modeling of phosphoinositide -3- kinases (PI3Ks) using MOE
- Pharmacophore Generation for PI3Kα selective inhibitors using MOE
- Pharmacophore Search against the National Cancer Institute database using MOE
- Molecular Dynamic simulations for the kinase domains of PI3Ks using the AMBER 10 package
- Calculating the binding free energies of prospective inhibitors using the MM/GBSA (molecular mechanics/ generalized born surface area) method in AMBER10
- Recruiting the computational alanine- scanning approach to calculate the relative change in free energy of binding (ΔΔ G bind) for the alanine mutants of binding residues in the protein using MM/GBSA in AMBER10
- Docking studies for PI3K inhibitors using Glide dock in MAESTRO
- Design and Synthesis of novel PI3Kα inhibitors
- Molecular Dynamic simulations for 16 models of β-secretase protein using the AMBER 10 package

Lecturer, 2004 - 2007, College of Pharmacy, AL-Zaytoonah Private University of Jordan, Amman, Jordan

- General Chemistry, Pharmaceutical Organic Chemistry, Pharmaceutical Analytical Chemistry, Pharmaceutical Medicinal Chemistry II, Pharmaceutical Medicinal Chemistry I lab, Pharmaceutical Analytical Chemistry Lab, Phytochemistry Lab, Pharmaceutics I Lab, Pharmaceutical Physical Lab I, Microbiology, Microbiology Lab, Parasitology Lab, Pharmaceutical Microbiology Lab.

Teaching Assistant, 1996 – 2004, College of Pharmacy, AL-Zaytoonah Private University of Jordan, Amman, Jordan

- Pharmacognosy Lab, Phytochemistry Lab, Pharmaceutical Organic Chemistry Lab, Pharmaceutical Analytical Chemistry Lab, Pharmaceutical Medicinal Chemistry Lab, Pharmaceutical Microbiology Lab, Pharmaceutical Biochemistry Lab.

Technical Skills

- Molecular Modeling Software (MOE, MAESTRO , PYMOL and AMBER)
- Computer Skills in MS Word, MS Excel, Power Point, and basic Internet Skills
- Chemical : Nuclear Magnetic Resonance Spectroscopy, Gas Chromatography Mass Spectroscopy

Education

2007-2012 Ph.D. in Pharmaceutical Sciences, University of Nebraska Medical Center (UNMC), NE, USA. Thesis Supervisors: Profs. Jonathan L. Vennerstrom and Haizhen Zhong. Thesis Title: Computational Studies and Inhibitors of PI3Kα.

2009-2011 Side Project: Modeling the protonation states of β-secretase Binding Pocket.

2001-2003 M.S. in Pharmaceutical Sciences, University of Jordan (UJ), Amman Jordan. Thesis Supervisor: Professor Ali M. Qaisi. Thesis Title: Synthesis of Some Novel Nitrofuran Derivatives of Potential of Potential Antimicrobial Activity.

June 1996 Bachelor of Pharmacy, University of Jordan (UJ), Amman Jordan.

Peer Reviewed Abstracts (8 Published Abstracts)

1. ACS Denver National Meeting, August 28 – September 1, 2011. Poster Presentation: Investigation of phosphoinositide 3-kinases binding pocket using mm-pbsa
2. TeraGrid '11, July 18-21, 2011, Salt Lake City, Utah. Poster Presentation: Modeling of PI3K using Molecular Dynamic Simulations on UNL Cluster
3. The Nebraska Academy of Sciences, April 15, 2011, Lincoln, Nebraska. Oral Presentation: Determination of β-secretase binding site charge employing MD simulation and molecular docking
4. ACS Anaheim National Meeting, March 27-30, 2011. Poster Presentation: Discovery of Novel Inhibitors of Phosphoinositide-3-Kinases
5. The 45th Midwest Regional Meeting of the ACS, October 27-30, 2010.Poster Presentation: Pharmacophore Model, Database Search, Docking Study and Biological Assays for Novel PI3Kα Inhibitors
6. AAPS Graduate Student Symposium in Drug Design and Discovery, November 8-12, 2009. Oral and Poster Presentations: Selectivity Studies of PI3K Inhibitors by Molecular Docking. This work is honored by the AAPS. "Graduate Student Symposium Award in Drug Design & Discovery"
7. The Nebraska Academy of Sciences, April 17, 2009, Lincoln, Nebraska. Oral Presentation: Homology Modeling and Docking Studies of PI3Kα/γ
8. The 43 rd ACS Midwest Regional Meeting, October 8-11, 2008. Oral Presentation: Computational Studies and Inhibitors Design of PI3Kα

Invited Speaker

1. Chemistry Department, University of Nebraska at Omaha, November 8, 2010. Oral Presentation: Discovery of Novel Inhibitors of Phosphoinositide 3-Kinases
2. Chemistry Department, University of Nebraska at Omaha, October 5, 2009. Oral Presentation: Selectivity Studies of PI3K Inhibitors by Molecular Docking

Peer Reviewed Scientific Articles (3 Submitted/Accepted/Published Peer Reviewed Articles)

Modeling The Protonation States of β-secretase Binding pocket. (In review)

Investigation of Phosophoinositide 3-Kinases Binding Pocket Using MM_PBSA. (In review)

1. **Sabbah D.A.,** Simms N.A., Brattain M.G., Vennerstrom J.L., Zhong H. Biological evaluation and docking studies of recently identified inhibitors of phosphoinositide-3-kinases. *J. Bioorg. Med. Chem.*2012, 22, 876-880.
2. **Sabbah D.A.**, Brattain M.G., Zhong H. Dual Inhibitors of PI3K/mTOR or MTOR-Selective Inhibitors: Which way Shall We Go? *J. Current Medicinal Chemistry* 2011, 18, 5528-5544.
3. **Sabbah D.A.,** Vennerstrom J.L., Zhong H. Docking Studies on Isoform-Specific Inhibition of Phosphoinositide-3-Kinases. *J. Chem. Inf. Model.* 2010, 50, 1887-1898.

Invited Peer Reviewed Book Chapters (1 in revision)

1. Chapter in a book: Drug Design and Discovery Targeting Phosphatidylinositol-3-kinases. The book name is: Practical Applications in Structure-Based Drug Design book. (In revision).

Awards

- 2012 ADDF Young Investigator Scholarship
- 2011 COMP's Denver National Meeting Brochure Cover Image Contest
- 2011 Open Science Grid Summer School and TeraGrid '11 Conference Attendance
- 2009 AAPS Graduate Student Symposium Award in Drug Design & Discovery

GRADUATE ASSISTANTSHIPS & FELLOWSHIPS

- 2010-2012: Bukey Fellowship
- 2007-2012: Graduate Studies Research Assistantship

AFFLIATIONS

- American Chemical Society
- American Association of Pharmaceutical Scientists
- Jordan Pharmaceutical Association

REFERENCES

- Professor Jonathan Vennerstrom, University of Nebraska Medical Center, College of pharmacy, office phone number: 402 559 5362, email: jvenners@unmc.edu, address: 986025 Nebraska Medical Center, Omaha, NE 68198-6025, USA
- Professor Edward Roche, University of Nebraska Medical Center, College of pharmacy, office phone number: 402 559 4645, email: eroche@unmc.edu, address: 986025 Nebraska Medical Center, Omaha, NE 68198-6025, USA
- Professor Haizhen Zhong, University of Nebraska at Omaha, Chemistry Department, office phone number: 402 554 3145, email: hzhong@unomaha.edu, address: 6001 Dodge Street, Omaha, NE 68182, USA