

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

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Professional Experience

I look for an academic position in a high reputable school that takes the advantages of extensive experience in computational chemistry and drug design.

Assistant Professor, October 2012-Present, College of Pharmacy, Al- Zaytoonah University of Jordan

- Teaching Medicinal Chemistry (I /II) and Drug Design courses for Undergraduates Pharmacy Students.
- Teaching Advanced Medicinal Chemistry, Drug Design, and Research Methodology courses for Postgraduates Master Pharmacy Students.
- Supervisory Committee Member for Master Students.
- Supervise Master Students and their thesis.
- The Chair of the Conference Committee:
 - Organized One day symposium on Cancer, May 15, 2013 entitled "Cancer: Causes, Diagnosis, and Treatment".

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

- Homology modeling of phosphoinositide -3- kinases (PI3Ks) using MOE
- Pharmacophore Generation for PI3K α 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 ($\Delta\Delta G_{\text{bind}}$) 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 PI3K α 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 Design of PI3K α .
- 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 Nitrofurans Derivatives of Potential of Potential Antimicrobial Activity.
- June 1996** Bachelor of Pharmacy, University of Jordan (UJ), Amman Jordan.

Peer Reviewed Abstracts (10 Published Abstracts)

1. The 44th annual PGSRM, June 7th-9th, University of Nebraska Medical Center, Omaha, Nebraska. Structure-based drug design, synthesis, and biological evaluation of a novel scaffold for PI3k α inhibitors
2. The Nebraska Academy of Sciences, April 20th, 2012, Lincoln, Nebraska. Oral Presentation: Synthesis, biological evaluation, and molecular docking studies of novel phosphoinositide-3-kinase (PI3k α) inhibitors
3. ACS Denver National Meeting, August 28 – September 1st, 2011. Poster Presentation: Investigation of phosphoinositide 3-kinases binding pocket using mm-pbsa
4. TeraGrid '11, July 18th-21st, 2011, Salt Lake City, Utah. Poster Presentation: Modeling of PI3K using Molecular Dynamic Simulations on UNL Cluster
5. The Nebraska Academy of Sciences, April 15th, 2011, Lincoln, Nebraska. Oral Presentation: Determination of β -secretase binding site charge employing MD simulation and molecular docking
6. ACS Anaheim National Meeting, March 27th-30th, 2011. Poster Presentation: Discovery of Novel Inhibitors of Phosphoinositide-3-Kinases

7. The 45th Midwest Regional Meeting of the ACS, October 27th-30th, 2010. Poster Presentation: Pharmacophore Model, Database Search, Docking Study and Biological Assays for Novel PI3K α Inhibitors
8. AAPS Graduate Student Symposium in Drug Design and Discovery, November 8th-12th, 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"
9. The Nebraska Academy of Sciences, April 17th, 2009, Lincoln, Nebraska. Oral Presentation: Homology Modeling and Docking Studies of PI3K α/γ
10. The 43rd ACS Midwest Regional Meeting, October 8th-11th, 2008. Oral Presentation: Computational Studies and Inhibitors Design of PI3K α

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 (6 Submitted/Accepted/Published Peer Reviewed Articles)

1. **Sabbah D.A.**, Vennerstrom J.L., Zhong H. Binding Selectivity Studies of Phosphoinositide 3-Kinases Using MM-GBSA. *J. Chem. Inf. Model.* 2012, 52, 3213–3224.
2. **Sabbah D.A.**, Simms N.A., Dong, Y., Ezell, E.L., Brattain M.G., Vennerstrom J.L., Zhong H. *N*-phenyl-4-hydroxy-2-quinolone-3-carboxamides as selective inhibitors of mutant H1047R phosphoinositide-3-kinase (PI3K α). *Bioorg. Med. Chem.* 2012, 20, 7175–7183.

3. **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.
4. **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.
5. **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.
6. **Sabbah D.A.**, Vennerstrom J.L., Zhong H. Modeling the Protonation States of β -secretase Binding pocket. (to be submitted)

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

AFFILIATIONS

- American Chemical Society
- American Association of Pharmaceutical Scientists
- US National Association of Professional Women
- 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