



SAMAR HELMY RIZK, Ph.D.

### **CONTACT INFORMATION:**

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### **EDUCATION:**

**Doctor of Philosophy, Biochemistry** **2013**

The Graduate Center of City University of New York, New York, USA

*Dissertation title:* "Molecular Interactions of Adipocyte Fatty Acid-Binding Protein with Activating and non-Activating Ligands: Protein Oligomerization and Ligand Binding Sites"  
*Committee:* Professors Ranajeet Gose, Probal Banerjee, Ronald Koder, Judith Storch and Ruth stark (Supervisor)

**Master of Philosophy, Biochemistry** **2008**

The Graduate Center of City University of New York, New York, USA

**Diploma in Biochemistry** **2006**

Cairo University, Cairo, Egypt

**Bachelor of Pharmaceutical Science** **1999**

Faculty of Pharmacy, Cairo University, Egypt

### **TEACHING EXPERTISE:**

I am involved as a mentor in a volunteer position with both the Junior Academy and The Next scholars programs that are affiliated with New York Academy of science. My responsibilities include advising students that are enrolled in projects designed by NYAS in an effort to engage students across the world in STEM fields. It is a satisfying experience being able to guide and inspire these students to bring out their capabilities.

I was also Lecturer in City college of New York for a General Chemistry course of 165 students, for which I was responsible for constructing the course and syllabus, preparing and presenting the lecture materials, exams and quizzes, and preparing a complete body of weekly online homework assignments that corresponds to the instructional material of the course. My responsibilities included workshop preparation and management, for which I met with the workshop coordinator and peer leaders to prepare workshop problems and solutions that would help the students become familiar with problem sets throughout the course. A total of seven weekly workshops (two hours duration each) were taught by the leaders to a maximum of 24 students. The material discussed in the workshops was universal and unified to span a range of complexity and broaden student exposure to the curriculum. The course received strongly positive feedback from the students as well as the Chemistry Department Chair and faculty supervisors.

### **TEACHING/ RESEARCH EXPERIENCE:**

**Biochemistry Assistant Professor** **September 2022- Current**

*Department of Biochemistry, Faculty of Pharmacy and Faculty of Dentistry, Ahram Canadian University, Egypt*

- Instructor of Biochemistry 1 and 2 courses
- The course provided an in-depth instruction of the fundamental laws and calculations of Biochemistry. Topics included Blood, Proteins and Protein denaturation, Enzymes.
- Supervising lab courses including Bio1, Bio 2 Clinical Biochemistry labs in Faculties of Pharmacy and Faculty of Dentistry.

**Biochemistry Lecturer** **October 2021- Current**  
*Department of Biochemistry, Faculty of Pharmacy, Galala University, Egypt*

- Instructor of Biochemistry Lecture
- The course provided an in-depth instruction of the fundamental laws and calculations of Biochemistry. Topics included Blood, Proteins and Protein denaturation, Enzymes.

**Mentor (volunteer Position)** **2017 - Current**  
*The Junior Academy of the New York Academy of Science (NYAS)*

- Responsible for giving students feedback regarding their project designs and giving possible directions
- Sharing resources relevant to student projects.
- Respond to students' questions and inquiries.

**Post doctoral fellow** **September 2013 – September 2014**  
*Prof. Ruth Stark lab, The City College of New York of City University of New York, USA*

- Worked on a 15 kDa protein (adipocyte fatty acid binding protein, AFABP) that is involved in fatty acid transport and metabolism and plays a central role in the development of diabetes and atherosclerotic cardiovascular disease.

**Adjunct Lecturer** **January – June 2013**  
*Department of Chemistry, The City College of New York of City University of New York, USA*

- Instructor of General Chemistry Lecture CHEM-10301 for one full term before submitting my thesis and moving to Canada in September
- The course provided an in-depth introduction to the fundamental laws and calculations of chemistry. Topics included measurement; stoichiometry; the gaseous state; thermochemistry; atomic structure; chemical bonding; redox reactions; solids, liquids and intermolecular forces.

**Research Assistant** **January 2008 – September 2013**  
*Prof. Ruth Stark lab, The City College of New York of City University of New York, USA*

- Worked on a 15 kDa protein (adipocyte fatty acid binding protein, AFABP) that is involved in fatty acid transport and metabolism and plays a central role in the development of diabetes and atherosclerotic cardiovascular disease.

**Adjunct Teaching Assistant** **2008 - 2013**  
*Department of Chemistry, The City College of New York of City University of New York, USA*

- General chemistry lab CHEM-10301 instructor
- This course introduces students to some of the most widely used experimental procedures in chemistry allowing them to gain familiarity with some equipment used frequently in chemistry. It also introduces students to common measurement methods, including visible spectroscopy and titration.
- Biochemistry short lecture and lab instructor for medical students in Sophie Davies School of Biomedical education.

**Adjunct Teaching Assistant** **2006 - 2008**  
*Department of Chemistry, College of Staten Island, USA*

- General chemistry lab instructor
- This course introduces students to some of the most widely used experimental procedures in chemistry allowing them to gain familiarity with some equipment used frequently in chemistry. It also introduces students to common measurement methods, including visible spectroscopy and titration

**Adjunct Teaching Assistant** **2000 - 2002**

*College of Pharmacy, Sixth of October University, Egypt*

- Biochemistry lab instructor
- This course introduces students to protein purification and characterization, enzyme assays and kinetics.
- Phytochemistry lab instructor
- The Phytochemistry lab teaches students how to find, isolate, and identify plant compounds with medicinal value. It consists of laboratory and workshop components.

**FELLOWSHIPS and AWARDS:**

Postdoctoral Fellow, Prof. Ruth Stark, City College of New York, City University of New York	2013
Lecturer for General Chemistry, City College of New York, CUNY	2013
University Fellowship, Graduate Center, CUNY	<b>2006</b> -
12 <sup>th</sup> Research Centers for Minority Institutions International Conference – Student Travel Award Recipient	2012
Teaching Assistant Award, Excellence in Laboratory Teaching, Chemistry Department, City College of New York, CUNY	2009

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New York Structural Biology Center; Affiliate member	2008 -
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**SELECTED PUBLICATIONS:**

- Wei Shi, Sukanta Dolai, Samar Rizk, Afshan Hussain, Hussnain Tariq, Saadyah Averick, William L'Amoreaux, Abdeslem El Idrissi, Probal Banerjee, and Krishnaswami Raja. "Synthesis of Monofunctional Curcumin Derivatives, Clicked Curcumin Dimer, and a PAMAM Dendrimer Curcumin Conjugate for Therapeutic Applications" *Organic Letters*, 2007, 9, 5461-5464 DOI: 10.1021/ol702370m
- Qiang Wang¥, Samar Rizk¥, Cedric Bernard, David Kam, Judith Storch and Ruth E Stark, "Protocols and Pitfalls in Obtaining Fatty Acid Binding Proteins for Biophysical Studies of Ligand-Protein and Protein-Protein Interactions" *In Preparation*.
- Samar Rizk, Cédric Bernard, and Ruth E. Stark, "Molecular Interactions of Adipocyte Fatty Acid-binding Protein with Activating and Non-activating Ligands: Protein Oligomerization and Ligand Binding Sites" *In Preparation*.

**CONFERENCE/ SCIENTIFIC PRESENTATIONS:**

- Physical Measurement of Ligand Interactions of Adipocyte Fatty Acid-Binding Protein, at 12thRCMI International Conference, Nashville, Tennessee, USA - December 2010 (selected oral presentation)