# Mohammad S. Qneibi Ph.D.

Department of Biochemistry & Molecular Biology

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Education

2013 – 2014 ***Yale University, School of Medicine***, New Heaven, CT, USA

Postdoctoral Training in the Department of Cellular and Molecular Physiology

2009 – 2013Ph.D. ***University at Albany, State University of New York,*** Albany, NY, USA

Doctoral Program in Chemistry, ***Advisor:*** Professor Li Niu

***Thesis Title:*** Structure-Activity Relationship of 2,3-Benzodiazepin-4-ones as

Noncompetitive AMPA Receptor Antagonists

2002 – 2006 B.S. ***Bar Ilan University***, Jerusalem

Chemical Engineering & Biotechnology

**Research Experience**

2016 – present **An-Najah National University, School of Medicine, Department of Biochemistry & Anatomy,** Nablus, Palestine

***Assistant Professor***

* Studying the membrane proteins on the cell surface, where the activity of virtually every cell is regulated by extracellular signals, such as neurotransmitters, hormones, and sensory stimuli.
* Understanding how these membrane proteins mediate signal transmission and transduction
* Investigating how AMPA receptor number and function are regulated at the synapse; and most importantly defining the molecular mechanism of AMPAR regulation by its accessory subunits

2014 – present **The Hebrew University-Hadassah, School of Medicine, Department of Biochemistry & Molecular Biology,** Jerusalem

***Postdoctoral Research Fellow***

* Studying the structure of AMPA receptors requirements for functional interaction with single interactors or combinations thereof
* Investigating the molecular and cellular mechanisms of AMPA receptor synaptic underlying synapse development and function
* Characterizing dynamic interactions and defining the sequence of AMPA receptors association with the interactors during the biosynthetic pathway.

2013 – 2014 **Yale University, School of Medicine, Department of Cellular and**

**Molecular Physiology**, New Haven, CT

***Postdoctoral Associate***

* Studying the molecular basis of mechanosensitivity in ion channels, using the mechano- gates K2P channels as a model
* Using two state-of-the-art approaches to study mechanical responses: high-speed pressure clamp and piezo-driven actuator
* Characterizing novel membrane receptors that perceive environmental inputs and convert them into electrical signals in the somatosensory neurons
* Electrical stimulation of primary mice neuronal cultures

2009 – 2013 **University at Albany, Chemistry Department,** Albany, NY

***Research Assistant***

* Working on glutamate ion channel receptors
* Rapid kinetic investigation of the mechanism of inhibition for a group of 2,3-benzodiazepine compounds, also known as GYKI compounds
* Investigating the mechanism of channel action, inhibition and regulation within the µs-to-ms time domain
* Using patch clamp, coupled with a laser-pulse photolysis technique as my main technical expertise in electrophysiology

2008 – 2009 **Western Kentucky University, Department of Chemistry**, Bowling Green, KY

***Research Assistant***

* Preparation of multi-substituted derivations of aromatic compounds including synthesis and characterization
* Metalation of aryl substrates using strong base (n-BuLi)
* Reaction of organolithium compounds including Metallation, ortho-metallation, Nucleophilic addition and substitution, halogen-metal exchange and transmetallation
* Using analytical techniques including gas chromatography (GC), mass spectrometry (MS)

2005 – 2006 ***Bar Ilan University***, Jerusalem

***Department of Chemical Engineering & Biotechnology***

* Design a soft drink production plant
* Covering every aspects of design, namely to the literature search, to engineering design and to the presentation of the result

2005 – 2006 ***Department of Biological Chemistry***

* Research project of novel materials for photodynamic cancer therapy and their organic synthesis, including full equipped organic chemistry laboratory electronic, analytical and all kinds of glassware

**Teaching experience & Courses**

2016 –*Present* Assistant Professor, School of Medicine & Health Sciences, An-Najah University

* General Chemistry I & II
* Organic Chemistry I & II
* Organic Chemistry I & II Lab
* Biochemistry
* General Biology

2015 – 2016 Visiting Assistant Professor, Chemistry Head Department, Al-Quds Bard College

* Organic Chemistry I & II
* General Chemistry I & II
* Biochemistry

2014 – 2015 Visiting Assistant Professor, Chemistry Department, Birzeit University

* + - * Medicinal Chemistry- Drug design \_*Graduate Course*
      * General Chemistry I
      * Fundamental Organic Chemistry

2009 – 2013 Teaching Assistant, *Organic Chemistry*, Chemistry Department, University at Albany (SUNY)

2011 – 2012 Teaching Assistant, *Biophysical Chemistry*, Chemistry Department University at Albany (SUNY)

2009 – 2012 Tutor, *Organic Chemistry & General Chemistry*, Center for Achievement, Retention and Student Success, University at Albany (SUNY)

**awards & Honors**

2013 Excellence in Teaching, President's Excellence Award, University at Albany

2012 Graduate Travel Award, Department of Chemistry, University at Albany

2011 Author O. Lang Teaching Award, Department of Chemistry, University at Albany

**Memberships in Professional Societies**

2012 – present SIGMA XI-The Scientific Research Society

2012 – present The Biophysical Society

**Articles Published**

1. Matt L., Kirk L.M., Chenaux G., SpecaD.J., PuhgerK.R., PrideM.C., **QneibiM.**, HahamT., BachY.S., SilvermanJ.L., CrawleyJ.N., HellJ.W., Díaz E. (2018) SynDIG4/Prrt1 is required for excitatory synapse development and plasticity underlying cognitive function. **Cell Reports,** 22 (9), 2246–2253. **Impact factor 8.82**
2. **Qneibi M**, Jaradat N, Zaid AN, Abu-Khalaf N, Natsheh A, Hussein F. (2018) Evaluation of taste, total phenols and antioxidant for fresh, roasted, shade dried and boiled leaves of edible Arum palaestinum Bioss. ***Marmara Pharm J.***; 22 (1): 52-58.
3. Yaacov A.B, Gillor M., Haham T., Parsai A., **Qneibi M.** and Bach.Y.S. (2017) Molecular Mechanism of AMPA receptor modulation by TARP/Stargazin. ***Neuron***, 51, 1126–1137. **Impact factor 13.97**
4. Jaradat N.A., Zaid A.N., Al-Ramahil R., Alqub M.A., Hussein F., Hamdan Z., Mustafa M., **Qneibi M.**, Ali I., (2017) Ethnopharmacological Survey of Medicinal Plants Practiced by Traditional Healers and Herbalists for Treatment of Some Urological Diseases in the West Bank/Palestine, ***BMC Complementary and Alternative Medicine***, 17 (1), 255. **Impact factor 2.69**
5. Jaradat N.A., Hussein F., Eldin A.N., Yassin T., Khawaja M., **Qneibi M.**, (2017) Phytochemical and Antibacterial Assessment of Rhagadiolus Stellatus Plant in Jerusalem Area - Palestine. ***Pal. Med. Pharm. J.***, 2, 35-44.
6. **Qneibi M.S**. (2013) Structure-Activity Relationship of 2,3-Benzodiazepin-4-ones as Noncompetitive AMPA Receptor Antagonists, State University of New York At Albany, Ph.D., ***Dissertation***, 180 pages; *Publication Number* *3561135*.
7. **Qneibi, M**. S., Micale, N., Grasso, S., and Niu, L. (2012) Mechanism of Inhibition of GluA2 AMPA Receptor Channel Opening by 2,3-Benzodiazepine Derivatives: Functional Consequences of Replacing a 7,8-Methylenedioxy with a 7,8-Ethylenedioxy Moiety, ***Biochemistry,*** *51*, 1787-1795. **Impact factor: 4.266**

**Published Abstracts**

2014 The Molecular Mechanism of Mechanosensitivity in K2P Channels, *Biophysical Journal.* *In press*.

2013 Mechanism of Inhibition of the GluA2 AMPA Receptor Channel Opening by

2,3-Benzodiazepine Derivatives, *Biophysical Journal, vol. 104, issue 2, p. 273a****.* Impact factor: 3.97**

**Conferences & Presentations**

2016 An-Najah University, Nablus, West Bank*.* Oral workshop titled *“Scientific Research Paper Writing* *for early researchers*”

2016 King's Academy, Amman, Jordan*.* Oral workshop titled *“A training workshop on Scientific Research Paper Writing and Presentation Skills*”

2014 The 58th annual meeting of Biophysical Society, San Francisco, CA. Poster presentation titled “*The Molecular Mechanism of Mechanosensitivity in K2P Channels”*

2013 Yale University, School of Medicine, Cellular & Molecular Physiology Annual retreat, West Haven, CT. Oral presentation titled “*Deciphering the Molecular Mechanism of Mechanosensitivity in K2P Channels”*

2013 Yale University, School of Medicine, Cellular & Molecular Physiology Annual retreat,

West Haven, CT. Poster presentation titled “*Is the Mechanosensitivity of K2P Channels Controlled by their C-Terminal Domain?*”

2013 *The 57th* annual meeting of Biophysical Society, Philadelphia, PA. Poster presentation titled “*Mechanism of Inhibition of GluA2 AMPA Receptor Channel Opening by 2,3-Benzodiazepine Derivatives”*

2011 University at Albany, Life Science Research Symposium, Albany, NY. Oral presentation titled “*Mechanism of Inhibition of GluA2 AMPA Receptor Channel Opening by 2,3-Benzodiazepine Derivatives”*

**Journal Reviewer**

* General Physiology and Biophysics Journal
* Journal ofResearch and Reports in Biochemistry
* Neurology Journal

**Special Courses**

2013 Regulatory Training for Animal Care & Use, Yale School of Medicine, New Haven, CT

2013 Medical Surveillance Program for Animal Handlers, Yale School of Medicine, New Haven, CT

2013 Biosafety - Part 1 & 2, Yale School of Medicine, New Haven, CT

2013 Fundamental of Teaching in Science, Yale University, New Haven, CT

**Laboratory Skills**

**Surgery** Dissection of trigeminal and dorsal root ganglia from mouse

**Electrophysiology** Patch clamp recording in Human embryonic kidney (HEK) 293T cells and Xenopus Oocytes: Whole cell, inside-out, outside-out, dual patch (multiple cells), and electrical stimulation of primary neuronal cultures

**Cell culture** HEK293T cells, Primary culture of trigeminal ganglion neurons, Xenopus Oocytes.

**Biochemistry** SDS-PAGE electrophoresis, PCR of genomic DNA, western blotting

**Chemistry** Organic synthesis, gas chromatography (GC), mass spectrometry (MS)

**Software** P-clamp, Origin, Prism, Adobe Illustrator, MATLAB, Microsoft Office