

## AYMAN K. HAMOUDA, B.PHARM, PH.D

ASSOCIATE PROFESSOR, DEPT. OF PHARMACEUTICAL SCIENCES – FISCH COLLEGE OF PHARMACY- UNIV. OF TEXAS AT TYLER.

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### EDUCATION

#### 2007-2009: RESEARCH FELLOW

Dr. Jonathan B. Cohen's laboratory, Department of Neurobiology-Harvard Medical School.

#### 2007: DOCTOR OF PHILOSOPHY IN PHARMACOLOGY AND NEUROSCIENCE WITH MINOR IN PHYSIOLOGY (GPA=4.0)

Texas Tech University Health Sciences Center (TTUHSC), Lubbock, Texas, USA. **Supervisor:** Dr. Michael P. Blanton.

**Dissertation title:** "Structural Studies with Affinity-Purified Muscle and Neuronal Nicotinic Acetylcholine Receptors"

#### 1998: BACHELOR OF PHARMACY (WITH HONORS). Al-Azhar University-Gaza, Gaza Strip

### EMPLOYMENT HISTORY

ASSOCIATE PROFESSOR, DEPT. OF PHARMACEUTICAL SCIENCES, FISCH COLLEGE OF PHARMACY, UNIVERSITY OF TEXAS AT TYLER	MAR2018-PRESENT
ASSISTANT PROFESSOR, DEPT. OF NEUROSCIENCE AND EXPERIMENTAL THERAPEUTICS, COLLEGE OF MEDICINE, TEXAS A&M HSC	OCT2013- MAR2018
INSTRUCTOR IN NEUROBIOLOGY, HARVARD MEDICAL SCHOOL, BOSTON, MA	AUG2009–OCT2013
RESEARCH FELLOW, NEUROBIOLOGY, HARVARD MEDICAL SCHOOL, BOSTON, MA	APR2007–JUL2009
RESEARCH ASSISTANT, TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER, LUBBOCK, TX	JAN2003-MAR2007
TEACHING ASSISTANT AND LABORATORY INSTRUCTOR, AL-AZHAR UNIVERSITY-GAZA	MAY1998-DEC2002

### CURRENT RESEARCH FUNDS

9/2018 - 7/2019: Presidential Interdisciplinary Grant, University of Texas at Tyler (Role, PI).

4/2018 - 3/2021: Fish College of Pharmacy (FCOP)-University of Texas at Tyler Faculty Research Fund (Role, PI).

4/2018 - 3/2021: University of Texas System Rising STARS Award (Role, PI).

4/2018 - 3/2019: Texas A&M Triads for Transformation. Project ID:791 (Role, Co-PI)

7/2015 - 6/2019: National Institute of Health-1R15NS093590-01 and 7R15NS093590-02 (Role, PI).

### HONORS & AWARDS (SELECTED)

2003-2004	Fulbright Foreign Student Scholarship
2006	Society for Neuroscience Graduate Student Travel Award
2006	Chancellor's Scholarship, Texas Tech University
2007	Alexander D. Kenny Outstanding Graduate Student Award, TTUHSC
2007	Convocation speaker, Graduate School of Biomedical Science–TTUHSC
2009,-10, -11	Seminar Speaker, Department of Neurobiology, Harvard Medical School, Boston, MA
2013	Invited speaker, XIV International Symposium on Cholinergic Mechanisms, Hangzhou, China.
2014	Member, Texas A&M Institute of Neuroscience (TAMIN), Texas A&M University.
2014	Invited speaker, International Brain Research Organization (IBRO)- Neuroscience Conference, Doha, Qatar.
2015	Invited speaker, Research Initiative for Scientific Enhancement (RISE) program, University of Puerto Rico.
2017	Invited speaker, Department of Pharmacology and Neuroscience, Texas Tech University HSC.
2018	Invited speaker, Opioid & Pain Management Conference, Coastal Bend Health Education, Texas.

### GRANT REVIEWER

2018- Early Career Reviewer (ECR) program; Center for Scientific Review (CSR), National Institutes of Health.

2017- American Heart Association (AHA) Study Section member: Cell Transport Basic Science 2 Committee.

2016- New Investigator Award (NIA)-American Association of Colleges of Pharmacy (AACP).

2016- University Research Board Fund-the American University of Beirut.

### JOURNAL REVIEWER

Review editor of Systems Biology section of Frontiers in Neuroscience and Frontiers in Physiology. Ad hoc reviewer for scientific Journals: Journal of Biological Chemistry (JBC), Biochemistry, the Biophysical Journal, Journal of Neuroscience Research, Scientific Report. Research/Education abstract reviewer and poster judge for several scientific/professional societies.

## BOOK CHAPTER:

Selwyn S. Jayakar, Gordon Ang, David C. Chiara, Ayman K. Hamouda\*. Photoaffinity Labeling of Pentameric Ligand-Gated Ion Channels to Identify: A Proteomic Approach to identify Allosteric Ligand Binding Sites. *Neuroproteomics: Methods and Protocols*, Second Edition, ISBN 978-1-4939-6952-4.

## RECENT PUBLICATIONS (\* = CORRESPONDING AUTHOR; # = EQUAL CONTRIBUTIONS)

Deba F., Ali H.I., Tairu A., Ramos K., Ali J.H., **Hamouda A. K.\*** (2018) LY2087101 and dFBr share transmembrane binding sites in the  $(\alpha 4)\beta 2$  Nicotinic Acetylcholine Receptor. *Scientific Reports* 8: 1249.

**Hamouda A. K.\***, Jackson A., Bagdas D., Damaj M. I. (2017) Reversal of Nicotine Withdrawal Signs through Positive Allosteric Modulation of  $\alpha 4\beta 2$  Nicotinic Acetylcholine Receptors in mice. *Nicotine & Tobacco Research* 20:903-907.

Wang Z.J.#, Deba F. #, Mohamed T. S., Chiara D.C., Ramos K., **Hamouda A. K.\*** (2017) Unraveling amino acid residues critical for allosteric potentiation of  $(\alpha 4)\beta 2$ -type nicotinic acetylcholine receptor responses. *Journal of Biological Chemistry*, 292: 9988-10001. **Recommended in F1000Prime:** <https://f1000.com/prime/727558690>

Ranked in the top 5% of all research outputs scored by The Altmetric Attention Score and in the 99<sup>th</sup> percentile compared to outputs of same age and source <https://asbmb.altmetric.com/details/19828251>

Gazova Z., Soukup O., Sepsova V., Siposova K., Drtinova L., Jost P., Spilovska K., Korabecny J., Nepovimova E., Fedunova D., Horak M., Kaniakova M., Wang Z.J., **Hamouda A. K.**, Kuca K. (2017) Multi-target-directed therapeutic potential of 7-methoxytacrine-adamantylamine heterodimers in the Alzheimer's disease treatment. *BBA Molecular Basis of Disease* 1863: 607-619.

Jayakar, S. S., Ang, G., Chiara, D. C., **Hamouda A. K.\*** (2017) Photoaffinity Labeling of Pentameric Ligand-Gated Ion Channels to Identify: A Proteomic Approach to identify Allosteric Ligand Binding Sites. *Methods in Molecular Biology* 1598: 157-197.

**Hamouda A.K.\***, Deba F., Wang Z.J. and Cohen J. B. (2016) Photolabeling a Nicotinic Acetylcholine Receptor (nAChR) with an  $(\alpha 4)\beta 2$  nAChR-selective Positive Allosteric Modulator. *Molecular Pharmacology* 89: 575-584.

Mohamed T. S., Jayakar S.S., and **Hamouda A. K.\*** (2015) Orthosteric and Allosteric Ligands of Nicotinic Acetylcholine Receptors for Smoking Cessation. *Frontiers in Molecular Neuroscience* 8: 71.

**Hamouda, A. K.**, Wang, Z.J., Stewart, D.A., Jain, A.D., Glennon, R.A., Cohen, J.B. (2015) Desformylflustrabromine (dFBr) and [<sup>3</sup>H]dFBr-labeled Binding Sites in a Nicotinic Acetylcholine Receptor. *Molecular Pharmacology* 88: 1-11

**Hamouda A.K.**, Al-Rousan R., and Alkhateeb F.M. (2015) Pharmacy Education in the Palestinian Territories. *American Journal of Pharmaceutical Education* 79 (1) Article 03. **Education-related publication**

**Hamouda, A. K.\***, and Cohen, J. B. (2014) Photoaffinity Labeling of Nicotinic Receptors: Diversity of Drug Binding Sites! *Journal of Molecular Neuroscience* 53: 480-486.

**Hamouda A. K.**, Stewart D. S., Chiara D. C., Savechenkov P. Y., Bruzik K. S. and Cohen J. B. (2014) Identifying Barbiturate Binding Sites in a Nicotinic Acetylcholine Receptor with [<sup>3</sup>H]Allyl-m- Trifluoromethyl-diazirine Mephobarbital, a Photoreactive Barbiturate. *Molecular Pharmacology* 85: 735-746.

**Hamouda, A. K.** Kim, T. and Cohen, J. B. (2013) Physostigmine and Galanthamine Bind in the Present of Agonist at the Canonical and Non-canonical Subunit Interfaces of Nicotinic Acetylcholine Receptors. *Journal of Neuroscience* 33: 485-494.

Pandhare, A., **Hamouda, A. K.**, Staggs, B., Aggarwal, S., Duddempudi, P., Lever, J.R., Lapinsky, D.J., Jansen, M., Cohen, J. B. and Blanton, M. P. (2012) Bupropion Binds at Two Sites in the Torpedo Nicotinic Acetylcholine Receptor Transmembrane Domain: A Photoaffinity Labeling Study with Bupropion Analogue [<sup>125</sup>I]SADU3-72. *Biochemistry* 51: 2425-2435.

**Hamouda, A. K.**, Stewart, D., Husain, S. S., and Cohen, J. B. (2011) Multiple Transmembrane Binding Sites for Trifluoromethyldiazirinyletomidate, a Photoreactive *Torpedo* Nicotinic Acetylcholine Receptor Allosteric Inhibitor. *Journal of Biological Chemistry* 286:20466-20477. **Recommended in F1000Prime:** <https://f1000.com/prime/10866956#recommendations-content>

daCosta, C. J., Sturgeon, R. M., **Hamouda A. K.**, Blanton M. P., and Baenziger, J. E. (2011) Structural Characterization and Agonist Binding to Human  $\alpha 4\beta 2$  Nicotinic Receptors. *Biochemical and Biophysical Research Communications* 407: 456-460