

SAWSAN.ABUHAMDAH,

B.Sc, M.Sc, PhD Neuropharmacology

Assistant Professor

University of Jordan, Faculty of Pharmacy
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I. General Information

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Licensure: Registered Pharmacist
Year Certified: 1993
Country: Jordan
Nationality: Jordanian
Material status: Single

II. Education

2007 University of Durham, United Kingdom
Ph.D. in Neuropharmacology

Thesis Title: Probing novel compound classes and new interacting protein for the mammalian GABA_A receptor.

Supervisor: Dr.Paul L Chazot

Synopsis of Research:

In this research we have characterized the effect of three structurally distinct GABA_AR compound classes, Mefenamic acid, Caloporside and essential oil natural products of Melissa & Lavender and examined in detail the pharmacological effects of a novel GABA_AR interacting protein, GRIF-1. Pharmacological screening of the three compound classes and the molecular pharmacology of a new interacting protein for the mammalian GABA_AR has been carried out using radioligand binding techniques on rat adult forebrain membranes and rat recombinant $\alpha 1\beta 2\gamma 2L$ model of GABA_AR stably expressed in HEK293 cells, in addition molecular modeling

and structure activity relationship was carried out to explore the dimensions and properties of different size substituent's on the structural flexibility in this chemical series. Furthermore immunological approaches were used to study the interacting protein GRIF-1 in more details.

2001 University of Jordan, Jordan
M.Sc in Pharmaceutical Sciences

The study involves studying (33) Credit Hours as follows:

1. **Obligatory courses:** (15) Credit Hours: These include: PHARMACEUTICAL ORGANIC CHEMISTRY, DRUG ANALYSIS AND IDENTIFICATION, DRUG FORMULATION AND DRUG DELIVERY, PHYSICAL PHARMACY AND BIOPHARMACEUTICS AND PHARMACOKINETICS.

2. **Elective Courses:** Studying (9) Credit hours from which I studied the following: NATURAL PRODUCTS CHEMISTRY, MEDICINAL CHEMISTRY AND PHARMACEUTICAL MICROBIOLOGY

3. **Thesis:** 9 Credit hours

Supervisor: Prof. Fatma U. Afifi

Thesis Title: Pharmacological and phytochemical identification of medicinal plants in Jordan.

Synopsis of Research: The research involved the isolation, identification and determination of the biological activities of medicinal plants used in Jordanian traditional medicine.

1993 University of Jordan, Jordan
B.Sc in Pharmacy

The study involves studying (162) Credit hours in basic and specialized pharmaceutical subjects, plus 1440 training hours in hospitals, public pharmacies and pharmaceutical companies.

III. Professional Experiences

1991-1993 Pre-registration pharmacy training, University of Jordan, Amman.

1993-1996 Pharmacist in charge / Al- Yarmouk Pharmacy / Amman.

1996-1997 Pharmacist in charge / Al-Hanna Pharmacy / Amman.

IV. Academic Appointments

- 1997-2001 Laboratory Demonstrator, Faculty of Pharmacy (Full time),
Al-Ahliyya Amman University, Jordan
- 2001-2003 Lecturer in Faculty of Pharmacy (Full time),
Al-Ahliyya Amman University, Jordan
- 2003-2007 Laboratory Demonstrator, Pharmacology & Neuroscience (Part time),
University of Durham, United Kingdom
- 2007-pres. Assistant Professor (Full time), Department of Biopharmaceutics and Clinical Pharmacy
Faculty of Pharmacy, University of Jordan, Jordan

1st April 2008– 31th Dec 2008

- 9 Months Visiting Scientist (Full time)
Granada Medical School, Department of Pharmacology, Spain.
(Erasmus Mundus External Cooperation Window Lot 3) scholarship.

V. Teaching Activity

At Al-Ahliyya Amman University, Jordan:

I was responsible for teaching 3rd, 4th and 5th year pharmacy students practical modules, including Organic chemistry, Medicinal chemistry, Pharmacognosy, Phytochemistry, Toxicology and Industrial pharmacy.

At University of Durham, United Kingdom:

I have demonstrated pharmacology practical's to 2nd year biomedical students, cell biology and anatomy for 2nd year biology students during my PhD study.

At University of Jordan, Faculty of Pharmacy, Jordan:

I'm responsible for lecturing different topics in the field of pharmacology. (Pharmacology I & II for for 3rd year pharmacy students, Pharmacotherapy I & II for 4th year pharmacy student's, Toxicology for 5th year pharmacy students, plus demonstrating Pharmacology & Toxicology labs).

POSTGRADUATE STUDIES SUPERVISION

1. An internal examiner for a M.Sc. dissertation "A Randomized controlled trial to investigate the impact of pharmaceutical care on reducing drug related problems in hospitalized patients". This was submitted on 26 / July/ 2007 at the Faculty of Pharmacy, University of Jordan.
2. An internal examiner for a M.Sc. dissertation "The impact of patient's education about Warfarin on improvement of their basal knowledge regarding its administration and side effects: a study on patients who receive Warfarin at Jordan University Hospital". This was submitted on 2/August /2007 at the Faculty of Pharmacy, University of Jordan.
3. An internal examiner for a M.Sc. dissertation "Screening and evaluation of available hypoglycaemic agents for their potential protective and treating effects of diabetic retinopathy". This was submitted on 5/May /2010 at the Faculty of Pharmacy, University of Jordan.

VI Research Interests:

My current and future research focuses on the identification, characterization and validation of novel drug targets for the treatment of the major acute and chronic CNS pathologies, with particular interest in epilepsy, Parkinson's, Alzheimer's research, neuropharmacology, receptor pharmacology, signal transduction, drug metabolism and pharmacogenetics.

VII. Awards and Honors

Islamic Development Bank, merit scholarship programme for high technology (For 3-YEAR Ph.D. STUDY), University of Durham, PhD Neuropharmacology (2003 - 2007).

Erasmus Mundus External Cooperation Window Lot 3 scholarship. Post doctoral position., Department of Pharmacology/Granada University-Medical School, Granada, Spain (1st April 2008– 31th Dec 2008)

VIII. Memberships in Professional Organizations

- A member in British Pharmacological Society (BPS), since 2003.
- A member in British Neuroscience Association (BNA), since 2003.
- A member in Jordan Pharmaceutical Association since 1993.

IX. Training, Skills & Achievements:

5/Mar-13/ Jun, 2009	Improving Teaching Skills, (90 credit hours) Center of Consultation, University of Jordan
28/ Jun-7/ July 2009	Ms.Excel Advanced Center of Consultation, University of Jordan
29/Feb-2008	University Teaching Plan, Center for Educational Development, University of Jordan.
3-4/Feb-2008	Ways of Evaluation, Center for Educational Development, University of Jordan.
5/Feb-2008	Multiple Choice Questions, Center for Educational Development, University of Jordan.
9/ Jan-23/Mar-2008	Curso de Espanol, Nivel Uno Instituto Cervantes, Amman, Jordan
2006	Basic First Aid University of Durham, United Kingdom
2005	Writing Scientifically, University of Durham, United Kingdom
2005	Preparing to teach large group University of Durham, United Kingdom
2004	Giving your first presentation: oral presentation skills University of Durham, United Kingdom
1993	4 weeks training at the University of Jordan Hospital.
1991-1993	1440 hours of training at Public pharmacies in Amman.

X. Communication & Teamwork:

I have good communication skills gained from giving presentations at university lectures and seminar programs, writing abstracts and presenting posters at various conferences, assisting and supervising the lab work of pharmacy students. I have gained extensive experience of working in a team based involving planning, organization, co-ordination and commitment at faculty of pharmacy, Al-Ahliyya Amman University and Jordan University, However, I'm also capable of working independently on my own initiative.

Computing

Good working knowledge of several packages including Microsoft word, PowerPoint, Graph pad Prism and the Internet.

XI. Publications

Original Research Articles Published in Peer-Reviewed Journals

1. **Abuhamdah, S**, Fuerstner, A, Lees, G and Chazot, PL (2005). Pharmacological binding studies of caloposide and novel congeners with contrasting effects upon [³⁵S] TBPS binding to mammalian GABA_A receptor, *Biochem. Pharmacol.* 70(9), 1382-1388.
2. **Abuhamdah,S.**, Afifi, F.U and Shehadeh, M. (January-February 2005). Simple quality control procedures for selected medicinal plants commonly used in Jordan. *Pharma.Biol.* Volume 43, Number 1, 1-7.
3. Shehadeh, M.B, Afifi, F.U and **Abuhamdah,S.** (2007). Platelet aggregation inhibitors from Aerial Parts of *Ruta Chaplepnensis* grown in Jordan. *Integrative Medicine Insights*, 2, 35-39.
4. M. S. J. Elliott, **S. Abuhamdah**, M-J. R. Howes , G. Lees , C. G. Ballard , C. Holmes , A. Burns f, P. L. Chazot , E. K. Perry and P. T. Francis.(2007). The essential oils from *Melissa officinalis* L. and *Lavandula angustifolia* Mill. as potential treatment for agitation in people with severe dementia. *International Journal of Essential Oil Therapeutics*, volume 1, issue 4, 143-152.
5. **Abuhamdah, Sawsan**; Huang, Liping, Elliott, Mark S.J.; Howes, Melanie Jayn R; Ballard, Clive ; Holmes, Clive; Burns, Alistair; Perry, Elaine K.; Francis, Paul T; Lees, George; Chazot, Paul L.(March, 2008). Pharmacological profile of an essential oil derived from *Melissa officinalis* with anti-agitation properties: focus on ligand-gated channels. *Journal of Pharmacy & Pharmacology*, Volume 60, Number 3,pp. 377-384.
6. **Sawsan.Abuhamdah**, Paul L.Chazot (August, 2008). Lemon Balm and Lavender herbal essential oils: old and new ways to treat emotional disorders? *Current Anaesthesia & Critical Care*, volume 19, issue 4, 221-226.
7. Huang L, **Abuhamdah S**, Howes MJ, Elliot MS, Ballard C, Holmes C, Burns A, Perry EK, Francis PT, Lees G, Chazot PL. (Nov, 2008). Pharmacological profile of essential oils derived from *Lavandula angustifolia* and *Melissa officinalis* with anti-agitation properties: focus on ligand-gated channels. *J Pharm Pharmacol.*; 60(11):1515-22.

Symposium Abstracts

1. L Huang, G Lees, **S.Abuhamdah** and PL Chazot (2006) *ASCEP conference* Australia. Seeking a mechanism of action for essential oils in the treatment of agitation in human dementia (poster presentation).
2. MSJ Elliott, **S.Abuhamdah**, L Huang, EK Perry, C Ballard, G Lees, PL Chazot & PT Francis (2006) *International Conference on Alzheimer's Disease (ICAD)*, Portugal. Essential Oils as Potential Treatment for Agitation in Severe Dementia: Elucidation of the Pharmacological Mechanism of Melissa and Lavender (poster presentation).
3. **S Abuhamdah**, K Brickley, FA Stephenson and PL Chazot (2005) *Biochem. Soc Trans. Molecular determinants of synaptic function: molecules and models* (Southampton University) The influence of rGRIF-1 upon rodent recombinant $\alpha 1\beta 2\gamma 2$ GABA-A receptor pharmacology (Poster communication).
4. **S. Abuhamdah**, K Brickley, FA Stephenson and PL Chazot (2005) *BNA Postgraduate and Early Career Symposium* (Durham University). The influence of a novel GABA_A receptor associated protein, GRIF-1a, upon GABA_A receptor pharmacology (Oral communication).
5. **S.Abuhamdah** and PL Chazot (2005) UK GRAD Programme, Getting your Message Across-Presenting to the Public, Leeds University. Probing new ways to modulate dysfunction of the GABA_A receptor: resetting the balance in the brain (Poster communication) **S Abuhamdah**, A Fuerstner, G Lees and PL Chazot (2004) *Br. J. Pharmacol. (Suppl.)* Newcastle University Meeting. Further characterization of Octyl- β -D-glucoside: a novel modulator of the rodent GABA_A receptor (Poster communication).
6. **S.Abuhamdah**, A Fuerstner, G Lees and PL Chazot (2004) *Br. J. Pharmacol. (Suppl.)* Bath University Meeting. Pharmacological characterization of caloporoside and analogues using [³⁵S] TPBS binding to adult rat forebrain membranes (Poster communication).

XII. Referees

1-Prof. Khaled M. Aiedeh

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2-Prof. Maher Salim

President, Al-Ahliyya Amman University, Al Salt Road, P.O.Box:183, Amman 19328, Jordan. Tel: (+962) 05 3500211/217 Ext: 2100, Fax: (+962) 06 5336033

Email: president@amman.edu.jo

3-Dr. Paul L. Chazot

Senior Lecturer in Neuropharmacology, School of Biological & Biomedical Sciences, Durham University, South Road, Durham, County Durham, DH1, 3LE.

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4-Prof. George Lees

Chair & Head of Department of Pharmacology & Toxicology Otago School of Medical Sciences. University of Otago. P.O.Box: 913, Dunedin, New Zealand.

Tel: (+64) 3-4797265, Fax: (+64) 3-4799140,

Email: george.lees@stonebow.otago.ac.nz

5-Prof. Fatma U. Afifi

Prof.of Pharmacognosy& Phytochemistry, Faculty of Pharmacy, University of Jordan, Amman, Jordan.

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