

Curriculum Vitae

ISSA E. A. AMARA:

Nationality: Libyan

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EDUCATION AND TRAINING:

May, 2008-April, 2013: PhD in Pharmaceutical Sciences, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, Canada.

Thesis title: Modulation of Aryl Hydrocarbon Receptor Regulated-Genes by Mercury.

November, 2011: Completed Doctoral Candidacy Exam.

May, 2002-October, 2003: M. Pharm "Clinical Pharmacy", Pharmacy School, Universiti Sains Malaysia, Pinang, Malaysia.

September, 1996-August, 2001: B. Pharm, Faculty of Pharmacy, University of Tripoli, Tripoli-Libya.

WORKING and TEACHING EXPERIENCES:

A. Working Experience:

April, 2021- Present: Dean of Faculty of Medicine, University of Zintan, Zintan Libya.

April, 2022- December, 2023: General Director of Al-Zintan Trauma and Surgery Teaching Hospital, Zintan Libya.

September, 2020- September, 2023: Assistant Professor and head of Pharmacology Department at Faculty of Medicine, University of Gharyan.

April, 2019- July, 2020: Research Associate at El-Kadi's Lab, Faculty of pharmacy and Pharmaceutical Sciences, University of Alberta, Canada.

March, 2017-March, 2019: Adjunct Professor at the Pharmacy Practice Department, Faculty of Pharmacy, University of Tripoli, Libya.

March, 2017-March, 2019: Deputy Minister of Health, Government of National Accord, Tripoli Libya.

August, 2015-to February, 2017: Assistant Professor at the Clinical Pharmacy Department, College of Pharmacy, Jazan University, Kingdom of Saudi Arabia.

February, 2015-July, 2015: Post-doctoral fellow at Pediatrics Department, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Canada.

October, 2014-January 2015: Community Pharmacy Internship at Shoppers Drug Mart-The Meadows, Store Address: 2350-24 Street Northwest Edmonton, AB, Canada. T6T 0G9.

May, 2013-July, 2014: Post-doctoral fellow at the Cross Cancer Institute, University of Alberta, Edmonton, Canada. At Prof. Roseline Godbout's lab.

B. Teaching Experience: My duties in these courses for undergraduate students, were delivering lectures, teaching laboratory material, marking exams, supervising clinical internship and coordinating some courses through different universities as stated below:

Undergraduate courses at the Faculty of Medicine, University of Gharyan, Gharyan-Libya.

(Academic years 2020 to 2023):

- Pharmacology 1 (General Pharmacology).
- Pharmacology 2 (Cardiovascular Pharmacology).
- Pharmacology 3 (Autacoid, and CNS and ANS pharmacology).
- Pharmacology 4 (Chemotherapy and antiviral pharmacology).
- Pharmacology 5 (Blood and Eye pharmacology).
- Toxicology 1 (Basic and environmental Toxicology).
- Toxicology 2 (Clinical Toxicology).

Undergraduate courses at the Faculty of Pharmacy, University of Tripoli, Tripoli-Libya.

(Academic years 2017 to 2018):

- Pharmacoeconomics for level nine students.

Undergraduate courses at the College of Pharmacy, Jazan University, Jazan, KSA.

(Fall semester 2016/2017):

- Pharmaceutical Care I (541 PHCL) for level nine students
- Pharmaceutical Care II (543 PHCL) for level ten students
- Pharmacoeconomics (557 PHCL) for level ten students

(Winter semester 2016):

- Pharmaceutical Care I (541 PHCL) for level nine students
- Pharmaceutical Care II (543 PHCL) for level ten students

(Fall semester 2015/2016):

- Clinical Skills (351 PHCL) for level six students
- Evidence Based Therapy (556 PHCL) for level ten students.

Undergraduate courses for students at the Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, Alberta, Canada. These courses were given during my PhD program, as a teaching assistant (Academic years 2010-2013).

- Cardiology (PHARM 367), for level six students
- Oncology (PHARM 467), for level eight students
- Also, I had been recognized to supervise many summer students on doing their summer projects (2008-2013).

With holding of my Master degree I have been recruited in the faculty staff member as a Lecturer on the department of Pharmacology, Faculty of Medicine, University of Al-Jabel Al-Gharbi, Zintan, Libya. In this period of time I have taught several courses for medical and dental undergraduate students like:

- Pharmacology 1 (General Pharmacology).
- Pharmacology 2 (Cardiovascular Pharmacology).

- Pharmacology 3 (Autacoid, and CNS and ANS pharmacology).
- Toxicology 1 (Basic and environmental Toxicology).
- Toxicology 2 (Clinical Toxicology).

Also, I have had another chance to teach courses of **clinical pharmacy** and **first aid** for undergraduate pharmacy students, at Tripoli Medical Institute (**Academic years 2005-2007**). Moreover, as a teaching assistant, I have had the opportunity to teach **Physiology laboratory** and marking midterm and final exam for second year medical students at the University of Al-Jabel Al-Gharbi, Libya, from **September to December 2001**.

CLINICAL and PROFESSIONAL EXPERIENCES:

October, 2002-October, 2003: M.Pharm Internship, Pursue different clerkship in different hospital wards, in Pinang Hospital, Pinang, Malaysia.

January, 2004- April, 2007: Clinical Pharmacist Part time job 20 hr/week in Tripoli Medical Center (TMC) Tripoli, Libya.

August, 2016- March 2017: Preceptor for Internship Pharmacy Students at Abu Arish General Hospital, Jazan, KSA.

May, 2018 to Present: GMP and cGMP inspector with Pharmacy and Medical Equipment Department, Ministry of Health, Tripoli-Libya.

ACADEMIC POSITIONS:

Dean of Faculty of Medicine, University of Zintan, Zintan-Libya

Head of Pharmacology Department, Faculty of Medicine, University of Gharyan from September, 2020 to September, 2013.

Acting Dean of Faculty of Dentistry Al-Jabel Al-Gharbi University from March, 2005 to April, 2006.

AWARDS AND HONORS:

2015-2016: Future Scientists Award, Jazan University, KSA, SR 6000.00/Year

2012-2013: Queen Elizabeth II Graduate Scholarships, University of Alberta, \$ 15000.00/Year

2012: Senior Graduate Student award, Pharmacy Research Day, Nov. 13, 2012, \$ 250.00

2012: Top Three Translational Posters at Alberta Graduate Conference, University of Alberta.

2012: Mary Louise Imrie, J Gordin Kaplan & Profiling Alberta's Graduate Students Awards, \$ 500.00

2011: Dr. Ronald Micetich Memorial graduate scholarship. \$ 8800.00

2011: Society of Toxicology 50th annual meeting travel award. \$ 1200.00

2010: Cedarlane Award of Excellence for best poster presentation by a trainee, 13th Annual CSPA Symposium. \$ 500.00

2010: Travel Award (Canadian Society of Pharmaceutical Sciences annual meeting, Vancouver). \$ 500.00

2008: Libyan Government Scholarship. \$ 40000.00/Year for 4 years.

LAB WORK EXPERIENCE:

- Isolation of RNA and proteins from both cells and tissues
- Agarose Gel preparation
- Isolation of mouse primary hepatocytes
- Microsomal and cytosolic preparation
- DNA Bacterial transfection
- siRNA cells transfection
- Transient transfection and luciferase assay
- Real time PCR
- Cell culture technique
- Western blot electrophoresis
- Animal handling technique
- Treatment of Cells with Radiation
- Measurement of different protein activities, such as:
 - 1- Cytochrome P450 (CYP P450), using EROD, MROD and PROD analysis
 - 2- NAD (P) H: Quinone Oxidoreductase-1 (NQO1), Glutathione S-transferase-1(GSTA1), Heme Oxygenase-1 (HO-1), using spectrophotometric assay.
 - 3- Soluble Epoxide Hydrolase (sEH), Epoxyeicosatrienoic acid (EET) and Dihydroxyeicosatrienoic acid (DHET) using LCMS technique.

COURSES WITH CERTIFICATES:

- 1- Animal Handling Course
- 2- Radiation Safety Course
- 3- Workplace Hazardous Materials Information System (WHIMS) Course
- 4- Graduate Ethics Training (GET) Course

PROFESSIONAL ORGANIZATIONS:

- 2017 to present, Head of Food and Drugs safety committee, MOH, Tripoli-Libya.
- 2017 to present, Head of Employee affair committee, MOH, Tripoli-Libya.
- 2017 to present, Head of Central Tenders committee, MOH, Tripoli-Libya.
- 2013-2014- Member, Post-doctoral fellowship Association. "PDFA"
- 2011-2013- Representative at the safety committee of Pharmacy Graduate Students Association. "PGSA"
- 2011- Member, Society of Toxicology. "SOT"
- 2010- Member, Canadian Society of Pharmaceutical Sciences. "CSPS"
- 2010- Member, Society of Free Radical Biology and Medicine. "SFRBM"
- 2002- Member, Libyan Society of Pharmaceutical Sciences. "LSPS"
- 2001- Member, Libyan Pharmacists Syndicate. "LPS"

Publications:

1. **Amara, I.E.**, Elshenawy, O.H., Abdelrady, M., El-Kadi, A.O., 2014. Acute mercury toxicity modulates cytochrome P450, soluble epoxide hydrolase and their associated arachidonic acid metabolites in C57Bl/6 mouse heart. *Toxicology letters*. **(Impact factor: 3.1)**.
2. **Amara I.E.** Anwar-Mohamed, A. and El-Kai, A.O.S. (2013). Posttranslational mechanisms modulating the expression of the cytochrome P450 1A1 gene by methylmercury in HepG2 cells: a role of heme oxygenase-1. *Toxicology Letters* 219: 239-247. **(Impact factor: 3.1)**.
3. Abdelhamid, G., **Amara, I.E.**, Anwar-Mohamed, A., El-Kadi, A.O., 2013. Modulation of cytochrome P450 1 (Cyp1) by vanadium in hepatic tissue and isolated hepatocyte of C57BL/6 mice. *Archives of toxicology*.**(Impact factor: 4.6)**.

My contribution to this publication was around 30%. I helped in performing experiments, data analysis and interpretation, and also helped in preparing the manuscript.

4. Anwar-Mohamed, A., Abdelhamid, G., **Amara, I.E.**, El-Kadi, A.O., 2013. Differential modulation of cytochrome P450 1a1 by arsenite in vivo and in vitro in C57BL/6 mice. *Free radical biology & medicine*. **(Impact factor: 5.7)**.

My contribution to this publication was around 35%. I helped in performing experiments, data analysis and interpretation, and also helped in preparing the manuscript. Finally, I also contributed to the revision requested by journal reviewers.

5. **Amara I.E.**, Anwar-Mohamed A., Abdelhamid G., and El-Kadi A.O.S., Mercury modulates the cytochrome P450 1a1, 1a2 and 1b1 in C57BL/6J mice: in vivo and in vitro studies, *Toxicol. Appl. Pharmacol.* (2012), <http://dx.doi.org/10.1016/j.taap.2012.11.027> **(Impact factor: 4.4)**.
6. **Amara I.E.**, Anwar-Mohamed, A., Abdelhamid G., and El-Kadi, A.O.S., Effect of Mercury on AhR-regulated genes in C57Bl/6 Mice at Different Extrahepatic Tissues. *Food Chem. Toxicol.* <http://dx.doi.org/10.1016/j.fct.2012.04.028> **(Impact factor: 3.0)**.
7. Anwar-Mohamed, A., Abdelhamid G., **Amara I.E.**, and El-Kadi, A.O.S., Differential modulation of aryl hydrocarbon receptor regulated genes by arsenite in the kidney, lung, and heart of C57BL/6 mice. *Arch Toxicol* (2012) 86:897–910 **(Impact factor: 4.6)**.

My contribution to this publication was around 30%. I helped in performing experiments, data analysis and interpretation.

8. Abdelhamid G., **Amara I.E.**, Anwar-Mohamed, A., and El-Kadi, A.O.S., Modulation of Aryl Hydrocarbon Receptor-Regulated Genes by Acute Administration of Ammonium

Metavanadate in an Extrahepatic Tissue of C57BL/6 Mouse. *J. Appl. Toxicol.* (2012)(**Impact factor: 2.5**).

My contribution to this publication was around 40%. I helped in performing experiments, data analysis and interpretation. I also contributed to the revision requested by journal reviewers.

9. **Amara I.E.**, and El-Kadi, A.O.S., Transcriptional Modulation of the NAD(P)H:quinone oxidoreductase 1 by Mercury in Human Hepatoma HepG2 Cells. *Free Radical Biology and Medicine*, 2011 November; 51(9):1675-1685. (**Impact factor: 5.7**).

10. **Amara I.E.**, Anwar-Mohamed A., El-Kadi A.O.S., Mercury Modulates the CYP1A1 at Transcriptional and Posttranslational levels in Human Hepatoma HepG2 Cells. *Toxicology Letters*, 2010 Dec 15;199(3):225-33. (**Impact factor: 3.5**).

11. Aburawi S. M., Ahmed S. S., **Amara I. E.**, Altubuly R. A., (2003). Effect of Nifedipine on Alprazolam-induced Anxiolysis and Brain GABA Level Changes in Albino Rats. *Neurosciences* 2003; Vol. 8 (2): 96-103.

My contribution to this publication was around 60%. I helped in performing experiments, data analysis and interpretation, and also helped in preparing the manuscript. Finally, I also contributed to the revision requested by journal reviewers.

Abstracts in peer-reviewed national and international conferences:

1. **El-Kadi, A.O.**, Amara I.E. and Elshenawy O.H., (2014). Acute mercury toxicity modulates cytochrome P450, soluble epoxide hydrolase and their associated arachidonic acid metabolites in C57BL/6 mouse heart. Accepted by **Experimental Biology Meeting**. April 26-30, 2014. San Diego Convention Center, California. (**International**).

2. **Amara I.E.**, Abdelrady M.K., Elshenawy O.H. and El-Kadi, A.O.S., (2012). Alteration of cytochrome P450 enzymes and their associated arachidonic acid metabolites by mercury in the heart of C57BL/6 mouse. *Pharmacy research day* Nov.13, 2012

3. **Amara I.E.** and El-Kadi A.O. (2012). Differential modulation of cytochrome P450 1a1 by Mercury in C57BL/6 mice: in vivo and in vitro studies. 2nd annual Alberta Graduate Conference, May 3-5, 2012. University of Alberta. Edmonton, Alberta. (**Local**).

4. **Amara I.E.** and El-Kadi A.O. Effect of Mercury on Cytochrome P450 1a1, 1a2 and 1b1 in C57BL/6 Mice at Different Extrahepatic Tissues. (Accepted to be present in the 51th Anniversary **Annual Meeting and ToxExpo**. March 11-15, 2012. Moscone Convention Center in San Francisco, California. (**International**).

5. **Amara I.E.** and El-Kadi A.O. (2011). Effect of Mercury on Nqo1 and HO-1 in C57BL/6 Mice in Different Extrahepatic Tissues. ***Pharmacy Research Day*** (2011), Faculty of Pharmacy and Pharmaceutical Sciences, Edmonton, Canada. **(Local)**.
6. Abdelhamid, G., **Amara I.E.**, Anwar-Mohamed, A. Modulation of Aryl Hydrocarbon Receptor-Regulated Genes by Acute Administration of Ammonium Metavanadate in an Extrahepatic Tissue of C57BL/6 ***Pharmacy Research Day*** (2011), Faculty of Pharmacy and Pharmaceutical Sciences, Edmonton, Canada. **(Local)**.
7. **Amara I.E.** and El-Kadi A.O. (2011). Mercury modulates the cytochrome P450 1a1 in C57BL/6 mice: in vivo and in vitro studies. 50th Anniversary **Annual Meeting and ToxExpo**. March 6-10, 2011. Walter E. Washington Convention Center. Washington, DC. USA. **(International)**.
8. **Amara I.E.** and El-Kadi A. O. (2010). Transcriptional Modulation of the NAD(P)H: quinine oxidoreductase 1 by Mercury in Human Hepatoma HepG2 Cells. November 17-21, 2010. **Society of Free Radical Biology and Medicine (SFRBM's) 17th Annual Meeting** Caribe Royale All Suites Hotel & Convention, Center, 8108 World Center Drive, Orlando FL. 32821 USA. **(International)**.
9. **Amara I.E.** and El-Kadi A.O. Mercury Modulates the CYP1A1 at Transcriptional and Posttranslational levels in Human Hepatoma HepG2 Cells. **The Canadian Society for Pharmaceutical Sciences (CSPS), 13th annual symposium**, June 2-5, 2010 Vancouver, BC, Canada. **(National)**.
10. **Amara I.E.** and El-Kadi A.O. Transcriptional and posttranslational regulation of CYP1A1 gene by Mercury. ***Pharmacy Research Day***. (2009), Faculty of Pharmacy and Pharmaceutical Sciences, Edmonton, Canada. **(Local)**.
11. **Amara I.E.** and Yahya Hassan. Neuroleptic Malignant Syndrome with low dose of Thioridazine. ***Malaysian Pharmacy Scientific Conference***. Bayview Beach Resort, Batu Ferringhi, Penang, Malaysia 31 October – 2 November 2002. **(International)**.
12. **Amara I.E.** and Aburawi S. M. Effect of Nifedipine on Alprazolam-induced Anxiolysis and Brain GABA Level Changes in Albino Rats. ***Third Pharmaceutical Sciences Conference***, (2002), Assiut University, Assiut, Egypt. **(International)**.
13. **Amara I.E.** and Aburawi S.M. Effect of Verapamil on Alprazolam-induced Anxiolysis and Brain GABA Level Changes in Albino Rats. ***Fifth Medical Sciences Conference***, (2001), National Medical Center, Zawiya, Libya. **(International)**.

Manuscripts under preparation:

1. Human Monocytic THP-1 Cell Line is a Reliable Model to Study Drug Metabolizing Enzymes in the blood.
2. Patients' Perception, view and satisfaction with the Pharmacy Services in Community Pharmacy, in Tripoli Region, Libya.
3. An Evaluation of the Prescribing Pattern of Drugs in the Primary Health Care Centers (PHCCs) in Al-Jabel Al-Gharbi Region, Libya.

OTHER EVIDENCE OF SCHOLARLY AND CREATIVE ACHEAVMENT AND RESEARCH/WORK EXPERIENCE:

Pharmacy Graduate Student Association (PGSA) (May 2011- May 2012): As a representative on the safety committee of the PGSA, at the Faculty of Pharmacy and Pharmaceutical Sciences. This committee have reviewed and advised the Dean on matters relating to the safety and health of staff, students and visitors to the Faculty. In addition, the committee have performed lots of duties such as: (1) they have reviewed the Faculty safety and risk management procedures/policies and advised the dean on any steps needed for the Faculty to comply, (2) Reviewed an individual laboratory safety audit reports from the University and advised the Dean on actions that should be taken to comply with all recommendations. Although, laboratory safety issues are the responsibility of the principal investigator, the Committee will advise the Dean on all significant safety issues present in inspection reports from the University.

Leadership in organizing conferences: I have been involved in organizing several conferences in Libya as an undergraduate student, for example I was one of the organizing committee for both second and third Pharmaceutical and Medical conferences respectively, in June and October 2001. Also, during my post-graduate studies in Malaysia I have been a member of the executive committee which was responsible for organizing Malaysian Pharmacy Scientific Conference, in November 2002.

Public speaking and volunteering work: I have presented my work on the periodical seminar in the Faculty of Pharmacy and Pharmaceutical Sciences at the University of Alberta in January, 2011. I have had a good chance to give a talk entitled **“Neuroleptic Malignant Syndrome with low dose of Thioridazine”** in November 2011 in Malaysian Pharmacy Scientific Conference in November, 2002.

LIST OF REFERENCES:

| Title/Name | Relationship | Institute/ organization | Mailing Address | Email/Phone No. |
|--|--|---------------------------------------|---|--|
| Associated Professor. Ahmed A. Albarraq | Chairman of Clinical Pharmacy Department | College of Pharmacy, Jazan University | College of Pharmacy Jazan University Jazan- P.O.Box 114 Zip Code 45142 | aalbarraq@gmail.com +966 (500)-168-966 Fax: 017334077 |

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|--|-----------------------------|--|--|--|
| Professor. Alvaro Osornio- Vargas | Post-doctoral Supervisor | Faculty of Medicine and Dentistry | Department of Pediatrics University of Alberta 3-591 Edmonton Clinic Health Academy 11405 87th Avenue Edmonton T6G 1C9 | osornio@ualberta.ca +1 (780)-492-7092 |
| Professor. Roseline Godbout | Post-doctoral Supervisor | Faculty of Medicine and Dentistry | Department of Oncology Cross Cancer Institute 11560 University Avenue Edmonton, Alberta T6G 1Z2 | rgodbout@ualberta.ca +1 (780)432-8901 |
| Professor. Ayman El- Kadi | PhD Supervisor | Faculty of Pharmacy and Pharmaceutical Sciences | 2-141J, Katz Group Centre for Pharmacy & Health Research University of Alberta 11361 - 87 Ave. Edmonton, AB., T6G 2E1 | aekadi@ualberta.ca +1 (780) 492-3071 |