

Josephine Bou Dagher

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EDUCATION

University of Georgia

Doctor of Philosophy (PhD) in Neuroscience

Athens, Georgia, USA

May 2021

American University of Beirut

Masters in Neuroscience

Bachelor of Science, Biology

Dean's Honor List

Beirut, Lebanon

October 2013

May 2009

Fall 2009

RESEARCH EXPERIENCE

University of Georgia

Research and Teaching Assistant

Athens, Georgia, USA

2015-2021

- Investigated the prenatal programming effects of endocrine disrupting chemicals including Bisphenols and Phthalates.
- Attended 7 local and national professional meeting and presented scientific findings to various audiences comprised of academic researchers, healthcare providers, and the community.
- Led a team of 12 undergraduate students, coordinating schedules, delegating tasks, and training them to perform experimental animal care, intake measurements, rat vaginal smears, gross necropsy, oral glucose tolerance test, qPCR, data collection and processing, statistical analysis and graph plotting using graph pad, referencing using endnote, and preparing for poster presentations.
- Managed the development and progression of the research study and worked as a collaborative team comprised of undergraduate, graduate students, postdoc and primary investigators (over 20 people) to ensure the execution of all project components for each participant.
- Voted as the mentoring coordinator of 'Women in Science' organization.

American University of Beirut

Research Assistant

Beirut, Lebanon

2010-2013

- Investigated the molecular and structural substrates of the neurotoxic effects of lidocaine injection in the brainstem rostral ventro-medial medulla.
- Developed skills in standard laboratory techniques, including Flow Cytometry, ELISA, Western Blotting, Immunofluorescence and Confocal Microscopy, and handling laboratory rats.

PUBLICATIONS

- **Josephine Bou Dagher**, Coral K. Hahn-Townsend, Amrita Kaimal, Maryam Al Mansi, Joseph E. Henriquez, Diane G. Tran, Christian R. Laurent, Caleb J. Bacak, Hannah E. Buechter, Celexis Cambric, Jared Spivey, Yen-Jun Chuang, Elyssa J. Campbell, Abhyuday Mandal, Puliyyur S. Mohankumar, Sheba M.J. MohanKumar. Independent and combined effects of Bisphenol A and Diethylhexyl Phthalate on gestational outcomes and offspring development in Sprague-Dawley rats, *Chemosphere*, Volume 263,2021.
- **Bou Dagher J.**, Lee JK. Regulator of G-protein Signaling 1 (RGS1). *Encyclopedia of Signaling Molecules, Second Edition*. May 2017
- **Josephine Bou Dagher**, Jae-Kyung Lee. R4 family: regulator of G-protein signalling. IUPHAR/BPS Guide to PHARMACOLOGY. March2017
<http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2804>
- Lee JK, **Bou Dagher J.** Regulator of G-protein Signaling (RGS)1 and RGS10 Proteins as Potential Drug Targets for Neuroinflammatory and Neurodegenerative Diseases. *The AAPS journal*. May 2016

PRESENTATIONS

ORAL PRESENTATIONS

- **Josephine Bou Dagher**, Maryam Al Mansi, Jana Demian, Loren Alyssa Cagle, William Bradford, P.S. MohanKumar and Sheba M.J. MohanKumar. Independent and combined effects of Bisphenol A and Diethylhexyl Phthalate on metabolic outcomes in Sprague-Dawley rats. *Obesity Initiative Symposium, University of Georgia*. March 2020
***Won First Prize**
- Jude Thornton, **Josephine Bou Dagher**, P.S. MohanKumar and Sheba M.J. MohanKumar. Effects of prenatal programming on hypertension related genes in the brainstem. *Veterinary Medicine Symposium, University of Georgia*. October 2018
- **Josephine Bou Dagher**, Maryam H. Al Mansi, Thomas B. Rudi, Elyssa Jacob, Amrita Kaimal, Yen-Jen Chuang, Djemila McCraya , P.S. MohanKumar and Sheba M.J. MohanKumar. Bisphenol-A and Diethylhexyl phthalate prenatal exposure followed by high fat feeding results in gender-specific metabolic alterations in rats. *Regenerative Bioscience Symposium, University of Georgia*. April 2018

POSTER PRESENTATIONS

- **Josephine Bou Dagher**, ..., P.S. MohanKumar and Sheba M.J. MohanKumar. Independent and Combined Effects of Bisphenol A and Diethylhexyl Phthalate on Gestational Outcomes and Offspring Development in Sprague-Dawley Rats. *Experimental Biology, San Diego*. April 2020.
- **Josephine Bou Dagher**, P.S. MohanKumar and Sheba M.J. MohanKumar. Independent and combined effects of low-dose Bisphenol A and Diethylhexyl Phthalate on pregnancy outcomes and offspring development in Sprague-Dawley rats. *Veterinary Medicine Symposium, University of Georgia*. October 2019
- **Josephine Bou Dagher**, Maryam Al Mansi, Elyssa Jacob, Amrita Kaimal, Yen-Jun Chuang, Puliyyur S Mohankumar, and Sheba M. J. MohanKumar. *Regenerative Biosciences symposium, University of Georgia*. April 2019. Prenatal Exposure to Bisphenol A and Diethylhexyl Phthalate Induces Apoptosis in the Thymus of Male and Female Offspring.
- **Josephine Bou Dagher**, Maryam Al Mansi, Elyssa Jacob, Amrita Kaimal, Yen-Jun Chuang, Puliyyur S Mohankumar, and Sheba M. J. MohanKumar. *Experimental Biology, Orlando*. Prenatal Exposure to Bisphenol A and Diethylhexyl Phthalate Induces Apoptosis in the Thymus of Male and Female Offspring. April 2019 *Selected to present at 2019 ASPET Student/Postdoc Poster Competition
- **Josephine Bou Dagher**, Elyssa B Jacob, Ansley Almond, Diane Tran, Amrita Kaimal, Yen-Jun Chuang, Reza Kianian, Hannah Buechter, P.S. MohanKumar, Sheba MJ MohanKumar. Gender-specific prenatal programming effect of a combination of Bisphenol-A and Diethyl hexyl phthalate on rat development. *GSPS Research Day, University of Georgia*. April 2018
- **Bou-Dagher, J.**, Barchini, J., Tchagchagian, S., Jabbur, S.J. and Saadé, N.E. Brainstem injection of lidocaine induces the activation of descending pain-inhibitory mechanisms in a rat model of mononeuropathy. *The First Annual AUB Basic Biomedical Research Day, American University of Beirut*. February 2011
- **Josephine Bou Dagher**, Antoine Saliba. Lessepsian migration as an evolutionary process. *American University of Beirut*. May 2009

TEACHING EXPERIENCE

University of Georgia

Athens, Georgia, USA

Department of Psychology

Summer 2018

Instructor of Record, Sensation and Perception

- Designed and executed all course materials including syllabus design and administrative work.
- Designed and facilitated course lectures and activities using active learning techniques that focused on scaffolding content and skills towards application experiences.
- Developed and implemented innovative online learning experiences, including inquiry-based learning activities and online simulations.
- Facilitated in class discussions and managed students' group presentations by developing a grading rubric to follow.
- Designed in-class assessments including quizzes, exams, and class-wide collaborative projects.
- Mentored one teaching assistant to help assist with the course load work.

Department of Psychology

Fall 2018, Fall 2020 and Summer 2020

Teaching Assistant, Psychopharmacology and Elementary Psychology

- Graded exams and writing prompts and maintained gradebook.
- Assisted students by meeting them during office hours and following up with their emails and concerns.
- Prepared and delivered 3 invited lectures in Psychopharmacology.

Department of Cellular Biology

Fall 2017, Spring 2018, Fall 2019, Spring 2020

Laboratory Teaching Assistant, Anatomy and Physiology

- Prepared lab course materials, created and implemented lab activities and facilitated lab discussions.
- Designed review packets and practice handouts for supplemental instruction sessions.
- Hosted weekly review sessions and office hours to support students.
- Designed and graded in-class and online assessments, including assignments, quizzes, exams.
- Coordinated with lead instructor and other teaching assistants (TA) and participated in mentoring new TAs.
- Assisted faculty in meeting and interacting with new candidates; evaluating them as a potential colleague, supervisor, and lecture instructor; and providing feedback.

International College

Beirut, Lebanon

Full-time Biology Teacher, High School

2011-2015

- Instructed over 600 students of Lebanese (Grade 10,11,12) and International Baccalaureate (IB) Biology Program.
- Orchestrated and ran in-class activities related to genetics, human anatomy and physiology, microbiology, and plant biology.
- Served as class advisor and supervised yearly led community service projects with my advisee.
- Trained and followed up six IB students performing their projects for the Biology extended essays.
- Participated in online, local and international teaching workshops and conferences: Creating interactive flipcharts for lessons using Promethean Activboard and ActivInspire, Moodle, IB professional development (IB category), Introduction to Teaching IB DP Biology, Biology extended essay.
- Accompanied and supervised high school students during their travel to Italy.

Jesus and Mary School

Rabweh, Lebanon

Full-time Science Teacher, Elementary School

2010-2011

- Taught elementary school children (Grade 3,4 and 5) Science through interactive weekly lesson plans.
- Served as classroom coordinator and advisor.
- Served as judge for elementary school students' projects in 'Science Fair'.

WORKSHOPS / CAFÉ PRESENTATIONS

- **Social Meet and Greet: Let's Have a sip of Tea.** November 2020
Women in Science, *University of Georgia, Athens GA, USA*
- **Mentoring Orientation.** November 2020
Women in Science, *University of Georgia, Athens GA, USA*
- **Mentoring Interest Meeting.** October 2020
Women in Science, *University of Georgia, Athens GA, USA*
- **Effective Teaching.** August 2019
Josephine Bou Dagher, Anastacia Janovec, Jamie Lynn Byram.
TA Café, *University of Georgia, Athens GA, USA*
- **Teaching in the lab.** August 2019
Josephine Bou Dagher, Lauren Essler, Harshani Rathnaweera.
New TA Orientation Workshop, *University of Georgia, Athens GA, USA*

HONORS AND AWARDS

- **Emerging Leaders Program** - University of Georgia 2020-2021
- **Excellence in Teaching Award Nominee** - University of Georgia 2020

- **Obesity Initiative First Annual Research Symposium** March 2020
First Place, Oral Presentation (1000\$) - University of Georgia
- **Future Faculty Fellows Program** - University of Georgia 2019-2020
- **Graduate School Travel Award (600\$)** - University of Georgia March 2019
- **Outstanding Teaching Assistant Award** - University of Georgia February 2019
- **Golden Key International Honor Society** 2018-Present
- **Dean's Honor List** for Faculty of Arts and Sciences – American university of Beirut Fall 2009
- **Award of Distinction** - Jesus and Mary School 2004-2005

CAMPUS & COMMUNITY INVOLVEMENT

Mentoring Coordinator, Women in Science, University of Georgia 2020-2021

- Coordinated 50+ mentor-mentee matching for the mentoring program and organized events such as mentor-mentee bonding activities and mentoring seminars.
- Planned and spearheaded themed events, orientation sessions, and workshops for the mentoring program.
- Assessed program effectiveness (qualitative and quantitative methods).

Community Service, Beit Chabeb and Anta Akhi, Lebanon 2003, 2004, 2014

- Accompanied and took care of handicapped people.

Community Service, Children's summer camps, Lebanon 2003-2010

- Counsellor 50+ young children and adolescents (Ages 7-14) and guided them through projected life skills.

SKILLS

Language: Fluent in Arabic, English, French

Research Skills: Statistical Analysis, Research Design, Literature Review, Data Collection and Processing, Analytical Reasoning and Evaluation Methods

Advanced in vitro and in vivo scientific technical skills: Pain Test, Perfusion, Genotyping, Reverse Transcriptase and Real time Polymerase Chain reaction (PCR), Western Blot, RNA / DNA / Protein extraction and quantification, Immunofluorescence, Confocal Microscopy, Gel Electrophoresis, ELISA, Preparation of single-cell suspensions, Flow cytometry, Cell culture, Immunofluorescence, Image J cell counting and cell size analysis, Stereotaxic surgery, Stress related behavioral tests : Shock Probe Defensive Burying Test, Elevated Plus maze, Open Field Test.

Computational skills: Image J, Microsoft Office, GraphPad Prism, Searching in scientific Database (PubMed – Medline...), Referencing (Refworks and Endnote), Windows Movie Maker, Moodle and etc, Adobe Photoshop, ActivInspire (Interactive board)

PROFESSIONAL DEVELOPMENT

Teaching and Education special training (*Certificate available upon request*)

- **Communicating effectively in STEM Mentoring Relationships** September 2020
Erin Dolan, *University of Georgia, Athens, GA, USA*
- **3 Tips to Own the Classroom with Zoom** September 2020
Bill Hoogterp, *Own the Room, Inc. & Own The Room Foundation, Inc.*
- **Lesson Planning** January 2020
Mary-Helen Hoque, *GradTeach, University of Georgia, Athens, GA, USA*
- **Making Learning Technology Work for you: Video Creation** January 2020
Philip Bishop, *GradTeach, University of Georgia, Athens, GA, USA*
- **Female Mentorship in Science Panel.** November 2019
UGA Neuroscience Program, *University of Georgia, Athens, GA, USA*

- **Mid-Semester Formative Evaluation (MSFE) Training.** October 2019
Future faculty Fellows Program, *University of Georgia, Athens, GA, USA*
- **2019 Spring Teaching Symposium** February 2019
Center for Teaching and Learning & Graduate School, *University of Georgia, Athens, GA, USA*
- **Planning, Presenting and Publishing Research on Your Teaching.** September 2018
Dr. Colleen M. Kuusinen, *University of Georgia, Athens, GA, USA*
- **Developing Your Teaching-as-Research Project.** October 2017
Dr. Denise Domizi, *University of Georgia, Athens, GA, USA*
- **SoTL retreat.** September 2015
Dr. Denise Domizi. *University of Georgia*
- **Graduate School Orientation and Information fair** August 2015
Graduate School, *University of Georgia, Athens, GA, USA*
- **International Baccalaureate (IB) Professional Development, Biology Category.** April 2014
Raffles World Academy, *Dubai, UAE*
- **SMEC 15: The Fifteenth Annual Science and Math Educators Conference.** March 2013
American University of Beirut (AUB), Beirut, Lebanon
- **Biology Extended Essay Online Workshop.** September - November 2013
IB Online Professional Development Team, *International College, Beirut, Lebanon*
- **IB Diploma Program Biology Internal Assessment Online Workshop.** Sep. – Nov. 2012
IB Online Professional Development Team, *International College, Beirut, Lebanon*
- **Moodle Workshop.** June and November 2012
Dr. Mahmoud Shihab, *International College, Beirut, Lebanon*
- **Creating interactive flipcharts for lessons using Promethean Activboard and ActivInspire.** December 2011
Dr. Mahmoud Shihab, *International College, Beirut, Lebanon.*
- **Triple A Learning: An Introduction to Teaching IB DP Biology online workshop.** October 2011
IB Online Professional Development Team, *International College, Beirut, Lebanon.*

Health and Safety Training: (*Certificate available upon request*)

- UGA IACUC 101 by AALAS Learning Library, *UGA* November 2018
- Lab Safety Basics by ORC Research Safety, *UGA* August 2017
- Biomedical Responsible Conduct of Research Course, by CITI, *UGA* January 2017
- Biosafety Practices and Procedures in BSL2 labs, *UGA* September 2016
- Chematix Inventory and Waste Training, *UGA* August 2016
- Proficiency in Standard and Special Microbiological Practices by In-Lab training, *UGA* November 2015
- USG Ethics Basic Course, Arts and Sciences, Biosciences, *UGA* September 2015
- Staying Healthy while Working with Laboratory Animals, by AALAS, *UGA* September 2015
- Research Occupational Health Enrolment, by ORC, *UGA* September 2015
- Social and Behavioral Research, by CITI, *UGA* September 2015
- Radiation Safety Training Course for users of unsealed radioactive materials in research, *AUB* July 2011
- Chemical and Biological Lab safety training Course, *AUB* June 2010
- Red Cross - Basic First Aid Course (CPR...), *American University of Beirut* March 2009

Seminars, workshops and conferences attended (*Certificate available upon request*)

- MEMA - 46th Middle East Medical Assembly, *American University of Beirut* May 2013
- Visceral Pain: The Point of View of the Specialist
Lebanese Society for the Study of Pain (LSSP) scientific meeting March 2013

- Neuropathic Pain: A challenge for the Patient and the Physician
Lebanese Society for the Study of Pain (LSSP) scientific meeting January 2012
- Update on Treatment of Headaches
Lebanese Society for the Study of Pain (LSSP) scientific meeting October 2010
- Volunteers Orientation Workshop: Children's Cancer Center of Lebanon (CCCL)
St. Jude's Center, Beirut June 2010