

Curriculum Vitae

Mohammed Abdalla El-Lakany

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Education and Qualifications

- 1/2021 – 4/2025: PhD student at the department of Physiology and Pharmacology, University of Western Ontario, London, Ontario, Canada.
- 9/2019 – 12/2020: MSc student at the department of Physiology and Pharmacology, University of Western Ontario, London, Ontario, Canada.
- 11/2014 – 8/2019: M.Sc. in Pharmaceutical Sciences (Pharmacology and Toxicology), Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University.
- 6/2014: Bachelor of Pharmaceutical Sciences, Distinction of Honor, Faculty of Pharmacy, Alexandria University (Ranked first in class. Grade: 96.4%)

Academic Employment and Teaching

- 9/2020 – 4/2021: Teaching assistant at the Department of Physiology and Pharmacology (PhysPharm 3000E), Schulich School of Medicine and Dentistry, University of Western Ontario, Canada.
- 9/2019 – present: Appointed as an assistant teacher at the Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt.
- 8/2015 – 9/2019: Demonstrator at the Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt.

Teaching involved the following courses: Pharmacology, Toxicology, Biochemistry, Clinical Pharmacology, and Therapeutics.

Publications

A. Full-length Articles:

1. **EL-Lakany MA**, Welsh DG. TRP channels: a provocative rationalization for local Ca²⁺ control in arterial tone development. *Frontiers in Physiology*. 1374730. 2024.
2. Mironova GY, Kowalewska PM, **EL-Lakany MA**, Tran CH, Sancho M, Zechariah A, Jackson WF, Welsh DG. The Conducted Vasomotor Response and the Principles of Electrical Communication in Resistance Arteries. *Physiological Reviews*. 104(1):33-84. 2024.
3. **EL-Lakany MA**, Haghbin N, Arora N, Hashad AM, Mironova G, Sancho M, Gros R, Welsh DG. Ca_v3.1 channels facilitate calcium wave generation and myogenic tone development in mouse mesenteric arteries. *Scientific Reports*. 13,20407. 2023.

4. Mironova GY, Mazumdar N, Hashad AM, **El-Lakany MA**, Welsh DG. Defining a role of NADPH oxidase in myogenic tone development. *Microcirculation*. 29(3), p.e12756. 2022.
5. **El-Lakany MA**, El-Gowell HM, Fouda MA, Sallam MY, El-Mas MM. Nicotine uncovers endotoxin-like cardiovascular manifestations in female rats: Estrogen and nitric oxide dependency. *Toxicology Letters*. 15;335:28-36. 2020.
6. **El-Lakany MA**, Fouda MA, El-Gowell HM, El-Mas MM. Ovariectomy provokes inflammatory and cardiovascular effects of endotoxemia in rats: Dissimilar benefits of hormonal supplements. *Toxicology and applied pharmacology*. 15;393:114928. 2020.
7. Sallam MY, El-Gowilly SM, El-Gowell HM, **El-Lakany MA**, El-Mas MM. Additive counteraction by $\alpha 7$ and $\alpha 4\beta 2$ -nAChRs of the hypotension and cardiac sympathovagal imbalance evoked by endotoxemia in male rats. *European journal of pharmacology*. 5;834:36-44. 2018.
8. **El-Lakany MA**, Fouda MA, El-Gowell HM, El-Gowilly SM, El-Mas MM. Gonadal hormone receptors underlie the resistance of female rats to inflammatory and cardiovascular complications of endotoxemia. *European journal of pharmacology*. 15;823:41-8. 2018.

B. Articles in Preparation

1. Haghbin N; Kim M; **El-Lakany MA**; Richter DM; Saha DK; Steven DA; Lau JC; MacDougall K; Tsoukias N; Welsh DG. PKC Isoforms in Cerebral Arterial Constriction: Mechanisms to Application.
2. **El-Lakany MA**; Mironova G; Kowalewska PM; Afas KC; Goldman D; Kharche SK; Ellis CG; Welsh DG. Sulfonylureas Compromise Oxygen Demand-Supply Coupling in Skeletal Muscle.
3. **El-Lakany MA**; Wedn AM; El-Mas M. P2X₄ Receptors are Oxygen Sensors in Skeletal Muscle Capillary Endothelial Cells.

C. Book Chapters

4. **El-Lakany MA**; Mironova G; Afas KC; Goldman D; Kharche SK; Ellis CG; Welsh DG. Role of Oxidative Stress and Interrelated Cellular Offences in Sex Modulation of Cardiorenal Sequels of Sepsis. *Oxidative Stress in Cardiovascular-Metabolic Diseases*. Springer Nature. 2024.

D. Conference Abstracts

1. **El-Lakany MA**; Mironova G; Kowalewska PM; Afas KC; Goldman D; Kharche SK; Ellis CG; Welsh DG. P2X₄R/K_{ATP} Channels Mediate Capillary-to-Arteriole Conducted Oxygen Signals in Mouse Skeletal Muscle. ASPET Annual Meeting. Portland, OR, USA, 2025. ASPET Travel Award. First Place Best Poster Presentation Award.
2. **El-Lakany MA**; Mironova GY, Kowalewska PM; Ellis CG; Welsh DG. Oxygen Signalling in Mouse Skeletal Muscle: Mechanism of Capillary-to-Arteriole Conduction. The International Symposium on Resistance Arteries (ISRA), Denmark, 2024. Abstract selected for oral presentation.
3. **El-Lakany MA**; Kowalewska PM; Ellis CG; Welsh DG. Sulfonylureas Compromise Microvascular Flow in Mouse Skeletal Muscle. World Congress of Basic and Clinical Pharmacology. Glasgow, UK. 2023. ASPET travel award (3000 USD). Abstract shortlisted for Best Abstract Award.
4. **El-Lakany MA**; Kowalewska PM; Sandow SL; Ellis CG; Welsh DG. Autocrine P2X₄ receptor activation in RBCs drives oxygen-dependent hyperemic responses in mouse skeletal muscle capillaries. Conference of Experimental Biology, Philadelphia, PA, USA. 2022.

5. **El-Lakany MA**; Haghbin N; Hashad A; Sancho M; Welsh DG. Role of CaV3. 1 Channels in Myogenic Tone and Blood Pressure Regulation in Mouse Mesenteric Arteries. Conference of Experimental Biology, Virtual, 2020.
6. **El-Lakany MA**, Fouda M, El-Gowell H, El-Mas M. Estrogen receptor- α counterbalances the endotoxic inflammatory response and associated arterial baroreflex dysfunction in ovariectomized rats. The Conference of Experimental Biology, Orlando, FL, USA. 2019. Abstract selected for oral presentation.
7. **El-Lakany MA**, Fouda M, El-Gowell H, El-Mas M. Nicotine dose-dependently uncovers endotoxic cardiovascular manifestations of hypotension and autonomic dysfunction in female rats. Conference of Experimental Biology, Orlando, FL, USA. 2019.
8. El-Mas M, **El-Lakany MA**, Fouda M, El-Gowell H, The provoked cardiovascular and autonomic effects of endotoxemia in ovariectomized rats are distinctly affected by estrogen and progesterone supplementation. Conference of Experimental Biology, San Diego, CA, USA. 2018. Alexandria University distinguished publication travel award (2700 USD).
9. **El-Lakany MA**, Fouda M, El-Gowell H, El-Gowilly S, El-Mas M. Gonadal Hormone Receptors Underlie the Resistance of Female Rats to Cardiovascular Complications of Endotoxemia. Conference of Experimental Biology, Chicago, IL, USA. 2017.

Awards and Honors

1. **Western Postdoctoral Fellowship, Western University, Ontario, Canada, 2025-2027.**
2. **First place, Best Poster Presentation Award**, The Division for Cardiovascular Pharmacology, ASPET Annual Meeting, Portland, Oregon, USA, April 2025.
3. **ASPET Travel Award**, ASPET Annual Meeting, Portland, Oregon, USA, April 2025.
4. **CIHR Doctoral Research Award**, worth 113,330 CAD for 3 years starting May 2023. Ended in April 2025 after graduating from the PhD program.
5. **ASPET Travel Award**, worth 3,000 USD to present distinguished research at the World Congress of Basic and Clinical Pharmacology, Glasgow, UK, in July 2023.
6. **Best Poster Award**, Robarts Research Retreat, Western University, London, Ontario, July 2023.
7. **Ontario Graduate Scholarship**, worth 15,000 CAD starting May 2023 to April 2024.
8. **Ontario Graduate Scholarship**, worth 15,000 CAD starting May 2022 to April 2023.
9. **Ontario Graduate Scholarship (International Pool)**, worth 15,000 CAD starting May 2021 to April 2022.
10. **ASPET Speaker Award**, worth 500 USD, to present orally at the Conference of Experimental Biology, Orlando, Florida, USA, EB2019.
11. **Alexandria University Young Scientists Travel Award** in recognition of distinguished scientific publication, worth 2700 USD, to present at the Conference of Experimental Biology, San Diego, California, USA, EB2018.
12. **Best Oral Presentation** at the Faculty of Pharmacy Annual Scientific Conference, Alexandria University, Egypt in September 2019.

13. **Supervisor** of an undergraduate clinical pharmacy students group who were awarded first prize for the best oral presentation, DUPHAT, Dubai, April 2018 for their outstanding graduation project.
14. **Supervisor** of an undergraduate clinical pharmacy students group who were awarded first prize for the best thematic poster presentation, DUPHAT, Dubai, April 2019 for their outstanding graduation project.
15. **The Silver Order of Distinction awarded by the president of Egypt** for achieving the top score at Alexandria University on September 28, 2014.