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Qualifications

- **Doctor of Philosophy (Pharmacology)**, Department of Physiology and Pharmacology, Cumming School of Medicine, University of Calgary, Canada (2010-2015)
- **Master of Sciences (Pharmacology)**, Department of Pharmacology and Toxicology, Faculty of Pharmacy, Univ. of Alexandria., Egypt (2006-2009)
- **Bachelor of Pharmaceutical Sciences** with the grade of Distinction Honor (Second highest total over 1350 students, GPA 4.0), Faculty of Pharmacy, Univ. of Alexandria, Egypt (2001-2006).
- Certificate of completion of the **Pharmacy Examining Board of Canada (PEBC)** exams (2011).

Career History

- **Ph.D. Student and Research assistant**, Department of Physiology and Pharmacology, Cumming School of Medicine, University of Calgary (2010-2015).
- **Registered Clinical Pharmacist** (since 2012).
- **Instructor** of Pharmacology, Biochemistry, Toxicology and Biological assay, Department of Pharmacology and Toxicology, Faculty of Pharmacy, Univ. of Alexandria, Egypt. I assumed the job following an invitation from the University of Alexandria to join the department (2006 - 2009).
- **M.Sc. Student and Research assistant**, Department of Pharmacology and Toxicology, Faculty of Pharmacy, Univ. of Alexandria, Egypt (2006-2009).

Teaching Experiences

- **Instructor/Teaching assistant** of MDSC/BIOL501&503 courses (Basic Principles of Pharmacology) to undergraduate Bachelor of Health Sciences students for the academic years (2012,2013 and 2014)
 - Organizing and teaching lectures, organized biweekly tutorials to discuss organ Pharmacology and graded exams & presentations (8 hours weekly- class of 60 students).
- **Instructor/Teaching assistant** of Pharmacology, Biochemistry, Toxicology and Biological assay to undergraduate pharmacy students for the academic years (2006,2007,2008 and 2009)
 - Organizing and teaching lectures and laboratory demonstrations to illustrate course concepts and graded exams & presentations (40 hours weekly- classes of 150 students each).

Technical laboratory Experiences

- **Patch clamp electrophysiology** (cultured and various freshly isolated cells).
- **Pressure and Wired Myography.**
- **Isolated rat kidney perfusion system**

- **Intravascular cannulation** (for blood pressure and heart rate measurements).
- **Western blotting** (conventional and highly sensitive three-step approaches)
- **Various biochemical analyses** to quantify plasma and tissue markers.
- **Behavioral assessment of cognitive and motor function in animal models.**

Peer-reviewed publications

- **Abd-Elrahman KS**, Colinas O, Walsh EJ, Zhu HL, Campbell CM, Walsh MP, Cole WC. Abnormal Myosin Phosphatase Targeting Subunit (MYPT1) Phosphorylation and Actin Polymerization Contribute to Impaired Myogenic Regulation of Cerebral Arterial Diameter in the Type 2 Diabetic Goto-Kakizaki Rat. *J Cereb Blood Flow Metab.* 2015 Dec 31. [Epub ahead of print].
- El-Yazbi AF, **Abd-Elrahman KS**, Moreno-Dominguez A (2015). PKC-mediated cerebral vasoconstriction: Role of myosin light chain phosphorylation versus actin cytoskeleton reorganization. *Biochem Pharmacol.* 95:263-278
- **Abd-Elrahman KS**, Walsh MP and Cole WC (2015). “Abnormal Rho-associated kinase activity contributes to the dysfunctional myogenic response of cerebral arteries in type 2 diabetes. *Can J Physiol Pharmacol.* 93:177-184.
- El-Mas MM, El-Gowell HM, **Abd-Elrahman KS**, Saad EI, Abdel-Galil AG, Abdel-Rahman AA. (2011) Pioglitazone abrogates cyclosporine-evoked hypertension via rectifying abnormalities in vascular endothelial function. *Biochem Pharmacol.* 81:526-533.
- El-Gowell HM, **Abd-Elrahman KS**, Saad EI, Abdel-Galil AG and El-Mas MM (2011). "PPAR γ dependence of cyclosporine-isoprenaline renovascular interaction: Roles of nitric oxide synthase and heme oxygenase". *J. Cardiovasc. Pharmacol.*, 58:173-180.
- Zhong XZ, **Abd-Elrahman KS**, Liao CH, El-Yazbi AF, Walsh EJ, Walsh MP and Cole WC (2010). “Stromatoxin-sensitive, Heteromultimeric Kv2.1/Kv9.3 Channels Contribute to Myogenic Control of Cerebral Arterial Diameter”. *J. Physiol.* 588:4519-4537.
- **Abd-Elrahman KS**, El-Gowell HM, Saad EI, Abdel-Galil AG and El-Mas MM (2010). “Role of PPAR gamma/nitric oxide synthase signaling in the cyclosporine-induced attenuation of endothelium-dependent renovascular vasodilation”. *J. Cardiovasc. Pharmacol.*, 56:195-202.

Poster presentations

- 1- **Abd-Elrahman KS**, Walsh EJ, Walsh MP and Cole WC. Enhanced ROK activity but not expression contributes to the dysfunctional myogenic response of 8-10 week Goto-Kakizaki rats. (presented in the international symposium of resistance arteries (ISRA), Banff, Canada, September 7-11, 2014)
- 2- **Abd-Elrahman KS**, Walsh EJ, Walsh MP and Cole WC. Abnormal phosphorylation of myosin light chain phosphatase and myosin downstream of Rho-associated kinase contributes to the dysfunctional cerebral myogenic response of Goto-Kakizaki rats. (presented in the International Union of Physiological Societies Congress (IUPS), Birmingham, UK, July 21-26, 2013)
- 3- **Abd-Elrahman KS**, Walsh EJ, Walsh MP and Cole WC. Abnormal LC₂₀ and MYPT1-T855 Phosphorylation Contribute to The Compromised Cerebral Myogenic Response of Goto-Kakizaki rats. (presented in FASEB Smooth Muscle Research conference, Snowmass CO, USA, in June 24-29, 2012)
- 4- **Abd-Elrahman KS**, El-Gowell HM, Saad EI, Abdel-Galil AG and El-Mas MM .PPAR γ Dependence Of the Cyclosporine-Isoprenaline Renovascular Interaction: Roles of Nitric Oxide Synthase And Heme Oxygenase. *FASEB J.* 2011 25:1087. (presented in the Experimental Biology Meeting, Washington DC, USA, in April 9-13, 2011)
- 5- El-Mas MM, El-Gowell HM, Saad EI, **Abd-Elrahman KS** & Abdel-Galil AG (2010). Pioglitazone ameliorates cyclosporine-induced attenuation of carbachol renovascular vasodilations: role of PPAR γ /nitric oxide synthase signaling. *FASEB J.* 2010 24:959.11
- 6- El-Mas MM, El-Gowell HM, Saad EI, **Abd-Elrahman KS** & Abdel-Galil, AG (2010). Improved antioxidant and lipid profiles underlie the protective effect of pioglitazone against cyclosporine-induced endothelium dysfunction in isolated rat aortas. *FASEB J.* 2010 24:961.13 (4,5 were presented in the Experimental Biology Meeting , Anaheim, California, USA, in April 24-28, 2010).

Oral presentations

- Abnormal MYPT1 and actin polymerization contribute to the dysfunctional myogenic response of cerebral arteries in type 2 diabetic rats (International symposium of resistance arteries (ISRA), Banff, Canada, September 7-11, 2014).
- Abnormal phosphorylation of MYPT1 at T855 & T697 is associated with dysfunctional myogenic constriction to intravascular pressure in cerebral arterioles of 8-10 week Goto-Kakizai rats (Canadian Cardiovascular Congress (CCC), Vancouver, Canada, October 24-38, 2014).

Reviewer in the Journal of Undergraduate Research in Alberta (JUGA)

Membership in Professional Organization

- American Society of Pharmacology and Experimental Therapeutics (**ASPET**)
- American Physiological Society (**APS**)
- Alberta College of Pharmacists, Clinical registrar, Alberta, Canada (**ACP**)
- Ontario College of Pharmacists, Clinical registrar, Ontario, Canada (**OCP**)

Selected awards and honors

- **Izaak Walton Killam Honary Doctoral Scholarship** (Awarded by Faculty of Graduate studies, University of Calgary, May 2011 and EXCEPTIONALLY re-awarded May 2013 for excellent performance during the doctoral program)
- **Alberta Innovates- Health Solution (AI-HS) Doctoral Studentship** (Awarded by AHIS, Alberta, Canada, January 2011- December 2014)
- **Faculty of Medicine Graduate Science Education Research Scholarship** (Awarded by Faculty of Graduate studies, University of Calgary, September 2010)
- **MDCV Scholarship** (Awarded by Faculty of Graduate Studies and Cardiovascular & Respiratory Sciences program, University of Calgary, August 2010)
- **Excellence in Publication Award** (Awarded by University of Alexandria, 2010, 2011, 2012)
- **Kertland family Doctoral Scholarship in Vascular Biology** (Awarded by Faculty of Graduate studies, University of Calgary, January 2010)

Other activities

- Volunteer, Heart and Stroke Foundation Canada. (Since 2011)
- Participant, the 3 Minute Thesis competition organized by University of Calgary. (2014)
- Attendee, Pharmacists development workshops organized by Lily Canada, Valeant Canada and Alberta Pharmacists association (RXA).
- Supervised a number of Pharmacist interns through structural practical training as a clinical pharmacist (2012, 2013 and 2014).

