

Department of Pharmacology & Toxicology

Faculty of Pharmacy- Alexandria University

Curriculum Vitae

Mai Mostafa Mohamed Hussein Helmy, PhD

Professor of Pharmacology

Department of Pharmacology and Toxicology

Faculty of Pharmacy

Alexandria University

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Mai Mostafa Mohamed Hussein Helmy

Alexandria University

Faculty of Pharmacy

Department of Pharmacology and Toxicology

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Personal information:

Date of birth: December 1st, 1979

Nationality: Egyptian

Current position: Associate Professor, Department of pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt

Languages: Fluent Arabic and English (written and spoken)

Education:

2006-2009 PhD In Pharmaceutical Sciences (Pharmacology), 12/9/2009

Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Hemodynamic interaction between cyclosporin and centrally acting antihypertensive agents.

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2003-2006 **Master Degree in Pharmaceutical Sciences (Pharmacology),
13/2/2006**

Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Adverse vascular effects of cyclosporin in rats.

1997-2002 **Bachelor Degree in Pharmaceutical Sciences (June 2002)**

Grade: Excellent with Distinction Honor.

Faculty of Pharmacy, Alexandria University, Egypt.

Employment History:

2020 - now **Professor - Department of Pharmacology and Toxicology,
Faculty of Pharmacy, Alexandria University, Egypt.**

2014 - now **Associate Professor - Department of Pharmacology and
Toxicology, Faculty of Pharmacy, Alexandria University,
Egypt.**

2009 - 2014 **Lecturer - Department of Pharmacology and Toxicology,
Faculty of Pharmacy, Alexandria University, Egypt.**

2006 - 2009 **Assistant Lecturer - Department of Pharmacology and
Toxicology, Faculty of Pharmacy, Alexandria University,
Egypt.**

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2002-2006 **Instructor** - Department of Pharmacology and Toxicology,
Faculty of Pharmacy, Alexandria University, Egypt.

Teaching and Academic Experience:

Teaching for Under Graduates and Postgraduate Students:

- ◇ Participation in teaching the practical sessions of the following courses in the Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt as an instructor (2002-2006) and as an assistant lecturer (2006 – 2009):
 - Biochemistry (third year)
 - Pharmacology (third year)
 - Biological Assay and standardization & Biostatistics (fourth year)
 - Toxicology and First Aid (fourth year)
- ◇ Participation in teaching the following courses in the Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt as a lecturer (2009 – 2011):
 - Biochemistry (third year)
 - Pharmacology (third year)
 - Biological Assay and standardization & Biostatistics (Fourth year)
 - Applied experimental pharmacology for postgraduates (2010 - 2011)
- ◇ Participation in teaching the following courses in the Department of Pharmacology and Toxicology, Faculty of Pharmacy and Drug manufacturing, Pharos University in Alexandria, Egypt as a lecturer (2009 – 2011):
 - Bioevaluation and drug screening (2009-2011)
 - Forensic chemistry (2010-2011)

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- ◇ Participation in teaching the following courses in the Department of Pharmacology and Toxicology, Faculty of Pharmacy, Alexandria University, Egypt as an Associate Professor (2018 – till now):
 - Toxicology, Forensic Chemistry and First Aid (Fourth year, general program)
 - Biophysics (First year, clinical pharmacy program)
 - Toxicology& forensic chemistry (Fifth year, clinical pharmacy program)
 - Drug Information (Fifth year, clinical pharmacy program)
 - Selected topics in toxicology for postgraduates (2018-2019)
- ◇ Participation in teaching the following course in the Department of Pharmacology and Toxicology, College of Pharmacy, Arab Academy for Science Technology & Maritime Transport, Egypt as an Associate Professor (2018 – 2019):
 - Pharmacology II (PCS325)

Other Activities related to Teaching and Education:

- ◇ Participation in designing and marking all written exams of the courses that I taught
- ◇ Participation in the oral exams in the department
- ◇ Participation in preparing the annual course report for all the courses that I taught
- ◇ Participation in preparing the course portfolio for all the courses that I taught

Memberships in Faculty Committees:

- ◇ Member in the **Measurement and Assessment Unit** of the faculty of pharmacy (December 2018- till now)
- ◇ Member in the faculty committee for the Third year results (since 2018-2019- till now)
- ◇ Member in the faculty committee for the development of the general courses for postgraduate students (Academic year 2018-2019)
- ◇ Representative Member for the department in the Library committee of the faculty of pharmacy (since June 2018- till now)

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- ◇ Faculty coordinator for the committee of Ethics Care and Use of experimental animals in Alexandria University (since January 2019- till now)
- ◇ Member in the committee for inventory of animals in the department of Pharmacology and Toxicology (June 2018 & 2019)
- ◇ Member in the committee for inventory of chemicals in the **department of Pharmacology and Toxicology** (2009-2010)
- ◇ Member in the committee for inventory of glassware in the **department of Pharmacology and Toxicology** (2010-2011)
- ◇ Member in the committee for **Re-structuring of the faculty stores** (2010-2011)
- ◇ Member in the **Quality Assurance Unit** of the faculty of pharmacy (2009- 2011)
 - Participation in preparing documentation for assessment of the scientific research system in the faculty
 - Participation in preparing the faculty self-study
- ◇ Member in the **Quality Assurance Unit** of the faculty of pharmacy (since December 2018- till now)

Research: (Scopus h-index: 10)

Dissertations supervised: (Master & PhD)

1- Role of nitregeric and/or endothelin modulation in the cisplatin-induced acute renal failure in male rats (Master thesis, 2011-2013)

2-Effect of endotoxemia on maternal and fetal cardiovascular programming in preeclamptic rats: Role of renin-angiotensin system modulators (PhD thesis, since September 2018 - 2021)

3-A Comparative Study of Selected Remedies for Protection Against Experimentally-Induced Gastrointestinal Lesions in Rats (Master thesis, since November 2018 - 2020)

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Conferences and Training Courses Attended:

Conferences:

- The 65th World Congress of Pharmacy and Pharmaceutical Sciences, Cairo, Egypt, 2-8 September 2005.
- The EPHAR Symposium, Molecular Pharmacology of G Protein Coupled Receptors and Signalling Partners, Fulya Congress Center, Istanbul, Turkey, 6-8 June 2011.
- The 1st International Conference On Health Between Nutrition And Treatment, Beni-Suef, Egypt, 30-31 August 2015.
- The 3rd International Genomic Medicine Conference, Center of Excellence in Genomic Medicine Research, King Abdul Aziz University, Jeddah, KSA, 30 November-1 December 2015.
- The 56th Annual Egyptian Society of Pharmacology & Experimental Therapeutics , British University in Egypt, Cairo, Egypt, 28 January 2017.
- The 4th FUE International Conference of Pharmaceutical Sciences: Dusit Thani Hotel, Lake View, 5th Settlement, New Cairo, Egypt, 31 January-2 February 2017.
- The 58th Annual Egyptian Society of Pharmacology & Experimental Therapeutics . MSA University, Cairo, Egypt, 20 April 2019.
- The 3rd International Conference on Traditional Medicine, Pharmacy and Pharmaceutical Sciences. Ostia Antica Park Hotel, Rome, Italy, 22-24 July 2019.

Abstracts published in Conferences:

Abstract from master thesis:

M.M. Helmy, A.A.M. Abdel Galil., M.A. El-Sawy, E.I. Saad., A.G. Omar. (2005): "Simvastatin reverses cyclosporine A-induced vascular dysfunction in male rats: A biochemical, pharmacological and histopathological study; 65th World Congress of Pharmacy AND Pharmaceutical Sciences, Abstract # CBS-P-007, September 2-8, Cairo, Egypt.

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Abstracts from PhD thesis:

1. Mahmoud M El-Mas, Amal G Omar, **Mai M Helmy**, and Mahmoud M Mohy El-Din (2008): Nitric oxide modulation of central imidazoline I₁ receptors accounts for the hypertensive effect of cyclosporine in rats. FASEB J. 22, Abstract # 1129.9, Experimental Biology, USA
2. Mahmoud M El-Mas, Amal G Omar, **Mai M Helmy**, and Mahmoud M Mohy El-Din (2010): Amelioration by tempol of the hypertensive and baroreflex depressant effects of cyclosporine in conscious rats: Role of cardiac autonomic control. FASEB J. 24, Abstract # 961.5, Experimental Biology, USA
3. Mahmoud M El-Mas, Amal G Omar, **Mai M Helmy**, and Mahmoud M Mohy El-Din (2010): Modulation of cyclosporine-induced hypertension by central endothelial and neuronal nitric oxide synthases. FASEB J. 24, Abstract # 959.1, Experimental Biology, USA
4. Mahmoud M El-Mas, Amal G Omar, **Mai M Helmy**, and Mahmoud M Mohy El-Din (2011): Autonomic and redox states modulate the moxonidine-cyclosporine hemodynamic and baroreflex interactions. FASEB J. 25, Abstract # 1084.2, Experimental Biology, USA

Abstracts during my work as a lecturer:

1. Mahmoud M El-Mas, Hanan M El-Gowelli, Mohamed A Fouda and **Mai M Helmy** (2011): Dose dependency and autonomic modulation of the depressant effect of chronic nicotine on reflex chronotropic responses in female rats. FASEB J. 25, Abstract # 1084.1, Experimental Biology, USA
2. **Mai M Helmy** (2011): Effect of α -tocopherol or simvastatin treatment on pro-oxidant antioxidant balance in the liver of aged rats. EPHAR Symposium, Molecular Pharmacology of G Protein Coupled Receptors and Signalling Partners, Fulya Congress Center, Abstract P-02, p 22-23, 6-8 June, Istanbul, Turkey.
3. **Mai M Helmy** and Amira M Senbel (2011): Evaluation of vitamin E in the treatment of erectile dysfunction in aged rats. EPHAR Symposium, Molecular Pharmacology of G Protein Coupled Receptors

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and Signalling Partners, Fulya Congress Center, Abstract P-01, p 20-21, 6-8 June, Istanbul, Turkey.

4. Senbel AM, **Helmy MM** (2012): Lead Acetate May Cause Erectile Dysfunction by Modulating the Action of Nitric Oxide in Rat Corpus Cavernosum. *Clinical Toxicology*; 50, 273–366, Abstract No. 153 page 315. International Congress of the European Association of Poisons Centres and Clinical Toxicologists , 25 May-1 June, London, UK.

Abstracts during my work as an Associate Professor:

1. Sahar El-Gowilly, **Mai Helmy**, and Hanan El-Gowelli (2015): Pioglitazone ameliorates methotrexate-induced renal endothelial dysfunction via amending detrimental changes in some antioxidant parameters, systemic cytokines and Fas production. E-abstract published in the proceedings (Vol: 2, No. 8) of the 17th International Conference on Pharmacology and Pharmaceutical Technology, Venice, Italy
2. Mahmoud El-Mas, Maged Helmy, and **Mai Helmy** (2015): Additive renoprotective effects of piogiltazone and fenofibrate against cisplatin-induced renal failure: PPARs/TNF- α modulation. *FASEB J.* 29, *Abstract # 938.5*, Experimental Biology, USA
3. Maged Helmy, **Mai Helmy**, and Mahmoud El-Mas (2017): Enhanced lipoxygenase/LTD4 activity accounts for the exaggerated hypertensive and nephrotoxic effects of cyclosporine plus indomethacin in rats. *FASEB J.* 31, *Abstract # lb541*, Experimental Biology, USA
4. **Mai Helmy**, Maged Helmy, and Mahmoud El-Mas (2018): Upregulation of cystathionine- γ -lyase/hydrogen sulfide pathway underlies the celecoxib counteraction of the cyclosporine-induced hypertension and renal insult in rats. *FASEB J.* 32, *Abstract # 562.9*, Experimental Biology, USA
5. **Mai Helmy** and Samar Mouneir (2019): Reno-protective effect of linagliptin against gentamycin nephrotoxicity in rats: Involvement of renal DPP-4, Proceedings of the 3rd International Conference on Traditional Medicine, Pharmacy and Pharmaceutical Sciences, Rome, Italy

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Training Courses & Workshops:

- **Test of English as a Foreign language (TOEFL) – American Embassy - Amid East- 2009**
- **Faculty and Leadership development Center (FLDC), Alexandria University training courses.**
 - Training course on **preparing research project**
 - Training course on **managing time and meetings**
 - Training course on **credit hour systems**
 - Training course on **legal and financial aspects in university environment**
 - Training course on **international publishing of scientific research**
 - Training course on **exams and students evaluation systems**
 - Training course on **effective presentations**
 - Training Course on **effective teaching**
 - Training course on **methodologies in scientific research**
 - Training course on **communication skills**
 - Training course on **code of ethics**
 - Training course on **Executive leadership development**
 - Training course on **Leadership and strategic thinking**
 - Training course on **University management**
 - Training course on **University laws and regulations**
 - Training course on **E-Exams**
- Seminar entitled: **Bioscience smart tools for enhancing your research), gulf scientific corporation, 14th November 2013, Jeddah, KSA.**
- E-Training workshop entitled: **EndNote**, held by the Saudi Digital Library, Ministry of Higher Education, KSA, 22th November 2015.
- E-Training workshop entitled: **EndNote**, held by Saudi Digital Library, Ministry of Higher Education, KSA, 22th November 2015.
- E-Training workshop entitled: **Springer Protocols Database**, held by the Saudi Digital Library, Ministry of Higher Education, KSA, 1st December 2015.
- Workshop entitled: **Behavioural Pharmacology**, held during the 56th Annual Egyptian Society of Pharmacology & Experimental Therapeutics, British University in Egypt, Cairo, Egypt, 28 January 2017.

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- Workshop entitled: **Assessment: The real driver for competency-based education in pharmacy**, held at the Faculty of Pharmacy, Alexandria University, 18th July 2018.

Membership of Professional Societies and international journals:

- Egyptian Pharmacist Syndicate (EPS) – ID: 61030 since 2002
- Member of the Egyptian Society of Pharmacology and Experimental Therapeutics (**ESPET**) since 2009
- Member of the American Society for Pharmacology and Experimental Therapeutics (**ASPET**), membership no. 49749 since 2014
- Editorial board member in the international journal of clinical pharmacology and pharmacotherapy
- Editorial board member in the Global Journal of Biotechnology and Biomaterial Science

Publications: (Full length articles)

Research articles from the master thesis: (2)

1. Abdel Galil AA, El-Sawy MA, Saad EI, Omar AG and **Helmy MM**. Simvastatin reverses cyclosporin A-induced endothelial damage in rats: lipid-lowering-dependent and -independent effects. Bull. Alex. Fac. Med., 2007, 43(1): 135-144.
2. Abdel Galil AA, El-Sawy MA, Saad EI, Omar AG, El-Deeb NM and **Helmy MM**. α -Tocopherol enhances vascular antioxidant status and preserves vascular integrity in Cyclosporin A-treated rats. Alex. J. Pharm. Sci., 2007, 21(2):145-152.

Research articles from the PhD thesis: (3)

1. El-Mas MM, Omar AG, **Helmy MM**, and Mohy El-Din MM. Interruption of central neuronal pathway of imidazoline I₁ receptor mediates the hypertensive effect of cyclosporine in rats. Brain Res., 2009, 1248: 96-106.
2. El-Mas MM, Omar AG, **Helmy MM**, and Mohy El-Din MM. Crosstalk between central pathways of nitric oxide and carbon monoxide in the hypertensive action of cyclosporine. Neuropharmacology, 2012, 62(4):1890-1896.

3. El-Mas MM, Mohy El-Din MM, **Helmy MM**, Omar AG. Redox imbalances incite the hypertensive, baroreflex, and autonomic effects of cyclosporine in rats. *Eur. J. Pharmacol.*, 2012, 694(1-3):82-88.

Research articles during working as a lecturer: (7)

1. **Helmy MM**, Senbel AM. Evaluation of vitamin E in the treatment of erectile dysfunction in aged rats. *Life Sci.*; 2012, 90(13-14): 489-494.
2. **Helmy MM**, El-Gowell HM. Montelukast abrogates rhabdomyolysis-induced acute renal failure via rectifying detrimental changes in antioxidant profile and systemic cytokines and apoptotic factor production. *Eur. J. Pharmacol.*, 2012, 683(1-3):294-300.
3. El-Mas MM, El-Gowell HM, El-Gowilly SM, Fouda MA, **Helmy MM**. Estrogen provokes the depressant effect of chronic nicotine on vagally mediated reflex chronotropism in female rats. *J. Pharmacol. Exp. Ther.*, 2012, 342(2):568-575.
4. **Helmy MM**. Potential hepato-protective effect of α -tocopherol or simvastatin in aged rats. *Pharmacological Reports*, 2012, 64(3):698-705.
5. Senbel AM, **Helmy MM**. Lead acetate may cause erectile dysfunction by modulating NO/cGMP pathway in rat corpus cavernosum. *Cell Biol. Toxicol.*, 2013, 29(5): 355-364.
6. **Helmy MM**, Helmy MW, Abd Allah DM, Abo Zaid AM, Mohy El-Din MM. Selective ET_A receptor blockade protects against cisplatin-induced acute renal failure in male rats. *Eur. J. Pharmacol.*, 2014, 730:133-139.
7. Helmy MW, **Helmy MM**, Abd Allah DM, Abo Zaid AM, Mohy El-Din MM. Role of nitrenergic and endothelin pathways modulations in cisplatin-induced nephrotoxicity in male rats. *J. Physiol. Pharmacol.*, 2014, 65 (3):393-399.

Research articles during working as an Associate Professor: (7)

1. El-Gowilly SM, **Helmy MM**, El-Gowelli HM. Pioglitazone ameliorates methotrexate-induced renal endothelial dysfunction via amending detrimental changes in some antioxidant parameters, systemic cytokines and Fas production. *Vascul Pharmacol.* 2015 Nov; 74:139-50. doi: 10.1016/j.vph.2015.07.002. Epub 2015 Jul 8.
2. **Helmy MM**, Helmy MW, El-Mas MM. Additive Renoprotection by Pioglitazone and Fenofibrate against Inflammatory, Oxidative and Apoptotic Manifestations of Cisplatin Nephrotoxicity: Modulation by PPARs. *PLoS One.* 2015 Nov 4;10(11):e0142303. doi: 10.1371/journal.pone.0142303. eCollection 2015.
3. **Helmy MM**, Hashim AA, Mouneir SM. Zileuton alleviates acute cisplatin nephrotoxicity: Inhibition of lipoxygenase pathway favorably modulates the renal oxidative/inflammatory/caspase-3 axis. *Prostaglandins Other Lipid Mediat.* 2018 Mar;135:1-10. doi: 10.1016/j.prostaglandins.2018.01.001. Epub 2018 Feb 4.
4. Helmy MW, **Helmy MM**, El-Mas MM. Enhanced lipoxygenase/LTD4 signaling accounts for the exaggerated hypertensive and nephrotoxic effects of cyclosporine plus indomethacin in rats. *Biomed Pharmacother.* 2018 Jun;102:309-316. doi: 10.1016/j.biopha.2018.03.065. Epub 2018 Mar 22.
5. Hashim AA, **Helmy MM**, Mouneir SM. Cysteinyl leukotrienes predominantly mediate cisplatin-induced acute renal damage in male rats. *J Physiol Pharmacol.* 2018 Oct; 69(5). doi: 10.26402/jpp.2018.5.12. Epub 2019 Jan 21.
6. **Helmy MM**, Helmy MW, El-Mas MM. Upregulation of cystathionine- γ -lyase/hydrogen sulfide pathway underlies the celecoxib counteraction of cyclosporine-induced hypertension and renal insult in rats. *Prostaglandins Other Lipid Mediat.* 2019 Apr;141:1-10

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7. **Helmy MM**, Mounair SM. Reno-protective effect of linagliptin against gentamycin nephrotoxicity in rats. *Pharmacol Rep.* 2019 Dec;71(6):1133-1139.
8. Abuiessa SA, Wedn AM, El-Gowilly SM, **Helmy MM**, El-Mas MM. Pre-eclamptic fetal programming alters neuroinflammatory and cardiovascular consequences of endotoxemia in sex-specific manners. *J Pharmacol Exp Ther* 2020 May;373(2):325-336.

Other Activities related to Research

- Participation in some of the studies performed by the Pharmaceutical Services Unit, Faculty of Pharmacy, University of Alexandria, presenting some scientific and research activities, such as toxicological and clinical expert report on diosmin, certified technical document on simvastatin and paracetamol, pharmacological activity and toxicity profile of some Egyptian pharmaceutical products (2009-2011).
- Reviewer for the following Internationally-cited journals: *Clinical and Experimental Pharmacology and Physiology (CEPP)*, *Pharmacological Reports*, *Journal of Pharmacy and Pharmacology (JPP)*, *BMC Pharmacology and Toxicology*, *World Journal of Cancer Research and Renal Failure*, *Global Journal of Cancer Therapy*.