



Curriculum Vitae

Name	Mostafa Adel Mohammed El-Zuhary Abdel-Hamed Rabie
Title	Associate Professor of Pharmacology & Toxicology, Faculty of Pharmacy, Cairo University
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Education:

<p><u>Academic Degrees</u></p> <ul style="list-style-type: none"> ○ PhD Degree: Department of Pharmacology and Toxicology, Faculty of Pharmacy, Cairo University, 2018 <i>Title:</i> “The possible modulatory role of an angiotensin metabolite in a Parkinson model in rats” ○ Master Degree: Department of Pharmacology and Toxicology, Faculty of Pharmacy, Cairo University, 2015 <i>Title:</i> “Pharmacological study of certain antioxidants in liver ischemia-reperfusion model in rats” ○ Bachelor of Pharmaceutical Sciences, Faculty of Pharmacy, Cairo University, 2011
<p><u>Research interest</u></p> <ul style="list-style-type: none"> ○ Molecular Neuropharmacology & Immunopharmacology. ○ Cardiovascular Pharmacology ○ Orthopedics & gene therapy
<p><u>Techniques</u></p> <ol style="list-style-type: none"> 1. Induction of Parkinson’s disease in rat model using central injection of 6-Hydroxydopamine via Stereotaxic operation 2. Induction of Liver toxicity in rat model using Liver ischemia reperfusion injury.

Techniques

3. Packaging of Recombinant Adeno-Associated virus (rAAV) vectors.
4. Preparation of Immunohistochemical slides and analysis.
5. Real time Polymerase Chain Reaction technique (RT-PCR) for assessment of gene expressions.
6. In-vitro assays for osteoarthritis model.
7. Preparation of X-Gal stain.

Techniques 3-7 are acquired during research training program funded by Erasmus+ Program KA171 with Center of Experimental Orthopedics, Saarland University Medical Center, Saarland University, Homburg/Saar, Germany

Programs

1. Graph Pad Prism analysis program for biostatistics analysis, scientific graphing, and curve fitting.
2. Mendeley program to handle and share references as well full-text documents, and citations while writing thesis and articles.

Teaching Courses:

	Course Title
<i>Undergraduate Courses (General Program)</i>	<ul style="list-style-type: none">○ Pharmacology I○ Pharmacology II○ Pharmacology III○ Biostatistics and Biological Standardization of Drugs○ Toxicology and Forensic Chemistry○ First Aid
<i>Undergraduate Courses (Clinical Program)</i>	<ul style="list-style-type: none">○ Pharmacology I○ Pharmacology II○ Toxicology and Forensic Chemistry○ Therapeutics-1○ Clinical Pharmacology○ Therapeutics-2
<i>Postgraduate Courses</i>	<ul style="list-style-type: none">○ Experimental Pharmacology (Master)○ Pharmacovigilance Diploma (Pharmacotherapy-Drug Induced adverse Effect – Pharmacovigilance Courses)○ Clinical Toxicology Diploma (IT-CT) (Risk Assessment Module)○ Quality Control & Quality Assurance Diploma (Bioanalysis of Hormones)

Career History and Professional Experience

<p>Titles</p>	<ul style="list-style-type: none"> ○ <i>Associate professor of Pharmacology and Toxicology</i>, Faculty of Pharmacy, Cairo University –May 2023 till now. ○ <i>Lecturer of Pharmacology and Toxicology</i>, Faculty of Pharmacy, Cairo University – May 2018 till May 2023. ○ <i>Assistant Vice Dean for Graduates and Research Affairs</i>, Faculty of Pharmacy, Cairo University – September 2018 till September 2019. ○ <i>Part-time Lecturer</i> at Egyptian Chinese University (ECU), Department of Pharmacology & Toxicology, 2022/2023 (<i>Pharmacology-1 & Pharmacology-2</i>) and establish a new pharmacology-1 lab for the students. ○ <i>Part-time Lecturer</i> at British University in Egypt (BUE), Department of Pharmacology & Toxicology, 2020/2021 & 2021/2022 (<i>Pharmacology-1, Pharmacology-2, Pharmacology-3 & Biological Screening</i>). ○ <i>Part-time Lecturer</i> at Misr International University (MIU), Department of Pharmacology & Toxicology and Clinical Pharmacy, 2018/2019, 2019/2020, 2021/2022 & 2022/2023 (<i>Pharmacology-1, Pharmacology-2, Pharmacology-3, Toxicology & Drug Abuse</i>; Integrated courses with four department Pharmacology & Toxicology, Clinical Pharmacy, Microbiology and Pharmaceutical Chemistry for multidisciplinary goals) ○ <i>Part-time Lecturer</i> at Future University in Egypt (FUE), Department of Pharmacology, Toxicology & Biochemistry, 2018/2019- (<i>Pharmaceutical Biostatistics, Medical Terminology, Biostatistics, Clinical Pharmacology & Pharmacology-3</i>), 2019/2020 (<i>Clinical Pharmacology, Pharmacology-3 & Drug Abuse</i>), 2020/2021 (<i>Toxicology & Pharmacology-1</i>) & 2021/2022 (<i>Toxicology</i>). ○ <i>Assistant Lecturer</i> of Pharmacology & Toxicology, Faculty Of pharmacy, Cairo University - May 2015- April 2018. ○ <i>Demonstrator</i> of Pharmacology and Toxicology, Faculty of Pharmacy, Cairo University – February 2012 till April 2015 ○ <i>General Coordinator of Continuous Pharmacy Education Center</i> “CPEC “- May 2012 till present.
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	<ul style="list-style-type: none"> ○ Participant in organizing and monitoring of the qualifying program of the American Board of Pharmacy specialties (BPS) in “Pharmacotherapy”- October 2012 till present. ○ Instructor in the qualifying program of the American Board of Pharmacy specialties (BPS) in “Pharmacotherapy” –September 2014 till present. ○ Member of academic advisory committee at Faculty of Pharmacy, Cairo University- January 2015 till now. ○ Member of Device Committee at department of Pharmacology and Toxicology, Faculty of Pharmacy, Cairo University – May 2012 till now.
<p>Projects</p>	<ul style="list-style-type: none"> ○ Participant in the Erasmus project entitled “IT-based international diploma and professional certificate in clinical toxicology”-ITCT (2015-2019), in collaboration with Newcastle University, Malta University, Ministry of Health, Ministry of Communication & Information Technology, Alexandria University and Ain-Shams University. ○ Participant in ASRT JESOR research grant project entitled “To Determine the Capability of the Cardioprotective Cyclocreatine Phosphate to Reduce the Progression of Myocardial Infarction to Heart Failure in the Standard ISO Rat Model (2018-2021). ○ Participant in research project entitled “Bioactive compounds from natural resources for treating Huntington’s disease” funded by King Abdulaziz University, KSA ○ Participant in research project entitled “Leads from natural products in treating Neurodegenerative diseases” funded by King Abdulaziz University, KSA ○ Participant in research project entitled “Saudi flora as a source for treating Parkinson’s disease” funded by King Abdulaziz University, KSA ○ I am involved in research project with my colleagues with Lublin University, Poland to study the role of certain essential oils against animal model of Schizophrenia. ○ Also, I am involved in research project with my colleagues Center of Experimental Orthopedics, Saarland University Medical Center, Saarland University, Homburg/Saar, Germany to evaluate the role of

<p>Projects</p>	<p>Fibroblast Growth Factors in management in Osteoarthritis. Besides, I joined a research training program in <i>Saarland University Medical Center</i> from 2/7/2023 till 31/8/2023 under the framework of the Mobility Exchange - Erasmus+ Program KA171.</p> <ul style="list-style-type: none"> ○ Furthermore, I am involved in two research projects for Alzheimer disease (AD), and I am waiting for their approval; one with <i>National Research Council (CNR), Neuroscience Institute, Italy</i> and the other with <i>Stockholm University, Sweden</i>. In the first project, we will use a mixed electrophysiological, molecular, and behavioral approach to investigate the potential of natural compounds with antioxidant/anti-inflammatory activities against in vivo and in vitro model of AD. Meanwhile, in the second one, we will use Adeno-Associated Virus (AAV) loaded with drugs/inhibitors to counteract the neuroinflammation induced in AD
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Publications and Presentations

1. "GC-MS analysis and the effect of topical application of essential oils of *Pinus canariensis* C.Sm., *Cupressus lusitanica* Mill. and *Cupressus arizonica* Greene aerial parts in Imiquimod-Induced Psoriasis in Mice" published at **Journal of Ethnopharmacology**, July **2023**
2. "Inosine attenuates rotenone-induced Parkinson's disease in rats by alleviating the imbalance between autophagy and apoptosis" published at **Drug Development Research**; **2023**, Doi: 10.1002/ddr.22077.
3. "Cyclocreatine Phosphate: A Novel Bioenergetic/Anti-Inflammatory Drug That Resuscitates Poorly Functioning Hearts and Protects against Development of Heart Failure" published at **Pharmaceuticals**; **2023**, 16(3), 453.
4. "Intra-articular injection of rAAV-hFGF-2 ameliorates monosodium iodoacetate-induced osteoarthritis in rats via inhibiting TLR-4 signaling and activating TIMP-1" published at **Toxicology & Applied Pharmacology**; **2023**, 459: 116361.
5. "Semaglutide, a Novel Glucagon-Like Peptide-1 Agonist, Amends Experimental Autoimmune Encephalomyelitis-Induced Multiple Sclerosis in Mice: Involvement of the PI3K/Akt/GSK-3 β Pathway " published at **International immunopharmacology**; 2023,115: 109647.
6. " Neuroprotective effect of secukinumab against rotenone induced Parkinson's disease in rat model: Involvement of IL-17, HMGB-1/TLR4 axis and BDNF/TrKB cascade" published at **International immunopharmacology**; **2023**, 114: 109571.
7. " Adenosine A1 receptor agonist, N6-cyclohexyladenosine, attenuates Huntington's disease via stimulation of TrKB/PI3K/Akt/CREB/BDNF pathway in 3-nitropropionic acid rat model " published at **Chemico-Biological Interaction**; **2023**, 369:110288.
8. "A Novel High Energy Phosphate Source Resuscitates Poorly Functioning Donor Hearts: " abstract published at **Circulation, American Heart Association, USA**, **2022**
9. "Experimental Evidence for Diiodohydroxyquinoline-Induced Neurotoxicity: Characterization of Age and Gender as Predisposing Factors" published at **Pharmaceuticals (Basel)**; **2022** Feb; 19;15(2):251
10. "Nandrolone Decanoate (Nan) Abusers and Concomitant Cannabis Use" Book chapter published at **Handbook of Substance Misuse and Addictions, Springer** **2022**
11. "Nourin-Associated miRNAs: Novel Inflammatory Monitoring Markers for Cyclocreatine Phosphate Therapy in Heart Failure" published at **international journal of Molecular Sciences**, **2021** Mar; 30; 22(7):3575

12. "Inhibition of Brain GTP Cyclohydrolase I Attenuates 3-Nitropropionic Acid-Induced Striatal Toxicity: Involvement of Mas Receptor/PI3k/Akt/CREB/ BDNF Axis" published at **Frontiers in Pharmacology**, 2021 Dec 22;12:740966
13. "Cyclocreatine phosphate: A Novel Mechanism for Preventing Development of Heart Failure" abstract published at **Circulation, American Heart Association, USA**, 2020.
14. "Vildagliptin Attenuates Huntington's Disease through Activation of GLP-1 Receptor/PI3K/Akt/BDNF Pathway in 3-Nitropropionic Acid Rat Model" published at **Neurotherapeutics**; 2020 Jan; 17(1):252-268.
15. "Correlation between angiotensin 1–7-mediated Mas receptor expression with motor improvement, activated STAT3/SOCS3 cascade, and suppressed HMGB-1/RAGE/NF- κ B signaling in 6-hydroxydopamine hemiparkinsonian rats "published at **Biochemical Pharmacology**; 2020 Jan; 171:113681.
16. "Telluric acid ameliorates hepatic ischemia reperfusion-induced injury in rats: Involvement of TLR4, Nrf2, and PI3K/Akt signaling pathways "published at **Biochemical Pharmacology**; 168 (2019):404-411, **August 2019**.
17. "The Mas receptor as a future perspective in Parkinson's disease "published at **Journal of Neurology & Neuromedicine**; 3(4): 65-68, **August 2018**.
18. "Neurorestorative role of intrastriatal angiotensin 1-7 in 6-hydroxydopamine hemiparkinsonism by dual angiotensin 1-7/MASR axis activation and HMGB-1/RAGE signaling inhibition "published at **World Congress of Pharmacology**, Kyoto, Japan, **July 2018**.
19. "Angiotensin 1-7 ameliorates 6-hydroxydopamine lesions in hemiparkinsonian rats through activation of MAS receptor/PI3K/Akt/BDNF pathway and inhibition of angiotensin II type-1 receptor/NF- κ B axis "published at **Biochemical Pharmacology** 151 (2018) 126–134, **February 2018**.
20. "Protective effect of Trimetazidine, Sodium selenite and Telluric acid in liver ischemia – reperfusion injury in rats "published at The **5th International Scientific Conference of Faculty of Pharmacy, Cairo University**, **April 2015**

Research Activities

Supervising **25** Master and Ph.D. thesis in topics of Pharmacology, Toxicology & Clinical Pharmacy

Peer Reviewed- Journal Articles (41 verified peer reviews)

2019	Medical Science Monitor	The Effect of Lidocaine on TRPM 2,6,7 and 8 Channels in Liver Ischemia / Reperfusion Model in Rats
	European Journal of Pain	Dexmedetomidine alleviates neuropathic pain in CCI rats by inhibiting HMGB1-mediated TLR4/NF- κ B and PI3K/Akt/mTOR signaling pathways
	International Immunopharmacology	Anti-inflammatory and antioxidant effect of Eucommia ulmoides polysaccharide in hepatic ischemia reperfusion injury by reducing ROS release and inhibiting the TLR-4-NF- κ B pathway in rats
2020	Biochemical Pharmacology	The Bcr-Abl inhibitor GNF-7 inhibits necroptosis and ameliorates acute kidney injury by targeting RIPK1 and RIPK3 kinases
	Future journal of Pharmaceutical Sciences	Cognitive enhancing and antioxidant activities of Sargassum ilicifolium and Padina tetrastratica in scopolamine treated mice
	Therapeutic Advances in Chronic Disease	“Extracellular HMGB-1 Activates Inflammatory Signaling in Tendon Cells and Tissues
	Future journal of Pharmaceutical Sciences	Evaluation of Cardioprotection and Bio-efficacy Enhancement of Stevioside and Diltiazem in Rats
	Naunyn-Schmiedeberg's Archives of Pharmacology	Piceatannol exhibited neurogenic effect through attenuation of JNK3 and Bcl-2/Cytc/Caspase dependent apoptosis pathways- In vitro cell line studies
	Biochemical Pharmacology	Metformin protects against neuroinflammation through integrated mechanisms of miR-141 and the NF- κ B-mediated inflammasome pathway in a diabetic mouse model
	Future journal of Pharmaceutical Sciences	Chemopreventive potential of plant-derived epigenetic inhibitors silibinin and quercetin: An involvement of apoptotic signaling cascade modulation
	Future journal of Pharmaceutical Sciences	Metformin and asarone inhibit HepG2 cell proliferation in a high glucose environment by regulating AMPK and Akt signaling pathway

2021	Future journal of Pharmaceutical Sciences	Single Dose of Datumetine Exposure Preferentially Upregulates NMDAR Signalling Pathways in Different Brain Regions of Mice
	Naunyn-Schmiedeberg's Archives of Pharmacology	The effects of PI3K/Akt/mTOR Signaling Pathway Inhibitors on Immune Evasion Mechanisms of Acute Myeloid Leukemia Cell Line
	Future journal of Pharmaceutical Sciences	Alzheimer's Disease and their Prevention by Antioxidants
	Molecular Neurobiology	Metabolomics-driven identification of biochemical mechanisms underlying the neuroprotective effects of pleiotrophin in a mouse model of Parkinson's disease
	Biochemical Pharmacology	A Brief History on the Hypotheses of Alzheimer's Disease Keeping Special Focus on Inflammasomes as the Key Players of Neuroinflammation
2022	Journal of Neuroinflammation	Sustained Hyperammonemia Activates Nf- κ b in Purkinje Neurons Through Activation of the Trkb-PI3K-Akt Pathway By Microglia-derived BDNF
	Cellular & Molecular Biology Letters	Depletion of Prx II promotes keratinocyte apoptosis and alleviates psoriatic skin lesions via the PI3K/AKT/GSK3 β signaling axis
	Journal of Neuroinflammation	Inhibition of CCR2 attenuates neuroinflammation and neuronal apoptosis after subarachnoid hemorrhage through the PI3K/Akt pathway
2023	Bulletin of Faculty of Pharmacy, Cairo University	Role of Mitochondrial Dysfunction in the Pathophysiology of Fibromyalgia
	Journal of Orthopedic Surgery and Research	Swimming Prevents Cell Death of Chondrocytes Via Pi3k/Akt Pathway in an Experimental Model
	Journal of Pharmaceutical and Biomedical Analysis	Bupleurum Chinense DC Improves LPS-induced Neuroinflammation in Rats By Activating CREB and Inhibiting Protein Expressions of NF- κ B and TNF- α

2023	Analytical Cellular Pathology	Inhibition of MiR-182-5p Targets FGF9 to Alleviate Osteoarthritis
	International Immunopharmacology	Upregulation of CD226 on Subsets of T Cells and NK Cells Is Associated with Upregulated Adhesion Molecules and Cytotoxic Factors in Patients with Tuberculosis
	International Immunopharmacology	Liraglutide Limits The Immunogenic Cell Death-mediated Ros Propagation And Pi3k/Akt Inactivation After Doxorubicin-induced Gonadotoxicity In Rats: Involvement Of The Canonical Hedgehog Trajectory
	NeuroMolecular Medicine	Neuroprotective Effects of Sinomenine on Experimental Autoimmune Encephalomyelitis via Anti-Inflammatory and Nrf2-dependent Anti-oxidative Stress Activity
	Frontiers in Pharmacology	BCG vaccination mitigates the neurotoxic effect of 3-NP in animal model of Huntington's disease
	International Immunopharmacology	Bispecific antibody simultaneously targeting AGR2 and PD1 mediates cytotoxic T-cell-induced antitumor response in AGR2-dependent manner and inhibits AGR2-induced PDL1 upregulation.

Awards

- Best research manuscript in the faculty of Pharmacy, Cairo University 2020, and best research in the Pharmacology department 2020
- Cairo university prizes in scientific publishing from 2018-2020 – Cairo University.

Attended Conferences:

- International Conference on Cancer & Oncotherapy (ICOC), December 2021
- The 9th scientific conference of Faculty of Pharmacy Cairo University, 2018
- The 8th scientific conference of Faculty of Pharmacy Cairo University, April 2017
- NPIS CPD Conference at Newcastle University, October 2017.
- The 5th scientific conference of Faculty of Pharmacy Cairo University, 2014.
- The 4th scientific conference of Faculty of Pharmacy Cairo University, 2013.

Courses & workshops:

- Workshop about “Mobile Application” by faculty and leadership center at Cairo University” FLDC”, 2022
- Workshop about “Critical Thinking” by faculty and leadership center at Cairo University” FLDC”, 2021
- Workshop about “Blended learning” by faculty and leadership center at Cairo University” FLDC”, 2021
- Workshop about “Statistical analysis in Bio-Experiments” by faculty and leadership center at Cairo University” FLDC”, 2020
- Workshop about “Research Ethics” by faculty and leadership center at Cairo University” FLDC”, 2019
- Workshop about “Stress Management” by faculty and leadership center at Cairo University” FLDC”, 2018
- Workshop about “Essentials of Pharmacovigilance Practice: An Overview”, 2018
- Workshop about “University Management” by faculty and leadership center at Cairo University” FLDC”, 2017.
- Workshop about “Creative Thinking” by faculty and leadership center at Cairo University” FLDC”, 2016
- Workshop about “Effective Teaching Skills” by faculty and leadership center at Cairo University” FLDC”, 2016
- Workshop about “Strategic Planning” by faculty and leadership center at Cairo University” FLDC”, 2016
- Workshop about “Exams and Students Evaluation System” by faculty and leadership center at Cairo University” FLDC”, 2015
- Workshop about “International Publishing of Scientific Research” by faculty and leadership center at Cairo University” FLDC”, 2015
- Workshop about Interactive Lectures by DAAD, 2014.
- Workshop about Understanding Learning Processes by DAAD, 2014
- Workshop about Interactive Lectures by DAAD, 2014
- Workshop about “Legal and Financial Aspects in University Environment” by faculty and leadership center at Cairo University” FLDC”, 2014
- Workshop about “University Code of Ethics” by faculty and leadership center at Cairo University” FLDC”, 2016
- Workshop about How to present scientific data by DAAD, 2014

- Workshop about Self-Marketing by DAAD, 2014
- Workshop about “Conference Organization” by faculty and leadership center at Cairo University” FLDC”, 2013
- Workshop about “Use Technology in Teaching” by faculty and leadership center at Cairo University” FLDC”, 2013
- Workshop about “Competing for Research Funds” by faculty and leadership center at Cairo University” FLDC”, 2012
- Workshop about “The Credit Hour Systems” by faculty and leadership center at Cairo University” FLDC”, 2012.
- Workshop about “Advance Training Program in Communication Skills and Consumer Behavior”
- ICDL Holder (Windows, Word, Excel, IT, Access, Power point And Net), 2010

Training internship:

Summer training

- Community Pharmacist at Modern Pharmacy from Aug. 2011 to Jun. 2018
- Two Weeks Training at “GSK Company” (Ceph’s), 2010.
- One month training at “Care pharmacy”, 2010
- Two Weeks Training at “GSK Company” (QC), 2009
- One month Training at “Amoun Pharmaceutical Company” (Production, QC and QA), 2009.
- Two-month training at “Care Pharmacy”, 2008
- One month training at “Memphis Pharmaceutical and Chemical industries” (Production, QC and QA), 2008
- One Weeks training at “El-Qahera Pharmaceutical and Chemical industries” (Production, QC and QA), 2008
- One Week training at “ADCO” (Production, QC and QA), 2007
- One month training at “Care pharmacy”, 2007