

Sahar Mahmoud Azzmy El-Gowilly

**Professor of Pharmacology and Toxicology
Faculty of Pharmacy-Alexandria University**



PERSONAL DETAILS:

Date of Birth: 7/ 11/ 1972

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Scopus H-index:11

TOTAL CITATION: 321

Executive Head of assessment and evaluation unit

Acting Head of Pharmacology and Toxicology Department

CAREER HISTORY:

- **Professor in Pharmacology and Toxicology (June 2017)** Dept. of Pharmacology and toxicology, Faculty of Pharmacy, Univ. of Alexandria, Egypt.
- Associate professor in pharmacology (February -2012),Lecturer in pharmacology (2004-2011)
- Assistant lecturer (1999-2004), Instructor (1996-1999)
- **Executive Head of the assessment and evaluation unit -Faculty of Pharmacy- since the academic year 2016-2017 till now**
- **Educational expert in Student Assessment**
- **Manager of Information Technology Unit -Faculty of Pharmacy-Alexandria University (since 2017)**
- **General Secretary of PHS conference of Faculty of Pharmacy Alexandria University**
- **Part-Time professor in Arab Academy of Science 2017-2018, 2018-2019**
- **Part-time professor in Pharos University 2009-2010, 2010-2011**
- **Occasional reviewer in "European Journal of pharmacology" 2011-till now**
- **Member of the National Center For Faculty and leadership Development (NCFLD) - Associated member (B381)**

Scientific and Educational Projects:

-**Head of Alexandria University Team and member of the Erasmus plus multi-beneficiaries project Call 2015-2016 entitled "IT-Based international diploma and certificates in clinical toxicology"- in cooperation with Cairo University, Assuit University, Malta University, Newcastle University, KTH institute, Ministry of health, Ministry of communication- The first electronic clinical toxicology diploma in the Middle East countries**



- **CO-PI in Science and Technology Development Fund (STDF)** project: "Sexual and molecular dimorphism in nicotine protection against renal and hemodynamic derangements of endotoxic shock" STDF-ID14895 .Grant Monetary: 763,000 EGP. (2015 - 2018).
- Member of the executive committee of the project "**Development of student assessment**" - **Alexandria University** (2009-2012) and participate in the preparation of the first **student assessment guide book** in Alexandria University
- **CO-PI in Science and Technology Development Fund** entitled "**Hemodynamic and renal effects of nicotine in rats with surgical menopause**" (2010-2013)

Teaching and Educational Activities

- Pharmacology for undergraduate pharmacy Students (2004-2012).
- Pharmacology for Bachelor degree pharmacy Students 2012-2013 –till now
- Teaching and course coordinate for Pharmacology II, Therapeutics I- Trauma & First aid, Drug Interactions For Clinical Pharmacy Students during the academic years 2012-2013 till 2018-2019
- Toxicology and first aid course for undergraduate pharmacy students (2004-2005)
- Biological Standardization & Biostatistics course for undergraduate pharmacy students (2006-2008)
- **Faculty of dentistry:** Dental nutrition and dental drugs for Malaysian students (2014-2015)& (2015-2016) & (2016-2017) & (2018-2019), (2019-2020)

Postgraduate Courses:

- Hospital Pharmacy Diploma (2016-2017, 2017-2018, 2018-2019, 2019-2020)
- Advanced topics in Toxicology in the academic year 2016-2017, 2017-2018, 2018-2019, 2019-2020 (E-course since 2018-2019)
- Applied Experimental Pharmacology for postgraduate students in the academic year (2012-2016)
- Molecular biology course for postgraduate students in the academic year (2006-2007)
- Advanced course in pharmacology for postgraduate students in the academic year (2007-2008)
- Drug interaction course for postgraduate students in the academic year (2008-2009)

Other Educational Activities:

1- Executive Head of the assessment and evaluation unit since 2016

- 2- Participation in the update of Clinical Pharmacy course specification and course content of clinical Pharmacy degree courses (Therapeutics I, Pharmacology II, Trauma and First Aid, Drug interactions)
- 3- Academic supervisor for Clinical Pharmacy Students 2011-2012 & 2012-2013 & 2013-2014 & 2015-2016
- 4- Academic supervisor of postgraduate students of pharmacology department (since September 2007 till 2013).
- 5- Member in the exam and control committee of the faculty of pharmacy-Alexandria University starting from the academic year 2004-2005 till now.
- 6- Member of the executive team of the quality assurance unit (Participates in the preparation of self study of the faculty, Prepare documents needed for the tenth indicator concerning students assessment and evaluation)
- 7- Internal auditor for the undergraduate Pharmacy Degree Program in the academic year 2014-2015



- 8- External Auditor for Pharmacology Department – six October University concerning Pharmacology and clinical Pharmacy Courses in the academic year 2012-2013

Research Activities:

Member of Supervision Committee for Master and PhD thesis:

A- Finished thesis:

- Entitled “Combined effects of nicotine and cyclosporine on renovascular activities of rats”- ended June 2008
- Entitled”Role of oxidative stress and nitric oxide in Isoniazid-Rifampicin-induced hepatotoxicity”-- ended 2011
- Entitled “Modulatory role of estrogen in the cardiovascular adverse effects of nicotine in female rats”- ended 2010
- Entitled “Investigation of the renovascular effects of nicotine in female ovariectomized rats” - ended 2013
- Entitled”Modulatory role of cyclosporine in the cardiovascular adverse effects of endotoxemia” – ended 2015
- Entitled “Modulatory role of ivabradine on autonomic signaling and its effect on doxorubicin-induced cardiac dysfunction”- ended 2017
- Entitled” Possible Protective effects of vitamin D and Angiotensin Modulators in experimentally -induced liver fibrosis- ended 2017

B- Current thesis:

- Entitled ”Peripheral and central mechanisms of the effect of nicotine in the cardiovascular effects of endotoxemia in male rats”- since November 2016

C- Significant contribution in the following thesis:

- Role of estrogen-nitric oxide synthase and heme oxygenase in the haemodynamic effect of nicotine in female rats- ended 2014
- Adenosinergic and estrogenic modulation of nicotine interaction and renovascular activities in female rats- ended 2014

- Contribution with Abstracts in Scientific Conferences :

1. El-Mas MM, Sallam MY, Abdel-Galil AA, El-Gowilly SM (2016). Central GABA_A Receptors Provoke Inflammatory and Cardiovascular Consequences of Endotoxemia in Conscious Rats. *FASEB J* April 2016 30:1200.4



2. El-Mas MM, Sallam MY, Abdel-Galil AA, El-Gowilly SM (2016). Cyclosporine Ameliorates Reductions in Blood Pressure and Heart Rate Variability Caused by Endotoxemia in Rats: Modulation by Central PI3K/sGC/MAPKs Signaling *FASEB J* April 2016 30:1200.3
3. Sallam MY, El-Gowilly SM, Abdel-Galil AA, El-Mas MM. Amelioration by GABA_B receptors of the cyclosporine-evoked counteraction of endotoxic cardiovascular manifestations in conscious rats. *FASEB J* April 2017 31:827.4
4. Sallam MW, El-Gowilly SM, El-Gowell HM, El-Mas MM. The $\alpha 7/\alpha 4\beta 2$ nAChRs Alleviate The Hypotension And Altered Cardiac Sympathovagal Balance Evoked By Endotoxemia In Male Rats *FASEB J* April 2017 31:848.3
5. El-Lakany MA, El-Gowell HM, Fouda MA, El-Gowilly SM, El-Mas MM. Gonadal Hormone Receptors Underlie The Resistance Of Female Rats To Cardiovascular Complications Of Endotoxemia *FASEB J* April 2017 31:848.4
6. Sallam MY, El-Gowilly SM, Fouda MA, Abd-Alhaseeb MA, El-Mas MM. Central Cholinergic Pathways Diminish the Hypotensive and Cardiac Autonomic Depressant Effects of Endotoxemia in Male Rats: Role of Medullary NF κ B/ $\alpha 7/\alpha 4\beta 2$ AChR Signaling. *FASEB J* April 2018 32:697.2
7. Wedn AM, El-Gowilly SM, El-Mas MM. Sex-unrelated counteraction by nicotine of the endotoxemia-evoked facilitation of renal vasodilator capacity in rats: roles of $\alpha 7/\alpha 4\beta 2$ nAChRs and HSP70. *FASEB J* April 2018 32:562.8
8. Wedn AM, El-Gowilly SM, El-Mas MM. The $\alpha 7$ -nAChRs/heme oxygenase/carbon monoxide pathway arbitrates nicotine counteraction of the inflammatory and renal vasoconstrictor hyporeactivity in endotoxic rats. *FASEB J* April 2018 32:568.9
9. Sallam MY, El-Mas MM, El-Gowilly SM. Nicotinic Acetylcholine Receptors of $\alpha 7$ and $\alpha 4\beta 2$ Types Mediate the Nicotine Counteraction of Impaired Baroreceptor Function in Endotoxic Rats. *FASEB J* April 2019, 33, Issue 1, suppl01: 511.2
10. Wedn AM, El-Gowilly SM, El-Mas MM. The Compromised Renal Vasodilations of Adenosinergic Origin in Endotoxic Rats is Reversed by Nicotine: Role of the nAChRs/Heme Oxygenase-1 Pathway. *FASEB J* April 2019, 33, Issue 1, suppl01: 513.11
11. El-Lakany MA, Fouda MA, El-Gowell HM, El-Mas MM. Estrogen Receptor- α Counterbalances the Endotoxic Inflammatory Response and Associated Arterial Baroreflex Dysfunction in Ovariectomized Rats. *FASEB J* April 2019, 33, Issue 1, suppl01: 513.5 (oral presentation)
12. Wedn AM, El-Gowilly SM, El-Mas MM. El-Mas. Prolonged Exposure of Rats to Bacterial Lipopolysaccharide Accelerates Mortality and blunts Hemodynamic and Renal Effects of Endotoxemia in Sex-Specific Fashions. *FASEB J* April 2019, 33, Issue 1, suppl01: 513.4
13. Wedn AM, El-Gowilly SM, El-Mas MM. Activation of $\alpha 7$ -nAChRs counteracts the inflammatory and renal vasoconstrictor hyporeactivity in endotoxic rats via heme oxygenase/carbon monoxide upregulation. Asian Conference on Science, Technology & Medicine (ACSTM), Dubai, UAE, February 2019 (oral presentation).
14. Sallam MY, El-Gowilly SM, Fouda MA, Abd-Alhaseeb MM, **El-Mas MM**. Central $\alpha 7/\alpha 4\beta 2$ AChR signaling ameliorates the inflammatory, hypotensive and cardiovascular manifestations of endotoxemia in conscious male rats. 5th Future University International Conference of Pharmaceutical Sciences, Cairo, Egypt, January 28-30, 2019, PP. 123 (<https://www.fue.edu.eg/5thfue-icps2019/>).
15. Wedn AM, El-Gowilly SM, **El-Mas MM**. Heme byproducts distinctly contribute to the $\alpha 7$ -nAChR-dependent counteraction of inflammatory and renal vasoconstrictor hyporeactivity in



endotoxic rats. 5th Future University International Conference of Pharmaceutical Sciences, Cairo, Egypt, January 28-30, 2019, PP. 56 (<https://www.fue.edu.eg/5thfue-icps2019/>).

16. Mahmoud M El-Mas, Hanan M El-Gowell, Lamiaa K Elsalakawy, and Sahar M El-gowilly. Nitric Oxide Synthase, But Not Heme Oxygenase, Mediates The Adenosine A2B Receptor-Sensitive Renal Vasodilations In Female Rats *FASEB J April 2012 26:1051.6*

17. Mahmoud M El-Mas, Sahar M El-gowilly, Eman Y Gohar, and Hanan M El-Gowell. Influence Of Chronic Nicotine On Acetylcholine-Evoked Renal Vasodilations In Female Rats: Dose Dependency And Ovarian Hormonal Modulation *FASEB J April 2012 26:1051.7*

18. Eman M Gohar, **Sahar M El-gowilly**, Hanan M El-Gowell, and Mahmoud M El-Mas Nicotine Paradoxically Alters The Facilitatory Action Of Estrogen And Progesterone On Adenosine Receptor-Mediated Renal Vasodilations *FASEB J April 9, 2013 27:654.6*

19. Mahmoud M El-Mas, Hanan M El-Gowell, Mohamed A Fouda, and **Sahar M El-Gowilly**: Modulation Of The Baroreflex Depressant Effect Of Chronic Nicotine In Female Rats By Nitric Oxide Synthase And Heme Oxygenase *FASEB J April 9, 2013 27:654.5*

20. Mahmoud M El-Mas, Marwa Y Sallam, Abdel-Galil A Abdel-Galil, and Sahar M El-Gowilly. Cyclosporine Ameliorates Reductions in Blood Pressure and Heart Rate Variability Caused by Endotoxemia in Rats: Modulation by Central PI3K/sGC/MAPKs Signaling *FASEB J April 2016 30:1200.3*

21. Mahmoud M El-Mas, Marwa Y Sallam, Abdel-Galil A Abdel-Galil, and Sahar M El-Gowilly. Central GABA_A Receptors Provoke Inflammatory and cardiovascular Consequences of Endotoxemia in Conscious Rats *FASEB J April 2016 30:1200.4*

Scientific Conferences Attended:

- **Member of the steering committee and general secretary of PHS conference 2019**
- Fifth international Pharmaceutical conference of Future University – February 2019
- Smart Learn conference 8,9-10-2018 Grand Nile Tower, Ain Shams University, Erasmus + funds
- Eleventh conference of Egyptian Association of Advancement of Medical Basic Sciences (EAMBS)_ entitled” Wound from basic to management – April 2014
- Egyptian international Cardiac Association conference “CardioAlex”- June 2014
- Tenth conference of the Egyptian Association of Advancement of Medical Basic Sciences (EAMBS_ entitled”Medicine and research for the foundation of youth”- 2013

TRAINING ATTENDED Since 2012:

- How to analyze the results of the written examination September 2019-Alexandria University
- How to audit practical and oral exams in medical education September 2019-Alexandria University
- **Managing ITCT learning management system**, Ministry of communication July 2018
- **Constructive alignment workshop** – Faculty of engineering, Ain Shams University in collaboration with KTH institute Sweden 22&23 August 2017
- Instructional design workshop- Ministry of communication- 14&15-2-2016



- E-learning Project management workshop 16-2-2016
- Immunohistochemical techniques in Pathology and their Application” – Medical Research institute 2013
- “Electronic Education”-NCFLD center – Alexandria University- 2016
- “Strategic planning” - NCFLD center – Alexandria University-2016
- “Management of disasters and crises “- NCFLD center – Alexandria University-2016
- “Application of technology in education” - NCFLD center – Alexandria University—2016

A- Oral presentation and active participation in the following workshops:

- **Continuous education professional certificate entitled "Medication errors and patient safety " in collaboration with Ministry of Health and as a part of – Erasmus plus -ITCT project- September 2018**
 - Organize and actively participate in training staff members of the project "ITCT" in training entitled "**Important toxicological and pharmacological techniques**"-Faculty of Pharmacy- Alexandria University-july 2018
- **Contraceptive Workshop”- Alexandria National Woman Health Center- December 2014**
- **Dental Pharmacology Workshop – organized by Malaysian Embassy- April 2015**

B- Organization and participation by lectures in the following workshops concerned with Student Evaluation

- OSPE and OSCE exams -faculty of Pharmacy-Alexandria University (November 2019)
- Criteria of good written exams -faculty of Pharmacy-Alexandria University (March, November 2019)
- Criteria of electronic exams -faculty of Pharmacy-Alexandria University (March, November 2019)
- Internal Audit and exam systems and control – Quality Assurance unit of Alexandria University – 2012.
- Internal Audit and exams - Quality Assurance unit of Alexandria University- 2013
- Program specification and course report preparation – 2013
- How to write self study- Quality Assurance unit of Alexandria University- 2013
- Different types of exams and student evaluation – Faculty of Art-2014
- Internal Audit and exam systems and control – Quality Assurance unit of Alexandria University – 2014
- Internal Audit and exam systems and control – Faculty of Commerce -2015

- General secretary of the Faculty of Pharmacy, Alexandria University conference : November 2019

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

Member of the editorial board of :

- American Journal of Clinical and Experimental Medicine
- Science Journal of Clinical Medicine(SJCM)



- Clinical Medicine Research(CMR)
- **Editorial review board member of World Academy of Science, Engineering and Technology.**
- **American Society of Pharmacology and Experimental Therapeutics (ASPET) -till 2014**
- **Electronic membership in "American College of Clinical Pharmacology" – May 2011**

AWARDS AND HONORS:

- 1- ACDIMA award for the Top Scientific Publication in Applied Pharmaceutical Sciences in the Arab world (2007). Awarded by the Arab Company for Drug Industries and Medical Appliances, Amman, Jordan.
- 2- Alexandria university scientific encouragement award 2012
- 3- University of Alexandria awards for distinguished publications in the top cited journals (2008 , 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

OTHER ACTIVITIES:

- Reviewer of some projects of "Science and technology development fund- STDF"
- Occasional reviewer in "European Journal of pharmacology" 2011-till now
- Reviewer in Omic publishing internal group journals that includes "Journal of Pharmaceutical sciences", "Pharmaceutical regulatory affairs", "Pharmaceutics & Drug Delivery Research" 2011-2014.

PUBLICATIONS:

Full length research article (35)

1. El-Mas MM, Mohy El-Din MM, **El-gowillySM**, Sharabi FM.(**2004**): Regional and endothelial differences in cyclosporine attenuation of adenosine receptor-mediated vasorelaxations. J Cardiovasc Pharmacol. 2004 Apr;43(4):562-73.
2. El-Mas MM, Mohy El-Din MM, **El-Gowilly SM**, Sharabi FM (**2004**):. Relative roles of endothelial relaxing factors in cyclosporine-induced impairment of cholinergic and beta-adrenergic renal vasodilations. Eur J Pharmacol. 2004 Mar 8;487(1-3):149-58.
3. El-Mas MM, El-Din MM, **El-Gowilly SM**, Sharabi FM.(**2005**): The alpha1-adrenergic receptor not the DA(1)-dopaminergic receptor mediates cyclosporine-SKF38393 renovascular interaction. Can J PhysiolPharmacol. 2005 Dec;83(12):1129-36.



4. El-Mas MM, Sharabi FM, **El-Gowilly SM**, El-Din M.M. (2007): Inhibition of nitric oxide-guanylate cyclase-dependent and -independent signaling contributes to impairment of beta-adrenergic vasorelaxations by cyclosporine. *Biochem Pharmacol.* 2007 Feb 1;73(3):359-67.
5. **El-gowilly S.M.**, Abdel-Rheem M Ghazal, Eman Y Goher and Mahmoud M El-Mas (2008): Additive impairment of beta-adrenoceptor-mediated renal vasodilation by nicotine and cyclosporine. *Clinical Experimental Pharmacology and Physiology, Clin Exp Pharmacol Physiol.*; Oct., 35 (10): 1164-1171
6. Mahmoud M. El-Mas, **Sahar M. El-gowilly**, Eman Y. Goher, Abdel-Rheem M. Ghazal (2008): Pharmacological characterization of cellular mechanisms of the renal vasodilatory effect of nicotine in rats. *Eur J Pharmacol.* 2008 Jul 7;588(2-3):294-300.
7. El-mas, M.M.; **El-Gowill, S.M.**, Gohar, EY and Ghazal, A.M. (2009): Sex and hormonal influences on the nicotine-induced attenuation of isoprenaline vasodilations in the rat perfused kidney. *Can. J. Physiol. Pharmacol.*, 87(7): 539-548.
8. Nasr, M.A., **El-gowilly, S. M.** and El-Mas, M. M. (2010): Comparable renovascular protective effects of moxonidine and simvastatin in rats exposed to cigarette smoke. *Vascular Pharmacology* 53 (2010) 53–60
9. Saad, E.I., **El-Gowilly, S.M.**, Sherhaa, M.O. and Bistawroos, A.E. (2010): Role of oxidative stress and nitric oxide in the protective effects of α -lipoic acid and aminoguanidine against isoniazid–rifampicin-induced hepatotoxicity in rats. *Food and Chemical Toxicology* 48 (2010) 1869–1875
10. El-Mas MM, **el-Gowilly SM**, Gohar EY, Ghazal AR, Abdel-Rahman AA. Estrogen dependence of the renal vasodilatory effect of nicotine in rats: role of $\alpha 7$ nicotinic cholinergic receptor/eNOS signaling. *Life Sci.* 2011 Jan 17;88(3-4):187-93.
11. El-Mas MM, El-Gowilly SM, Fouda MA, Saad EI. Role of adenosine A(2A) receptor signaling in the nicotine-evoked attenuation of reflex cardiac sympathetic control. *Toxicol Appl Pharmacol.* 2011 Aug 1;254(3):229-37. Epub 2011 Apr 29
12. El-Gowelli HM, Abd-Elrahman KS, Saad EI, **El-Gowilly SM**, Abdel-Galil AG, El-Mas MM. PPAR γ dependence of cyclosporine-isoprenaline renovascular interaction: Roles of nitric oxide synthase and heme oxygenase. *J Cardiovasc Pharmacol.* 2011 Aug;58(2):173-80.
13. Sahar M. El-Gowilly Metoprolol ameliorates cyclosporine A-induced hypertension and nephrotoxicity in rats. *J Cardiovasc Pharmacol.* 2011 Aug 31, 58(6):639-46.
14. El-Mas MM, Fouda MA, **El-Gowilly SM**, Saad EI. Central estrogenic pathways protect against the depressant action of acute nicotine on reflex tachycardia in female rats. *Toxicol Appl Pharmacol.* 2012 Feb 1;258(3):410-7. Epub 2011 Dec 19.



15. El-Mas, MM, El-Gowell, HM, **El-Gowilly, SM**, Foda, MA, Hel, MM (2012): Estrogen provokes the depressant effect of chronic nicotine on vagally-mediated reflex chronotropism in female rats. *J. Pharmacol. Exp. Ther.*, 342, 568-575.
16. El-Gowell, H.M., **El-Gowilly, S.M.**, Elsalakawy, L.K., El-Mas., M.M. (2013): Nitric oxide synthase/K⁺ channel cascade triggers the adenosine A_{2b} receptor-sensitive renal vasodilations in female rats. *Eur. J. Pharmacology*, (702): 116-125
17. Gohar, E.Y., **El-Gowilly, S.M.**, El-Gowell, H.M. and El-Mas, M.M. (2013): Nicotine paradoxically affect the facilitatory effect of ovarian hormones on the adenosine receptor mediated renal vasodilations. , (710): 1-9
18. El-Mas MM, **El-Gowilly SM**, Elsalakawy LK, El-Gowell HM. Estrogen compromises the facilitatory effect of chronic nicotine on adenosine A_{2B} receptor/K⁽⁺⁾ channel-mediated renal vasodilations. *Clin Exp Pharmacol Physiol*. 2014 May
19. Gohar EY, **El-gowilly SM**, El-Gowell HM, El-Demellawy MA, El-Mas MM. PI3K/Akt-independent NOS/HO activation accounts for the facilitatory effect of nicotine on acetylcholine renal vasodilations: modulation by ovarian hormones. *PLoS One*. 2014 Apr 14;9(4):e95079
20. Fouda MA, El-Gowell HM, **El-Gowilly SM**, Rashed L, El-Mas MM. Impairment of nitric oxide synthase but not heme oxygenase accounts for baroreflex dysfunction caused by chronic nicotine in female rats. *PLoS One*. 2014 May 28;9(5):e98681.
21. Fouda MA, El-Gowell HM, **El-Gowilly SM**, El-Mas MM. The estrogen-dependent baroreflex dysfunction caused by nicotine in female rats is mediated via NOS/HO inhibition: Role of sGC/PI3K/MAPKERK. *ToxicolApplPharmacol*. 2015 Dec., 15;289(3):466-73.
22. **El-Gowilly SM**, Helmy MM, El-Gowell HM. Pioglitazone ameliorates methotrexate-induced renal endothelial dysfunction via amending detrimental changes in some antioxidant parameters, systemic cytokines and Fas production. *VasculPharmacol*. 2015 Nov;74:139-50.
23. Sallam MY, **El-Gowilly SM**, Abdel-Galil AA, El-Mas MM. Modulation by central MAPKs/PI3K/sGc of the TNF α /iNOS-dependent hypotension and compromised cardiac autonomic control in endotoxic rats. *J Cardiovasc Pharmacol*. 2016 Apr 14.
24. Sallam MY, **El-Gowilly SM**, Abdel-Galil AG, El-Mas MM. Central GABA_A receptors are involved in inflammatory and cardiovascular consequences of endotoxemia in conscious rats. *NaunynSchmiedebergs Arch Pharmacol*. 2016 Mar;389(3):279-88.
25. Sallam MY, **El-Gowilly SM**, Abdel-Galil AA, El-Mas MM. Cyclosporine counteracts endotoxemia-evoked reductions in blood pressure and cardiac autonomic dysfunction via central sGC/MAPKs signaling in rats. 2017, *Eur J Pharmacol*.797: 143-152



26. El-Lakany MA, Fouda MA, El-Gowell HM, **El-Gowilly SM**, El-Mas MM. Gonadalhormone receptors underlie the resistance of female rats to inflammatory and cardiovascular complications of endotoxemia. *Eur J Pharmacol*. 2018 Mar 15;823:41-48.
27. Fouda MA, El-Gowell HM, **El-Gowilly SM**, El-Mas MM. Hemin blunts the depressant effect of chronic nicotine on reflex tachycardia via activation of central NOS/PI3K pathway in female rats. *Pharmacol Rep*. 2018 Jun;70(3):455-462.
28. Sallam MY, **El-Gowilly SM**, Abdel-Galil AA, El-Mas MM. Activation of central GABA(B) receptors offsets the cyclosporine counteraction of endotoxic cardiovascular outcomes in conscious rats. *Fundam Clin Pharmacol*. 2018 Oct;32(5):485-498.
29. El-Naggar AE, **El-Gowilly SM**, Sharabi FM. Possible Ameliorative Effect of Ivabradine on the Autonomic and Left Ventricular Dysfunction Induced by Doxorubicin in Male Rats. *J Cardiovasc Pharmacol*. 2018 Jul;72(1):22-31.
30. 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. *Eur J Pharmacol*. 2018 Sep 5;834:36-44.
31. Wedn AM, **El-Gowilly SM**, El-Mas MM. (2019) Nicotine Improves Survivability, Hypotension, and Impaired Adenosinergic Renal Vasodilations in Endotoxic Rats: Role of $\alpha 7$ -NACHRs/HO-1 Pathway. *Shock*. In press
32. Sallam MY, **El-Gowilly SM**, Fouda MA, Abd-Alhaseeb MM, El-Mas MM. Brainstem cholinergic pathways diminish cardiovascular and neuroinflammatory actions of endotoxemia in rats: Role of NF κ B/ $\alpha 7$ / $\alpha 4\beta 2$ AChRs signaling. *Neuropharmacology*. 2019 Jun 25;157:107683.
33. Wedn, A.M., **El-Gowilly, S.M.**, El-Mas, M.M. (2020): The $\alpha 7$ -nAChR/heme oxygenase-1/carbon monoxide pathway mediates the nicotine counteraction of renal inflammation and vasoconstrictor hyporeactivity in endotoxic male rats. *Inflammation Research* Volume 69, Issue 2, 1 February 2020, Pages 217-231
34. Wedn, A.M., **El-Gowilly, S.M.**, El-Mas, M.M. (2020): Time and sex dependency of hemodynamic, renal, and survivability effects of endotoxemia in rats. *Saudi Pharmaceutical Journal* Volume 28, Issue 1:(127-135)
35. Wedn, A.M., **El-Gowilly, S.M.**, El-Mas, M.M. (2019): Nicotine reverses the enhanced renal vasodilator capacity in endotoxic rats: Role of $\alpha 7/\alpha 4\beta 2$ nAChRs and HSP70. *Pharmacological Reports*. Volume 71, Issue 5, (782-793)