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Educational Background

- **Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences**, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, Egypt, 2014. The thesis entitled *“Design and Synthesis of Some Rimonabant Congeners of Anticipated Pharmacological Activity as Cannabinoid Receptor Modulators”*.
- **Master’s degree in Pharmaceutical Sciences (M.Sc.)**, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, Egypt, 2009. The thesis entitled *“Synthesis of Some Compounds of Activity against Some Hormonal Disturbances and Analytical Study on Chosen Examples from Compounds on the Market”*.
- **Bachelor’s degree in Pharmaceutical Sciences**, Faculty of Pharmacy, Cairo University, Egypt, 2000, Excellent with Honor Grade.

Academic Professional Experience

- **Associate Professor**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, since 2020.
- **Assistant Professor**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, since 2014.
- **Assistant Professor**, Department of Pharmaceutical Chemistry, School of Pharmacy, Badr University in Cairo (BUC), 2017-2018.
- **Assistant Professor**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Heliopolis University for Sustainable Development, 2015-2017.
- **Assistant Lecturer**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2009-2014.
- **Teaching Assistant**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2000-2009.

Non-academic Experience

- **Visiting assistant research scientist**, Professor. Nouri Neamati lab, Department of Medicinal Chemistry, College of Pharmacy, University of Michigan, Ann Arbor, USA, since 2018.
- **Reviewer, Joint ASRT-BA Research Grants Program for Young Researchers**, Academy of Scientific Research and Technology (ASRT) and Bibliotheca Alexandria (BA), Egypt, 2019 and 2021.
- **Reviewer**, (Journal of Medicinal Chemistry, ACS Omega, Biotechnology Letters, Archiv der Pharmazie, others).
- **Member, Independent Ethics Committee**, Zi-Diligence Research Center, Egypt, 2015-2019.

Teaching Experience

- Practical courses & tutorials on theoretical courses, Pharmaceutical Chemistry Department, Faculty of Pharmacy, Cairo University, 2000-2014.
- Undergraduate Courses, (Pharmaceutical Chemistry 801, 802, 803 and Drug Design 804), Pharmaceutical Chemistry Department, Faculty of Pharmacy, Cairo University, since 2014.
- Undergraduate Courses, (Pharmaceutical Chemistry PC509 & PC610), Pharmaceutical Chemistry Department, Faculty of Pharmacy, Heliopolis University for Sustainable Development, (2015-2017).
- Undergraduate Courses, (Pharmaceutical Chemistry I), Pharmaceutical Chemistry Department, School of Pharmacy, Badr University in Cairo (BUC), since 2017.
- Postgraduate Courses, (Master's Degree), Pharmaceutical Chemistry Department, Faculty of Pharmacy, Cairo University, since 2014.
- Postgraduate Courses Principles of Drug Discovery and Development (1801), Applications of Computer Graphics to Drug Design (1806), Computer Aided-Drug Design (1808), Computer-Based Molecular Modelling (1809), Drug Discovery Diploma, Pharmaceutical Chemistry Department, Faculty of Pharmacy, Cairo University, 2015-2018.

Administrative Affairs

- Officer, Lab & Purchases Committee, Pharmaceutical Chemistry Department, Faculty of Pharmacy, Cairo University, 2015-2016.
- Associate Editor, Bulletin of Faculty of Pharmacy, Cairo University, 2017-2018.
- Consultant, Students' Groups Committee, Department of Youth Affairs, Faculty of Pharmacy, Cairo University, 2017-2018.
- Member, Students' Activity Committee, Cairo University, 2017-2018.

Faculty Leadership Training Modules

1. **Scientific Research**, Faculty and Leadership Training Center (FLDC), Cairo University, March 2006.
2. **University Code of Ethics**, FLDC, Cairo University, August 2009.
3. **Quality Standards in the Education Process**, FLDC, Cairo University, August 2009.
4. **Effective Presentation Skills**, FLDC, Cairo University, August 2009.

5. **Competitive Research Projects**, FLDC, Cairo University, February 2012.
6. **International Publishing of Research**, FLDC, Cairo University, June 2012.
7. **Use of Technology in Teaching**, FLDC, Cairo University, September 2012.
8. **E-Learning**, FLDC, Cairo University, January 2013.
9. **Conference Organization**, FLDC, Cairo University, January 2014.
10. **The Credit Hour Systems**, FLDC, Cairo University, February 2014.
11. **Meetings and Managing Times**, FLDC, Cairo University, May 2014.
12. **Legal and Financial Aspects in University Environment**, FLDC, Cairo University, May 2014.
13. **Managing Research Teams**, FLDC, Cairo University, January 2015.
14. **Statistical Analysis in Biological Trials**, FLDC, Cairo University, March 2017.
15. **Fundamentals of Clinical Trials**, FLDC, Cairo University, May 2017.
16. **Crisis Management**, FLDC, Cairo University, October 2017.
17. **Stress Management**, FLDC, Cairo University, November 2018.
18. **Exams and Assessment**, FLDC, Cairo University, February 2019.
19. **Decision Making and Problem Solving**, FLDC, Cairo University, March 2021.

Recognition and Scientific Awards

- **National fellowship for postdoctoral researchers**, Ministry of Higher Education, Egypt, 2017.
- **Scientific Incubators Award**, Cairo University, 2009/2010, 2nd Place.
- **Scientific Incubators Award**, Cairo University, 2008/2009, 2nd Place.

Professional Associations and Community Service

- Member, American Chemical Society (ACS), USA, since 2010.
- Sponsored Affiliated Member, International Union of Pure and Applied Chemistry (IUPAC), 2018.
- Elected Member, Syndicate of Pharmacists in Cairo, Egypt, 2018-2019.
- Member, Egyptian General Syndicate of Pharmacists, Egypt, since 2000.
- President, Student Union of Faculty of Pharmacy, Cairo University, 1998-1999.
- Member, Student Union of Faculty of Pharmacy, Cairo University, 1997-2000.

Organization of Events

- 1st Workshop on Computer-Aided Drug Design Using Molecular Modeling Programs, Faculty of Pharmacy, Cairo University, 2006.
- 2nd Workshop on Computer-Aided Drug Design Using Molecular Modeling Programs, Faculty of Pharmacy, Cairo University, 2009.

Participation in Events

- Participant, Assay Guidance Workshop for Cell-Based Assays and Lead Discovery, National Center for Advancing Translational Sciences (NCATS), National Institute of Health (NIH), November 16-17, 2021.
- Participant, U-M Drug Discovery Symposium, University of Michigan, Ann Arbor, October 25th, 2021.

- Participant, American Association of Cancer Research (AACR) Virtual Annual Meeting II 2020, June 22 - 24, 2020.
- Participant, 2019 Reinventing Drug Discover Through Chemical Biology Symposium, University of Michigan, Ann Arbor, May 16th, 2019.
- Participant, "2D NMR spectroscopy" Workshop, Performance Appraisal and Quality Assurance Unit (PAQU), Faculty of Pharmacy, Cairo University, March 2019.
- Participant, "Commercialization of Scientific Research" Workshop, Business Incubator of Faculty of Economy and Political Sciences (FEPS), Cairo University, March 2019.
- Participant, "Spreading the Quality Culture" Workshop, Performance Appraisal and Quality Assurance Unit (PAQU), Faculty of Pharmacy, Cairo University, February 2019.
- Attendee, "Principles of Egyptian National Security" Program, Nasr Military Academy, January 2018.
- Participant, "Course Specifications and Reports" Workshop, Performance Appraisal and Quality Assurance Unit (PAQU), Faculty of Pharmacy, Cairo University, November 2017.
- Attendee, "Bioanalysis and Validation in Bioanalytical Methods" Lecture, Performance Appraisal and Quality Assurance Unit (PAQU), Faculty of Pharmacy, Cairo University, April 2017.
- Attendee, "In vitro Enzyme Inhibition Assays: Guidelines and Practical Tips" Lecture, Faculty of Pharmacy, Cairo University, April 2017.
- Lecturer, "Computers in Chemistry" Workshop, Faculty of Pharmacy, Cairo University, March 2017.
- Participant, "Creating Online and Interactive Quizzes" Workshop, Performance Appraisal and Quality Assurance Unit (PAQU), Faculty of Pharmacy, Cairo University, March 2017.
- Participant, "Towards Fast Acceptance of Your Stability File, Regulations and Technicalities" "Workshop, Center for Applied Research and Advanced Studies (CARAS), Faculty of Pharmacy, Cairo University, May 2015.
- Participant, "Structure and Ligand Based Drug Design "Workshop, Professional Development Program, Faculty of Pharmacy, Misr International University (MIU), September 2014.
- Participant, « Communication and Rhetorical Techniques", DAAD Kairo Akademie, October 2013.
- Attendee, 2nd Scientific Symposium of Faculty of Pharmacy, Beni-Suef University, "Recent Advances in Pharmaceutical Research", January 2011.
- Participant, "Computer-Aided Drug Design Using Molecular Modeling Programs" workshop, Performance Appraisal and Quality Assurance Unit (PAQU), Faculty of Pharmacy, Cairo University, July 2009.

Presentations in Scientific Conferences

- "Design, Synthesis, and In vitro Anticancer Activity of Novel 3,6-Disubstituted Pyridazine Derivatives", The International Congress on Cell Science and Molecular Biology (IC-CSMB) held in Alexandria, Egypt, August 2022.
- "Design and Synthesis of Some Semicarbazone and Thiosemicarbazone Derivatives as Cannabinoid Receptor Modulators", 5th International Scientific Conference, Faculty of Pharmacy, Cairo University, 2014.

- "2-Amino-4,5-Diphenyl-Furan-3-Carbonitrile Derivatives as Cannabinoid Receptor Probes", 5th International Scientific Conference, Faculty of Pharmacy, Cairo University, 2014.

Published Peer-Reviewed Papers

1. Abd El-Mageed, Menna MA, Amal AM Eissa, Awatef El-Said Farag, and **Essam Eldin A. Osman**. "Design and synthesis of novel furan, furo [2, 3-*d*] pyrimidine and furo [3, 2-*e*][1, 2, 4] triazolo [1, 5-*c*] pyrimidine derivatives as potential VEGFR-2 inhibitors". *Bioorganic Chemistry* 116 (2021): 105336.
doi.org/10.1016/j.bioorg.2021.105336
2. **Essam Eldin A. Osman**, Alnawaz A Rehemtulla, and Nouri Neamati. "Why All the Fury over Furin?." *Journal of Medicinal Chemistry* (2021).
doi.org/10.1021/acs.jmedchem.1c00518
3. Ahmed A. Elbatrawy, Seung Jae Hyeon, Nan Yue, **Essam Eldin A. Osman**, Seung Hyeo Choi, Sungsu Lim, Yun Kyung Kim, Hoon Ryu, Mengchao Cui, and Ghilsoo Nam. "Turn-On" Quinoline-Based Fluorescent Probe for Selective Imaging of Tau Aggregates in Alzheimer's Disease: Rational Design, Synthesis, and Molecular Docking". *ACS Sensors* 6 (6), (2021): 2281-2289.
doi.org/10.1021/acssensors.1c00338
4. **Essam Eldin A. Osman**, Noura S. Hanafy, Riham F. George, and Samir M. El-Moghazy. "Design and synthesis of some barbituric and 1, 3-dimethylbarbituric acid derivatives: A non-classical scaffold for potential PARP1 inhibitors". *Bioorganic Chemistry* 104 (2020): 104198.
doi.org/10.1016/j.bioorg.2020.104198
5. **Essam Eldin A. Osman**, Peter L. Toogood, and Nouri Neamati. "COVID-19: Living through Another Pandemic". *ACS Infectious Diseases* (2020).
doi.org/10.1021/acsinfecdis.0c00224
6. Abd-Allah, Walaa Hamada, **Essam Eldin A. Osman**, Mostafa Abd-El-Mohsen Anwar, Hanan Naeim Attia, and Samir M. El Moghazy. "Design, Synthesis and docking studies of novel benzopyrone derivatives as anticonvulsants". *Bioorganic Chemistry* (2020): 103738.
doi.org/10.1016/j.bioorg.2020.103738
7. Youssif, Bahaa GM, Ashraf M. Mohamed, **Essam Eldin A. Osman**, Ola F. Abou-Ghadir, Dina H. Elnaggar, Mostafa H. Abdelrahman, Laurent Treamblu, and Hesham AM Gomaa. "5-Chlorobenzofuran-2-carboxamides: From allosteric CB1 modulators to potential apoptotic antitumor agents". *European Journal of Medicinal Chemistry* 177 (2019): 1-11.
doi.org/10.1016/j.ejmech.2019.05.040

8. Hisham, Mohamed, Bahaa GM Youssif, **Essam Eldin A. Osman**, Alaa M. Hayallah, and Mohamed Abdel-Aziz. "Synthesis and biological evaluation of novel xanthine derivatives as potential apoptotic antitumor agents." *European Journal of Medicinal Chemistry* 176 (2019): 117-128. doi.org/10.1016/j.ejmech.2019.05.015
9. Moussa, Shaimaa A., **Essam Eldin A. Osman**, Nahed M. Eid, Sahar M. Abou-Seri, and Samir M. El Moghazy. "Design and Synthesis of Novel 5-(4-Chlorophenyl) Furan Derivatives with Inhibitory Activity on Tubulin Polymerization". *Future Medicinal Chemistry* 10, no. 16 (2018): 1907-1925. doi.org/10.4155/fmc-2018-0036
10. Nowar, Raghad M., **Essam Eldin A. Osman**, Sahar M. Abou-Seri, Samir M. El Moghazy, and Dalal A. Abou El Ella. "Design, Synthesis and Biological Evaluation of Some Novel Quinazolinone Derivatives as Potent Apoptotic Inducers". *Future Medicinal Chemistry* 10, no. 10 (2018): 1191-1205. doi.org/10.4155/fmc-2017-0284
11. **Essam Eldin A. Osman**, "Analytical Investigation of Different Mathematical Approaches Utilizing Manipulation of Ratio Spectra". *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 188 (2018): 469-477. doi.org/10.1016/j.saa.2017.07.024
12. Ahmed, Riham I., **Essam Eldin A. Osman**, Fadi M. Awadallah, and Samir M. El-Moghazy. "Design, Synthesis and Molecular Docking of Novel Diarylcyclohexenone and Diarylindazole Derivatives as Tubulin Polymerization Inhibitors". *Journal of Enzyme Inhibition and Medicinal Chemistry* 32, no. 1 (2017): 176-188. doi.org/10.1080/14756366.2016.1244532
13. El-Moghazy, Samir M., Riham F. George, **Essam Eldin A. Osman**, Ahmed A. Elbatrawy, Miroslava Kissova, Ambra Colombo, Emmanuele Crespan, and Giovanni Maga. "Novel Pyrazolo [3, 4-d] pyrimidines as Dual Src-Abl Inhibitors Active against Mutant Form of Abl and the Leukemia K-562 Cell Line". *European Journal of Medicinal Chemistry* 123 (2016): 1-13. doi.org/10.1016/j.ejmech.2016.07.034
14. Moussa, Bahia A., Ramzia I. El-Bagary, and **Essam Eldin A. Osman**. "Determination of Letrozole in Pharmaceutical Preparation and Human Plasma Based on Fluorometric Detection". *Analytical Chemistry Letters* 3, no. 2 (2013): 139-146. doi.org/10.1080/22297928.2013.838429
15. Moussa, Bahia A., Ramzia I. El-Bagary, and **Essam Eldin A. Osman**. "Optimized Spectrophotometric Methods for the Determination of Raloxifene Hydrochloride". *International Research Journal of Pure and Applied Chemistry* 3, no. 3 (2013): 220.

16. Moussa, Bahia A., Ramzia I. El-Bagary, and **Essam Eldin A. Osman**. "Spectrophotometric and Chromatographic Methods for the Estimation of Raloxifene Hydrochloride in Bulk and Pharmaceutical Formulations". *American Chemical Science Journal*, 3(4) (2013): 378-386.

Papers under Publication

- Mai M. Shaalan, **Essam Eldin A. Osman**, Yasmeeen M. Attia, Olfat A. Hammam, Riham F. George, Bassem H. Naguib, "Novel 3,6-disubstituted pyridazine derivatives targeting JNK1 pathway: Scaffold hopping and hybridization-based design, synthesis, molecular modeling, in vitro and in vivo anticancer evaluation".
- Mohamed Adel Elanany, **Essam Eldin A. Osman**, Ehab Mohamed Gedawy, Sahar M. Abou-Seri, "Design and synthesis of novel cytotoxic fluoroquinolone analogs through topoisomerase inhibition, cell cycle arrest, and apoptosis".
- **Essam Eldin A. Osman**, Sahar M. Abou-Seri, Marco Allara, Mohammed M. Hussien, Vincenzo Di Marzo, Samir M. El Moghazy, "Design, Synthesis, and Biological Evaluation of Some Novel Furan Derivatives as Cannabinoid Receptor Modulators".
- **Essam Eldin A. Osman**, Sahar M. Abou-Seri, Christophe Morisseau, Mohammed M. Hussien, Buce Hammock, Samir M. El Moghazy, "Benzoin Hydrazones as Dual Modulators of Cannabinoid Receptors and Soluble Epoxide Hydrolase".

Ph.D. and M.Sc. Students Supervision

1. Menttullah M. Ahmed, "***Design and Synthesis of Some Fused Pyrimidine Derivatives with Potential Activity against Cancer Kinome***", Ph.D. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2017 (defended in December 2021).
2. Noura S. Hanafy, "***Design, Synthesis and Biological Evaluation of Some new Plinabulin Derivatives as Tubulin Polymerization Inhibitors***", Ph.D. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2017 (defended in October 2020).
3. Mai M. Shaalan, "***Design and synthesis of novel 3,6-disubstituted pyridazine derivatives with anticipated cytotoxic activity***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2018 (defended in September 2022).
4. Mohamed A. Elanany, "***Design and Synthesis of Some Quinazoline derivatives with Potential Activity in Alzheimer***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2017 (defended in July 2022).
5. Manar A. Kasem, "***Synthesis and Biological Evaluation of Some Furan and Furoprymidine Derivatives as Novel Anticancer Agents***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2017 (defended in January 2021).

6. Mostafa. A. Anwar, "***Design and Synthesis of Some Coumarin Derivatives with Potential CNS Activity***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2017 (defended in July 2020).
7. Fatema A. Elbadawy, "***Design and Synthesis of Some Novel Chalcones and Their Derivatives as Potential Cytotoxic Agents***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2015 (defended in April 2019).
8. Menttullah A. Zaki, "***Design and Synthesis of Some Novel Pyridazine Derivatives as Potential Anti-Cancer Agents***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2016 (in progress).
9. Ebrahim M. Reda Ashour, "***Design and Synthesis of Novel Diarylamines as Potential Anticancer Agents***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2018 (in progress).
10. Ahmad T. Al Ashery, "***Anticancer Potential of New Ureidothiazole Derivatives: Synthesis and Biological Evaluation***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2018 (in progress).
11. Sarah G. Fouad, "***Design and Synthesis of Some Novel Theinopyrimidine derivatives with Potential Anti-cancer Activity***", M.Sc. Thesis, Pharmaceutical Chemistry, Faculty of Pharmacy, Cairo University, 2017 (in progress).

References

Furnished upon request