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SUMMARY

Organic and medicinal chemist is capable of development of synthetic methodologies for the creation of new agents, synthesis and characterization of new compounds, and development of new insights into structure-function relationships. Good experience in carbohydrate chemistry. Good background and experience about instrumentation such as UV Vis, NMR, FT-IR and HPLC.

PROFESSIONAL EXPERIENCE

Sep 2022- Present	Acting Head of Pharmaceutical Chemistry Department, Faculty of Pharmacy, Ahram Canadian University
June 2019- Present	Associate Professor in Pharmaceutical Chemistry Department, Faculty of Pharmacy, Ahram Canadian University
July 2019- Aug. 2020	Assistant Instructor, Research Faculty position in Internal Medicine Department, University of Texas Southwestern Medical Center, USA
April 2013 - May 2019	Assistant Professor in Pharmaceutical Chemistry Department, Faculty of Pharmacy, Ahram Canadian University
Sep. 2008 - Mar.2013	Lecturer Assistant in Pharmaceutical Chemistry Department, Faculty of Pharmacy, Ahram Canadian University
Sep. 2005 - Aug. 2008	Teaching Assistant in Pharmaceutical Chemistry Department, Faculty of Pharmacy, Ahram Canadian University
April 2005 – Aug. 2005	Shift Manager Pharmacist in Seif pharmacy.

EDUCATION

Aug. 2015 Dec. 2015 Feb.-April 2017	Postdoc. Alexander von Humboldt Research assistant in Institut für Pharmazeutische und Medizinische Chemie Heinrich-Heine-Universität Düsseldorf.
Sep. 2009 - April 2013	PhD in Pharmaceutical Chemistry, Cairo University, Egypt. Thesis: Design and synthesis of novel group of heterocyclic glycosides with expected biological activity
April 2011- Aug. 2011	Internship research in Pharmaceutical Science Department, University of Alberta, Canada.
Sep. 2003 - May 2008	Master in Pharmaceutical Chemistry, Helwan University, Egypt. Thesis: Synthesis of some new antimetabolites with expected chemotherapeutic effect.
Sep. 1998 - May 2003	Bachelor degree in pharmaceutical science, Ain Shams University, Egypt. Grade: Excellent with honors.

PUBLICATIONS

A) Publications with peer review process

1. M H Sanad, SFA Rizvi, F A Marzook, **A B Farag**, In-Silico Study, Preparation and Biological Evaluation of ^{99m}Tc-Mesalamine Complex as Radiotracer for Diagnostics and Monitoring of Ulcerative Colitis in Mice, *Pharmaceutical Chemistry Journal*, 2022, 56 (6), 754-761.
2. MH Sanad, **A B Farag**, FA Marzook, SK Mandal, Radiocomplexation, Chromatographic Separation and Bioevaluation of [^{99m}Tc] Dithiocarbamate of Procainamide as Selective Labeled Compound for Myocardial Perfusion Imaging, *Pharmaceutical Chemistry Journal*, 2022, 56 (6), 777-784.
3. MH Sanad, Fawzy A Marzook, **A B Farag**, Sudip Kumar Mandal, Syed FA Rizvi, Jeetendra Kumar Gupta, Preparation, biological evaluation and radiolabeling of [^{99m}Tc]-technetium tricarbonyl procainamide as a tracer for heart imaging in mice *Radiochimica Acta*, 2022, 110 (4), 267-277.

4. M H Sanad, S F A Rizvi, **A B Farag**, Design of novel radiotracer ^{99m}TcN -tetrathiocarbamate as SPECT imaging agent: a preclinical study for GFR renal function, *Chemical Papers*, 2022, 76 (2), 1253-1263.
5. M H Sanad, H M Eyssa, FA Marzook, **A B Farag**, Preparation and Bioevaluation of [^{99m}Tc] Tricarbonyl Omeprazole for Gastric Ulcer Localization in Mice, *Radiochemistry*, 2022, 64 (1), 54-61.
6. M H Sanad, **A B Farag**, Sabry A Bassem, FA Marzook, Radioiodination of zearalenone and determination of *Lactobacillus plantarum* effect of on zearalenone organ distribution: In silico study and preclinical evaluation, *Toxicology Reports*, 2022, 9, 470-479.
7. MH Sanad, **A B Farag**, Sabry A Bassem, FA Marzook, Preparation, characterization, and bioevaluation of ^{99m}Tc -famotidine as a selective radiotracer for peptic ulcer disorder detection in mice, *Radiochimica Acta*, 2022, 110 (1), 67-74.
8. M H Sanad, S F A Rizvi, **A B Farag**, Radiosynthesis and *in silico* bioevaluation of ^{131}I -Sulfasalazine as a highly selective radiotracer for imaging of ulcerative colitis, *Chemical Biology & Drug Design*, 2021, 98 (5), 751-761.
9. M H Sanad, H M Eyssa, F A Marzook, **A B Farag**, SFA Rizvi, Sudip Kumar Mandal, Soumya Stuti Patnaik, ASM Fouzy, Sabry A Bassem, Francis Verpoor, Radiosynthesis and biological evaluation of ^{99m}Tc nitrido-levetiracetam as a brain imaging agent, *Radiochemistry*, 2021, 63 (5), 635-641.
10. M H Sanad, H M Eyssa, FA Marzook, **A B Farag**, SFA Rizvi, Sudip Kumar Mandal, Soumya Stuti Patnaik, ASM Fouzy, Sabry A Bassem, Francis Verpoort, Comparative bioevaluation of ^{99m}Tc tricarbonyl and ^{99m}Tc -Sn (II) lansoprazole as a model for peptic ulcer localization, *Radiochemistry*, 2021, 63 (5), 642-650.
11. M H Sanad, FA Marzook, SFA Rizvi, **A B Farag**, ASM Fouzy, Radioiodinated azilsartan as a new highly selective radiotracer for myocardial perfusion imaging, *Radiochemistry*, 2021, 63 (4), 520-525.
12. M H Sanad, H M Eyssa, FA Marzook, **A B Farag**, SFA Rizvi, SK Mandal, SS Patnaik, ASM Fouzy, Optimized chromatographic separation and bioevaluation of radioiodinated ilaprazole as a new labeled compound for peptic ulcer localization in mice, *Radiochemistry*, 2021, 63 (6), 811-819.
13. M H Sanad, HM Eyssa, FA Marzook, SFA Rizvi, ASM Fouzy, Sabry A Bassem, Alhussein A Ibrahim Synthesis, radiolabeling, and biological evaluation of ^{99m}Tc -Tricarbonyl

mesalamine as a potential ulcerative colitis imaging agent, *Radiochemistry*, 2021, 63 (6), 835-842.

14. M. H. Sanad, **A.B. Farag***, S. F. A. Rizvi*, In silico and In vivo study of radioiodinated nefiracetam as radiotracer for brain imaging in mice, *Radiochimica Acta*, 2021, 109 (7), 575-582.
15. M. H. Sanad, S. F. A. Rizvi, **A.B. Farag***, Synthesis, characterization and bioevaluation of ^{99m}Tc nitride-oxiracetam as brain imaging model, *Radiochimica Acta*, 2021, 109 (6), 477-483.
16. G.H. Elgemeie, N.M. Fathy **A.B. Farag**, and I.B. Yahab. Design and synthesis of new class indeno[1,2-b]pyridine thioglycosides, *Nucleoside & Nucleotide and Nucleic acid*, 2020, 39,1-16.
17. M. H. Sanad, F. Marzook, G.M. Saleh, **A.B. Farag**, H. M. Talaat, Radiolabeling, Preparation, and Bioevaluation of ^{99m}Tc-Azathioprine as a Potential Targeting Agent for Solid Tumor Imaging, *Radiochemistry*, 2019, 61, 478-482.
18. M. H. Sanad, **A.B. Farag**, G. M. Saleh, Radiosynthesis and Biological Evaluation of ¹⁸⁸Re-5,10,15,20-Tetra(4-pyridyl)-21*H*,23*H*-porphyrin Complex as a Tumor-Targeting Agent, *Radiochemistry*, 2019, 61, 347-351.
19. M. H. Sanad, **A.B. Farag**, M. A. Motaleb, Radioiodination and biological evaluation of landiolol as a tracer for myocardial perfusion imaging: preclinical evaluation and diagnostic nuclear imaging, *Radiochimica Acta*, 2018, 106 (12), 1001-1008.
20. M. H. Sanad, **A.B. Farag**, D. H. Salama, Radioiodination and bioevaluation of rolipram as a tracer for brain imaging: In silico study, molecular modeling and gamma scintigraphy, *Journal of Labelled Compounds and Radiopharmaceuticals*, 2018, 61, 501-508.
21. **A.B. Farag**, HA Ewida, MS Ahmed, Design, synthesis, and biological evaluation of novel amide and hydrazide based thioether analogs targeting Histone deacetylase (HDAC) enzymes, *European journal of medicinal chemistry*, 2018, 148, 73-85.
22. G.H. Elgemeie, **A.B. Farag**, N.M. Fathy and S. A. Kursani. Design, synthesis, molecular docking and anti-hepatocellular carcinoma evaluation of novel acyclic pyridine thioglycosides, *Nucleoside & Nucleotide and Nucleic acid*, 2018, 37,186-198.

23. M. H. Sanad, **A.B. Farag**, D. H. Salama, Radioiodination, Molecular Modelling and Biological Evaluation of Aniracetam as a Tracer for Brain Imaging, Egyptian journal of Radiation Sciences and Application, 2017, 2, 131-141.
24. **A.B. Farag**, A. Magdi, Spectrophotometric study of the interaction between a novel benzothiazolethioglycoside as antimicrobial agent with bovine serum albumin, Chemistry Research Journal, 2017, 2, 66-72.
25. G.H. Elgemeie, **A.B. Farag**, Design, synthesis, and in vitro anti-hepatocellular carcinoma of novel thymine thioglycoside analogs as new antimetabolic agents, Nucleoside & Nucleotide and Nucleic acid., 2017, 36, 355-377.
26. G.H. Elgemeie, N.M. Fathy **A.B. Farag**, and S. A. Kursani. Novel synthesis of dihydropyridine thioglycosides and their cytotoxic activity, Nucleoside & Nucleotide and Nucleic acid., 2017, 36,328-342.
27. G.H. Elgemeie, , N.M. Fathy, W.A. Zaghary, **A.B. Farag** S-Glycosides in Medicinal Chemistry: Novel Synthesis of Cyanoethylene Thioglycosides and Their Pyrazole Derivatives, Nucleoside & Nucleotide and Nucleic acid, 2017, 36, 198-212
28. Elgemeie G.H., K.M. Amin,O.M. El-Badry, G.S. Hassan, **A.B. Farag**, C.A. Velazquez, A. O. El-Kadi.Synthesis and in vitro anti-tumor activity of new imidazole and thienoimidazole thioglycosides.*J Am Sci*, 2012;8(12):1071-1076.
29. Elgemeie GH, Fathy NM, **Farag A.B**, El-Badry OM, Hassan GS, Amin KM, Halaweish F, (2014) Design, Synthesis and *In vitro* Anti-tumor Evaluation of Novel Acrylohydrazide Thioglycosides. Med chem, 2014, 4, 400-406.
30. Elgemeie G.H., **A.B. Farag**, K.M. Amin,O.M. El-Badry, G.S. Hassan, Design, Synthesis and Cytotoxic Evaluation of Novel Heterocyclic Thioglycosides., Med chem, 2014, 4, 814-820.

B) Publications without peer review process

1. **A.B. Farag**, P. Wang, I. Boys, J. W. Schoggins, H. Sadek, Identification of Atovaquone, Ouabain and Mebendazole as FDA Approved drugs targeting SARS-COV-2, ChemRxiv, 2020.

ABSTRACTS/ PRESENTATION

- 1- **A.B. Farag**, Elgemeie G.H., K.M. Amin, O.M. El-Badry, G.S. Hassan, Synthesis and Cytotoxic Evaluation of Novel Pyrazolomethylene Thioglycosides., Poster Presentation, New Trends in Pharmaceutical And Medical Ressearch, NTPMR 2016, Giza, Egypt.
- 2- Aliah S. Abd Elaziz, **A.B. Farag**, Sahar M. Abou-seri, K.M. Amin, O.M. El-Badry, Design, Synthesis and anticancer Evaluation of Novel Imidazopyridine derivatives as Cyclin-Dependant kinase-2 Inhibitor., Poster Presentation, Challenges in future Pharmaceutical Trends, 2018, Giza, Egypt.
- 3- G.H. Elgemeie, N.M. Fathy **A.B. Farag**, and I.B Yahab. Design, synthesis and cytotoxic evaluation of indeno[1,2-b]pyridine thioglycosides, 6th Euro-Mediterranean conferences of Life Sciences, Pharma and Biomedicine (BioNats), Jan, 2019.
- 4- A H Othman, **A B Farag**, M. K Ashrey, S E Abbas, T A Elwaie, Design, Synthesis and EGFR inhibitory activity of some novel 6-nitro-4-substituted quinazolines, 5th International Pharma Confrence, Helwan University, 2022.

RESEARCH EXPERIENCES/ TRAINING COURSES

Jan. 2019	Graphical representation of concentration as novel technique in spectrophotometric determination of drug substances in formulation Faculty of Pharmacy, Ahran Canadian University, Egypt
Nov. 2018	Mass Spectrometry Faculty of Pharmacy, Ahran Canadian University, Egypt
Nov. 2018	Participation and organization of the 2nd ACU international conference
Jul. 2018	Creative Thinking Faculty of Pharmacy, Ahran Canadian University, Egypt
May. 2018	Pharmaceutical Vigilance Faculty of Pharmacy, Ahran Canadian University, Egypt
Jan. 2018	Art and leadership skills Cairo University, Egypt
Dec. 2017	Assessment of ILOS Faculty of Pharmacy, Ahran Canadian University, Egypt

Oct. 2017	Program specification Faculty of Pharmacy, Aham Canadian University, Egypt
Nov. 2016	Forming and building the team up Faculty of Pharmacy, Aham Canadian University, Egypt
May 2016	Participation and organization of the 1st ACU international conference
May 2015	Research design, assessment and write up Institute of international education, USAID
Feb. 2015	Molecular Modeling Training Course Faculty of Pharmacy, Asuit University, Egypt
Sep. 2013	Strategic planning for any higher educational institute course Faculty of Pharmacy, Aham Canadian University, Egypt.
Sep. 2008 - Mar. 2013	Research Assistant in Pharmaceutical Chemistry. Faculty of Pharmacy, Cairo University, Egypt.
April 2011- Aug. 2011	Research Assistant in Medicinal Chemistry. Faculty of Pharmacy, University of Alberta, Canada.
May 2010-July 2010	Audit student clinical pharmacy courses via video conference with Faculty of pharmacy, Tronto University, Canada in Aham Canadian University, Egypt.
Sep. 2005 - Aug. 2008	Research Assistant in Pharmaceutical Chemistry. Faculty of Pharmacy, Helwan University, Egypt.
July 2002 – Aug. 2002	Drug Quality Control training Elqahera pharmaceutical Company, Egypt.

PROJECTS AND ASSIGNMENTS

- 1- Design, synthesis, and biological evaluation of new imidazole and thienoimidazole thioglycosides for Breast cancer treatment.
- 2- Synthesis and cytotoxic evaluation of novel heterocyclic thioglycosides.
- 3- Study the docking scores of some heterocyclic thioglycosides targeting HSP-90.
- 4- Synthesis of a new class of cyanoethylene thioglycosides and their pyrazole derivatives.
- 5- Novel epigenetic small molecules to combat cancer.
- 6- Synthesis of new small molecules as HDAC inhibitors.

- 7- Radiolabelling of FDA approved drugs for imaging of different organs.
- 8- Repurposing of FDA approved drugs against SARS-COV-2.
- 9- Clinical trial on Atovaquone for treatment of COVID-19 sponsored by University of Texas Southwestern Medical Center, NCT04456153.
- 10- Repurposing of FDA approved drugs for cardiac regeneration.

RESEARCH GRANTS

Title of the Grant	Source	Role	Total Amount	Period
Novel epigenetic small molecules to combat cancer	Alexander von Humboldt	Post-Doc	50.000 Euro	June 2016- Dec 2018

TEACHING RESPONSIBILITIES

- Teaching Organic Chemistry I/II Labs for pharmacy students.
- Teaching Organic Chemistry III lectures /labs for pharmacy students
- Teaching Pharmaceutical Chemistry I/II lectures /labs for pharmacy students.
- Teaching Computer Aided Drug Design lectures /labs for pharmacy students.