



Heba A. Hassan, 2024
Medicinal Chemistry Department
Minia University

Heba Ahmed Hassan, PhD

Associate Professor, Medicinal Chemistry dept., Faculty of Pharmacy,
Minia University, Egypt.

New Minia City, The second quarter, No. 462

Minia, Egypt

(+2) 01068390918

hebahassan2009@live.com & heba.hasan@mu.edu.eg

PERSONAL INFORMATION

Name: Heba Ahmed Hassan Mohamed.

Gender: Female.

Date of birth: November 28, 1981.

Nationality: Egyptian.

Marital status: Married.

Educational background:

✓ **PhD**, Pharmaceutical Sciences (Medicinal Chemistry), **April 2013**

Faculty of Pharmacy, Minia University (Minia, Egypt) and Faculty of Science, Wake Forest

University, Winston Salem, (NC, USA)

Thesis Advisors:

1. **Prof. Hassan H. A. Farag**, Professor of Pharm. Med. Chem. and Former Dean of the Faculty of Pharmacy, Assiut University

2. **Prof. S. Bruce King**, Professor of Chemistry, Wake Forest University, Winston Salem, NC, USA

3. **Prof. Gamal El-Din Ali Ahmed**, Prof. of Medicinal Chemistry, Faculty of Pharmacy, Minia University.

4. **Prof. Mohamed Abdel-Aziz Mohamed Osman**, Prof. of Medicinal Chemistry and Dean of Faculty of Pharmacy, Minia University.

Thesis entitled “*Synthesis and Development of New Nitroxyl Donors and their Reactions with Thiol and Heme Proteins*”

✓ **Master** degree in pharmaceutical sciences (Medicinal Chemistry), **October 2008**

Faculty of Pharmacy, Minia University (Minia, Egypt)

عميد الكلية

أ.د. محمد عبد العزيز محمد عثمان

رئيس القسم

أ.د. إيمان أحمد محمود



Thesis advisors:

1. **Prof.Dr. Hassan H. A. Farag**, Professor of Pharm. Med. Chem. and Former Dean of the Faculty of Pharmacy, Assiut University
2. **Prof. Dr. Gamal El-Din Ali Ahmed**, Prof. of Medicinal Chemistry, Faculty of Pharmacy, Minia University.
3. **Prof. Dr. Mohamed Abdel-Aziz Mohamed Osman**, Prof. of Medicinal Chemistry and Dean of Faculty of Pharmacy, Minia University.

Thesis entitled: *“Design, Synthesis and Investigation of New Dihydro Pyridine Derivatives as New Carriers for Specific Delivery of Drugs to The Brain”*

- ✓ **Bachelor** of Pharmaceutical Sciences, **May 2003** **Faculty of Pharmacy, Minia University (Minia , Egypt) Grade** (Excellent with honor).

Research Experience:

Faculty of Pharmacy, Minia University, Minia, Egypt and Faculty of Science, Wake Forest University, Winston Salem, (NC, USA)

- Developing new methods for Synthesis and Purification of Pharmaceutical Organic Compounds and Investigation of their Biological Activities.
- Very Good experience in Explanation of Spectroscopic Analysis (NMR, IR.....etc).
- Design and synthesis of new compounds as pharmacophore for cancer treatment.
- GC and LC-mass spectrometry

- ✓ **Post graduate research student** (master and doctoral student)

Faculty of Pharmacy, Minia University, Minia, Egypt (August 2013- till now)

- Synthesis of Fluoroquinolone derivatives using different synthetic and separation techniques
- NO release measurement.
- Synthesis of Different heterocycle hybrids as anticancer or antiapoptotic agents.
- Some biological testing like antimicrobial activity, Anti-inflammatory.
- Principles of drug design software.

عميد الكلية

أ. د . محمد عبد العزيز محمد عثمان

رئيس القسم

أ.د. إيمان أحمد محمود



Teaching Experience:

Lecturer of Medicinal Chemistry. **June 2013-Feb 2020**

Associate Professor of Medicinal Chemistry. **Feb 2020-till now**

Medicinal Chemistry Department, Faculty of Pharmacy, Minia University.

- Teaching theoretical **Medicinal Chemistry** courses for **undergraduate** pharmacy students (ANS, CNS, CVS, Drug Design, Steroids, Anti-cancer, Antibiotics)
- Teaching theoretical **Organic Chemistry** courses for **undergraduate** pharmacy students (hydrocarbons, spectroscopy, carboxylic acid, alicyclic, aromaticity and aromatic derivatives, heterocyclic chemistry,.)
- Teaching **Advanced Medicinal Chemistry** for **postgraduate** pharmacy students
- Teaching **Heterocyclic chemistry** for **postgraduate** student in Medicinal Chemistry Dept.

Organic Chemistry Department, Faculty of Pharmacy, Deraya University.

February 2015, October 2015, October 2016 and October 2018

- Teaching theoretical **Organic Chemistry I and II** courses for **undergraduate** pharmacy students (Aliphatic Organic Compounds, Aromatic compounds, Spectroscopy,.....)

Demonstrator and Teaching assistant. **September 2003 - may 2013**

Medicinal Chemistry Department, Faculty of Pharmacy, Minia University

- Teaching practical Organic Chemistry courses.
- Teaching practical Medicinal Chemistry courses.

Skills

Languages: Arabic: mother tongue.
 English: Very Good written and spoken

Computer: Excellent in windows, Word, PowerPoint, Internet, and endnote
 Very good in Excel, Chem Draw and GraphPad Prism
 (Passed ICDL exams – advanced ICTP, course exam)

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أ. د . محمد عبد العزيز محمد عثمان

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Workshops

Attended at

**Faculty Development & Leadership center and Information Technology center,
Minia University, Minia, Egypt.**

- Effective presentation
- Effective communication
- Effective Teaching
- Quality Assurance in the teaching process
- Strategic planning
- Thinking Skills
- Management of research team
- Ethics of scientific research
- The use of modern technology in teaching processes
- Advanced word, power point and Excel
- Student Evaluation and Assessment Techniques
- Credit Hours System
- Financial and legal aspects
- Creating personal websites
- University Administration
- End note
- Statistical analysis using SPSS program
- Anti-corruption
- Dealing with students with special need
- Organizing scientific conferences

Publications

- ✓ **Hassan HA**, Abdel-Aziz M, Abuo-Rahma GEI-D, Farag HH “1-Malonyl-1,4-dihydropyridine as a novel carrier for specific delivery of drugs to the brain”. **Bioorganic & Medicinal Chemistry**, Volume 17, Issue 4, 15 February 2009, Pages 1681-1692.
- ✓ Mohamed Abdel-Aziz, **Heba A. Hassan Mohamed**, Gamal El-Din A. A. Abuo Rahma, Hassan H. Farag; “N-Malonyl-1,2-dihydroisoquinoline as a Novel Carrier for Specific Delivery of Drugs to the Brain”, **Arch Pharm (Weinheim)**. 343(1), 2010, 54-60.
- ✓ **Heba A. H. Mohamed**, Mohamed Abdel-Aziz, Gamal El-Din A. A. Abuo-Rahma, S. Bruce. King,” New Acyloxy Nitroso Compounds with Improved Water Solubility and Nitroxyl (HNO) Release Kinetics and Inhibitors of Platelet Aggregation”. **Bioorganic & Medicinal Chemistry**, Volume 23, Issue 17, 16 April 2015, Pages 6069-77.

عميد الكلية

أ.د. محمد عبد العزيز محمد عثمان

رئيس القسم

أ.د. إيمان أحمد محمود



- ✓ Mohammed A.A. Abdullah , Gamal El-Din A.A. Abuo-Rahma a, El-Shimaa M.N. Abdelhafez , **Heba A. Hassan**, Rehab M. Abd El-Baky “Design, synthesis, molecular docking, anti-Proteus mirabilis and urease inhibition of new fluoroquinolone carboxylic acid derivatives”. **Bioorganic Chemistry 70 (2017) 1–11**

- ✓ Aliaa M. Mohassab , **Heba A. Hassan** , Dalia Abdelhamid , Mohamed Abdel-Aziz , Kevin N. Dalby , Tamer S. Kaoud “Novel quinoline incorporating 1,2,4-triazole/oxime hybrids: Synthesis, molecular docking, anti-inflammatory, COX inhibition, ulcerogenicity and histopathological investigations”. **Bioorganic Chemistry 75 (2017) 242–259**

- ✓ Abdelfattah H. Abuelhassan, Mostafa M. Badran, **Heba A. Hassan**, Dalia Abdelhamed, Sameh Elnabtity, Omar M. Aly, ” Design, synthesis, anticonvulsant activity, and pharmacophore study of new 1,5-diaryl-1H-1,2,4-triazole-3-carboxamide derivatives” **Med Chem Res (2018) 27:928–938.**

- ✓ Hend A. A. Ezelarab , Samar H. Abbas , **Heba A. Hassan** , Gamal El-Din A. Abuo-Rahma “Recent updates of fluoroquinolones as antibacterial agents”. **Arch Pharm Chem Life Sci. 351(2018).**

- ✓ Hend. A. A. Ezelarab, **Heba. A. Hassan**, Samar. H. Abbas, Rehab .M. Abd El-Baky, Gamal El-Din. A. Abuo-Rahma, "Design, Synthesis and Antifungal Activity of 1,2,4-Triazole and 1,3,4-Oxadiazole-ciprofloxacin hybrids." **Journal of Advanced Biomedical and Pharmaceutical Sciences 1 (2018) 78-84.**

- ✓ Samar Abbas, Amer Abd El-Hafeez, Mai Shoman, Monica Montano, **Heba A. Hassan**” New Quinoline/Chalcone Hybrids as Anti-Cancer agents: Design, Synthesis, and Evaluations of Cytotoxicity and PI3K inhibitory activity”. **Bioorganic Chemistry 82 (2019) 360–377**

- ✓ Shymaa A Abbas, **Heba A. Hassan**, Mamdouh F. Ahmed, Gamal A. I. Moustafa, Gamal El-Din A. Abuo-Rahma, “Recent Prospectives of Anticancer Histone Deacetylase Inhibitors” **Journal of Advanced Biomedical and Pharmaceutical Sciences, Accepted 2019.**

- ✓ Shymaa A Abbas, **Heba A. Hassan**, Gamal A. I. Moustafa, Gamal El-Din A. Abuo-Rahma, “Facile One-pot Three-component Synthesis of 4,6-Diaryl-3,4-dihydropyrimidine-2(1H)-thiones Under Ultrasonic Irradiation”, **Synthetic Communication, Accepted 2019.**

- ✓ Abdelfattah Hassan, **Heba A. Hassan**, Dalia Abdelhamid, Gamal El - Din A. Abu-Rahma. " Synthetic Approaches Toward Certain Structurally Related Antimicrobial Thiazole Derivatives (2010-2020)". **HETEROCYCLES, Vol. 102, No. 9, 2021, pp.**



- ✓ Aliaa M. Mohassab, **Heba A. Hassan**, Dalia Abdelhamid, Mohamed Abdel-Aziz. " STAT3 transcription factor as target for anti -cancer therapy" Pharmacological Reports (2020) 72:1101–1124
- ✓ Abdelfattah Hassan , Mohamed Badr , Dalia Abdelhamid , **Heba A. Hassan** , Mohammed A. S. Abourehab , Gamal El-Din A. Abuo-Rahma, " Design, synthesis, in vitro antiproliferative evaluation and in silico studies of new VEGFR-2 inhibitors based on 4-piperazinylquinolin-2(1H)-one scaffold" Bioorganic Chemistry 120 (2022) 105631.
- ✓ Tamer S. Kaoud , Aliaa M. Mohassab , **Heba A. Hassan** , Chunli Yan , Sabrina X. Van Ravenstein , Dalia Abdelhamid , Kevin N. Dalby , Mohamed Abdel-Aziz. "NO-releasing STAT3 inhibitors suppress BRAF-mutant melanoma Growth" European Journal of Medicinal Chemistry 186 (2020) 111885.
- ✓ Hend A. A. Ezelarab, Samar H. Abbas, Mohammed A. S. Abourehab, Mohamed Badr, Sanya Sureram, Poonpilas Hongmanee, Prasat Kittakoo, Gamal El-Din A. Abuo-Rahma, **Heba A. Hassan**. "Novel antimicrobial ciprofloxacin-pyridinium quaternary ammonium salts with improved physicochemical properties and DNA gyrase inhibitory activity" Medicinal Chemistry research, 30 (2021) 2168-2183
- ✓ Aliaa M. Mohassab , **Heba A. Hassan** , Dalia Abdelhamid , Ahmed M. Gouda , Bahaa G. M. Youssif , Hiroshi Tateishi , Mikako Fujita , Masami Otsuka , Mohamed Abdel-Aziz. " Design and synthesis of novel quinoline/chalcone/1,2,4-triazole hybrids as potent antiproliferative agent targeting EGFR and BRAFV600E kinases" Bioorganic Chemistry 106 (2021) 104510.
- ✓ Mohamed Hisham , **Heba A. Hassan** , Hesham A.M. Gomaa , Bahaa G.M. Youssif , Alaa M. Hayallah , Mohamed Abdel-Aziz. "Structure-based design, synthesis and antiproliferative action of new quinazoline-4-one/chalcone hybrids as EGFR inhibitors" Journal of Molecular Structure (2022), 1254, 132422
- ✓ Moamen A. Hassanin, Muhamad Mustafa , Mohammed A. S. Abourehab , **Heba A. Hassan** , Omar M. Aly , and Eman A. M. Beshr. " Design and Synthesis of New Hydantoin Acetanilide Derivatives as Anti-NSCLC Targeting EGFR L858R/T790M Mutations" **Pharmaceuticals** 2022, 15, 857
- ✓ Aliaa M. Mohassab , **Heba A. Hassan** , Dalia Abdelhamid , Ahmed M. Gouda , Hesham A.M. Gomaa , Bahaa G.M. Youssif , Mohamed O. Radwan , Mikako Fujita , Masami Otsuka , Mohamed Abdel-Aziz. " New quinoline/1,2,4-triazole hybrids as dual inhibitors of COX-2/5-LOX and inflammatory cytokines: Design, synthesis, and docking study" **Journal of Molecular Structure** (2021), 1244, 130948
- ✓ Abdelfattah Hassan , Mohamed Badr , **Heba A. Hassan** , Dalia Abdelhamid , Gamal El- Din A. Abuo-Rahma. " Novel 4-(piperazin-1-yl)quinolin-2(1H)-one bearing thiazoles with antiproliferative activity through VEGFR-2-TK inhibition" **Bioorg. Med. Chem.** (2021), 40, 116168.

- ✓ Kamal S. Abdelrahman, **Heba A. Hassan**, Salah A. Abdel-Aziz¹, Adel A. Marzouk, Atsushi Narumi, Hiroyuki Konno, Mohamed Abdel-Aziz. " JNK signaling as a target for anticancer therapy" **Pharmacological Reports (2021) 73, 405–434.**
- ✓ Aliaa M. Mohassab **Heba A. Hassan** , Hesham A. Abou-Zied , Mikako Fujita , Masami Otsuka , Hesham A. M. Gomaa, Bahaa G. M. Youssif , Mohamed Abdel-Aziz” Design and synthesis of new quinoline-ester/-amide derivatives as potent antiproliferative agent targeting EGFR and BRAFV600E kinases” **Journal of Molecular Structure 2024 , 1297, 136953**
- ✓ Hend A. A. Ezelarab, **Heba A. Hassan**, Gamal El-Din A. Abuo-Rahma, Samar H. Abbas “Design, synthesis, and biological investigation of quinoline/ciprofloxacin hybrids as antimicrobial and anti-proliferative agents” **Journal of the Iranian Chemical Society 2023 20:683–700**
- ✓ Hend A. A. Ezelarab, Taha F. S. Ali, Samar H. Abbas, **Heba A. Hassan** and Eman A. M. Beshr “Indole-based FLT3 inhibitors and related scaffolds as potential therapeutic agents for acute myeloid leukemia” **BMC Chemistry (2023) 17:73**
- ✓ Lamya H. Al-Wahaibi , Mohamed Hisham, Hesham A. Abou-Zied, **Heba A. Hassan**, Bahaa G. M. Youssif, Stefan Bräse, Alaa M. Hayallah, and Mohamed Abdel-Aziz “Quinazolin-4-one/3-cyanopyridin-2-one Hybrids as Dual Inhibitors of EGFR and BRAFV600E: Design, Synthesis, and Antiproliferative Activity” **Pharmaceuticals 2023, 16, 1522.**
- ✓ Kamal S. Abdelrahman , **Heba A. Hassan**, Salah A. Abdel-Aziz , Adel A. Marzouk , Raef Shams , Keima Osawa, Mohamed Abdel-Aziz and Hiroyuki Konno “ Development and Assessment of 1,5-Diarylpyrazole/Oxime Hybrids Targeting EGFR and JNK–2 as Antiproliferative Agents: A Comprehensive Study through Synthesis, Molecular Docking, and Evaluation” **Molecules 2023, 28, 6521.**
- ✓ Mohamed Hisham, **Heba A. Hassan**, Hesham A. M. Gomaa, Bahaa G.M. Youssif, Alaa M. Hayallah and Mohamed Abdel-Aziz, “Design, Synthesis, and Antiproliferative Activity of Quinazolin-4-One/Chalcone Hybrids Via the EGFR Inhibition Pathway” **Anti-Cancer Agents in Medicinal Chemistry, 2023, 22, 1-7**
- ✓ Hend A.A. Ezelarab , Amer Ali Abd El-Hafeez , Taha F.S. Ali , Ahmed M. Sayed , **Heba A. Hassan** , Eman A.M. Beshr , Samar H. Abbas. ”New 2-oxoindole derivatives as multiple PDGFR α/β and VEGFR-2 tyrosine kinase inhibitors“ **Bioorganic Chemistry, 2024, 145, 107234**



- ✓ Hend A. A. Ezelarab, Taha F. S. Ali, Samar H. Abbas, Ahmed M. Sayed, Eman A. M. Beshr, **Heba A. Hassan**, “New antiproliferative 3-substituted oxindoles inhibiting EGFR/VEGFR-2 and tubulin polymerization” **Molecular Diversity**, 2024, 28, 563
- ✓ Hend A. A. Ezelarab, **Heba A. Hassan**, Samar H. Abbas, Taha F. S. Ali, Eman A. M. Beshr, “The main biotargets of indole or 2-oxoindole-based hybrids acting as promising antiproliferative agents “ **J. Adv. Biomed. & Pharm. Sci.**, 2023, 6, 174 – 183
- ✓ Mohamed Hisham, **Heba A. Hassan**, Alaa M. Hayallah, Mohamed Abdel-Aziz, “Nicotinonitrile as an Essential Scaffold in Medicinal Chemistry: An Updated Review” **J. Adv. Biomed. & Pharm. Sci.**, 2023, 6, 1 – 11
- ✓ Abdelfattah Hassan, Mostafa M. Badran, **Heba A. Hassan**, Dalia Abdelhamed, Omar M. Aly, “Design, synthesis in vitro and in vivo evaluation of new diaryltriazoles carboxylic and hydroxamic acid derivatives as inhibitors of tumor necrosis alpha converting enzyme (TACE)” **Octahedron Drug Research** 2023, 2, 44-62

Posters

- ✓ Amer Ali Abd El-Hafeez, **Heba A. Hassan**, Samar H. Abbas, Toru Hosoi, Koichiro Ozawa, Mai E. Shoman. “New Quinoline/Chalcone Hybrids induce G2/M cell cycle arrest and apoptosis in A549 and K-562 cells via PI3K/Akt/mTOR pathway inhibition” Abstracts of papers of Nano Info Chemistry Symposium no. 14, Hiroshima, Japan, December 2017.
- ✓ Heba S. Abd-Ellah, Aliaa M. Mohassab, Mai E. Shoman, Eman A. Beshr, **Heba A. Hassan**, Dalia Abdelhamid, Mohamed Abdel-Aziz, Al-Shaimaa F. Ahmed, Kevin N. Dalby, Tamer S. Kaoud, “Design, synthesis and biological evaluation of novel NSAIDs with improved gastrointestinal safety profile” Abstracts of papers of the American Chemical Society meeting no. 255, New Orleans, LA, USA, March 2018.
- ✓ Samar H. Abbas, Mai E. Shoman, Kevin N. Dalby, Tamer S. Kaoud and **Heba A. Hassan**. “ Design, synthesis and cytotoxicity of new quinoline/oxime hybrids ” Abstracts of papers of the American Chemical Society meeting no. 255, New Orleans, LA, USA, March 2018.

Other activities:

An invited reviewer in:

- **Journal of Bioorganic Chemistry**
- **Journal Of Medicinal Chemistry**
- **Journal of Enzyme Inhibition and Medicinal Chemistry**
- **Journal of Molecules**

عميد الكلية

أ.د. محمد عبد العزيز محمد عثمان

رئيس القسم

أ.د. إيمان أحمد محمود



References:

Dr. Mohamed A. Mohamed

Professor of Medicinal Chemistry,
Dean, Faculty of Pharmacy, Minia University,
Tel. 002-086-2369075
Fax. 002-086-2369075
E-mail abulnil@hotmail.com

Dr. Gamal El-Din Ali Ahmed

Professor of Medicinal Chemistry,
Head of Department of Medicinal Chemistry,
Faculty of Pharmacy, Minia University,
Tel. 002-086-2369075
Fax. 002-086-2369075
E-mail gamalaburahma@yahoo.com

Thank you.. certificates for the previously mentioned information is available upon request

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أ. د. محمد عبد العزيز محمد عثمان

رئيس القسم

أ.د. إيمان أحمد محمود