

Mai Emad Eldin Hussein Ahmed Hamad, PhD

Lecturer of Pharmacognosy

Pharmacognosy department- Faculty of Pharmacy- Cairo University

ORCID: 0000-0002-8838-8147

Email: mai.husein@pharma.cu.edu.eg

Academic Qualifications:

Cairo University, Faculty of Pharmacy, Cairo, Egypt (January 2023)

PhD of Pharmaceutical Sciences (Pharmacognosy)

Advisors: Prof. Ahlam Mahmoud El-Fishawy, Prof. Hesham Ibrahim El-Askary, Dr. Amira Safwat El Senousy and Dr. Ahmed Abdelghani Hamed

Thesis title: Phytochemical and Biological Studies of Certain *Albizia* Species (Family Fabaceae) and their Endophytes

Cairo University, Faculty of Pharmacy, Cairo, Egypt (January 2019)

MSc of Pharmaceutical Sciences (Pharmacognosy)

Advisors: Prof. Ahlam Mahmoud El-Fishawy, Prof. Hesham Ibrahim El-Askary and Dr. Amira Safwat El Senousy

Thesis title: Pharmacognostical Study of *Hibiscus sabdariffa* L. (Family Malvaceae) Cultivated in Egypt

Cairo University, Faculty of Pharmacy, Cairo, Egypt (May 2013)

BSc of Pharmaceutical Sciences, excellent with honors

Work and Teaching experience:

Work

- **Lecturer** of Pharmacognosy (2023 till now), Faculty of Pharmacy, Cairo University, Egypt.
- **Teaching assistant** of Pharmacognosy (2019-2022), Faculty of Pharmacy, Cairo University, Egypt.
- **MSc. Student and instructor** of Pharmacognosy (2014-2019), Faculty of Pharmacy, Cairo University, Egypt.

Teaching

- Preparing and teaching laboratory and lecture sessions of Pharmacognosy (203) for second year students, Phytochemistry (205) and (206) for third year students professional ethics (007) for fifth year at Cairo University, Egypt
- Supervising practical sessions.
- Participating in most student-related activities; correction of quizzes and practical exams.

Research

- Isolation and characterization of plant secondary metabolites *viz.* triterpenes, sterols and flavonoids using different spectroscopic and chromatographic methods.
- Isolation and characterization of new microbial secondary metabolites from endophytes obtained from herbs.

Professional skills:

Research skills:

- **Purification of plant and microbial natural products** using different chromatographic techniques (normal/reverse phase - analytical/semi-preparative and preparative HPLC).
- **Characterization of plant and microbial natural products** utilizing 1D/2D NMR, LC-qTOF-MS/MS coupled with Global Natural Product Social Molecular Networking (GNPS), UV-Vis, optical rotation ($[\alpha]_D$).
- **Qualitative and quantitative analysis of plant and microbial natural products** using UHPLC-DAD, HPLC-DAD-MS, and, UHPLC-qTOF-MS/MS.

Language skills: Arabic (Mother tongue), English (good command).

Computer skills: Microsoft Office (Word, Excel and PowerPoint), Prism GraphPad, Chemdraw, mzmine, Sirius, Cytoscape and Adobe illustrator.

Publications:

- **Mai E. Hussein**, Amira S. El Senousy, Wessam H. Abd-Elsalam, Kawkab A. Ahmed, Hesham I. El-Askary, Samar M. Mounair and Ahlam M. El Fishawy. Roselle seed oil and its nano-formulation alleviated oxidative stress, activated Nrf2 and downregulated m-RNA expression genes of pro-inflammatory cytokines in paracetamol-intoxicated rat model. *Records of Natural Products*. 2019, 14,1-7.
- **Mai E. Hussein**, Amira S. El Senousy, Hesham I. El-Askary, Samar M. Mounair and Ahlam M. El Fishawy. Immunomodulatory and anti-inflammatory activities of the defatted alcoholic extract and mucilage of *Hibiscus sabdariffa* L. leaves, and their chemical characterization. *Journal of Pharmacognosy and Phytochemistry*. 2019, 8(4), 982-990.
- **Mai E. Hussein**, Osama G. Mohamed, Ahlam M. El-Fishawy, Hesham I. El-Askary, Amira S. El-Senousy, Ahmed A. El-Beih, Eman S. Nossier, Ahmed M. Naglah, Abdulrahman A. Almehezia, Ashootosh Tripathi and Ahmed A. Hamed. Identification of antibacterial metabolites from endophytic fungus

Aspergillus fumigatus, isolated from *Albizia lucidior* leaves (Fabaceae), utilizing metabolomic and molecular docking techniques. *Molecules*. 2022, 8,27(3),1117.

- **Mai E. Hussein**, Amira S. El Senousy, Hesham I. El-Askary, Ahlam M. El Fishawy, Ahmed A. Hamed and Rana A. Youness. Pseurotin A Halts Hepatocellular Carcinoma Oncogenic Potential Through Tuning miR-30a and let-7i Tumor Suppressor miRNAs. *Egyptian Journal of Chemistry*. 2022, 65(13), 501-509.
- **Mai E. Hussein**, Osama G. Mohamed, Ahlam M. El-Fishawy, Hesham I. El-Askary, Ahmed A. Hamed, Marwa M. Abdel-Aziz, Radwan Alnajjar, Amany Belal, Ahmed M. Naglah, Abdulrahman A. Almehizia, Ahmed A. Al-Karmalawy, Ashootosh Tripathi and Amira S. El Senousy. Anticholinesterase Activity of Budmunchiamine Alkaloids Revealed by Comparative Chemical Profiling of Two *Albizia* spp., Molecular Docking and Dynamic Studies. *Plants*, 2022, 11(23),3286.

Conference Presentations:

4/2018: 9th International Scientific Conference of Faculty of Pharmacy, Cairo University, "Globally-Recognized Egyptian Pharmaceutical ingredients A National Priority".

Poster title: *In vivo*, anti-inflammatory activities of seeds and leaves of *Hibiscus sabdariffa* L. grown in Egypt.

Mai E. Hussein, Amira S. El Senousy, Hesham I. El-Askary, Samar M. Mouneir, Ahlam M. El Fishawy.

Courses and Seminars:

- 12/2016: Exams & Students Evaluation Systems "Faculty & Leadership Development Center (FLDC), Cairo University".
- 7/2017: University Code of Ethics "Faculty & Leadership Development Center (FLDC), Cairo University".
- 8/2017: Ethical Considerations for Animal use in Research and Education "Faculty & Leadership Development Center (FLDC), Cairo University".
- 12/2017: Research Ethics "Faculty & Leadership Development Center (FLDC), Cairo University".
- 1/2018: International Publishing of Scientific Research "Faculty & Leadership Development Center (FLDC), Cairo University".

- 5/2018: Managing Time & Meetings "Faculty &Leadership Development Center (FLDC), Cairo University".
- 12/2019: Crisis Management "Faculty &Leadership Development Center (FLDC), Cairo University".
- 2/2019: Arabic and English Editing in Scientific Research "Faculty &Leadership Development Center (FLDC), Cairo University".
- 7/2019: Use of Technology in Teaching "Faculty &Leadership Development Center (FLDC), Cairo University".
- 7/2019: Critical Thinking "Faculty &Leadership Development Center (FLDC), Cairo University".
- 9/2020: Legal and Financial Aspects in University Environment "Faculty &Leadership Development Center (FLDC), Cairo University".
- 12/2020: H index, Impact Factor and Citation "Faculty of Pharmacy, Cairo University".
- 1/2021: Communication Skills "Faculty &Leadership Development Center (FLDC), Cairo University".
- 5/2021: Essentials of Integrated Education "Faculty &Leadership Development Center (FLDC), Cairo University".
- 5/2021: Digital Transformation Certificate "Faculty &Leadership Development Center (FLDC), Cairo University".
- 8/2024: Seminar on Health Cultivation Culture of Traditional Chinese Medicine for Developing Countries "it was held in China"

Honours, prizes and awards

2019: Prize for the best master thesis in Pharmacognosy Department, Egypt.

2024: Prize for the best PhD thesis in Pharmacognosy Department, Egypt.