



curriculum vitae

(Scientific and Administrative History)



Prof. Mohamed-Elamir F. Hegazy

Professor of Natural Products Chemistry

Pharmaceutical and Drug Industries Research Institute

National Research Centre

2025

Name: Mohamed-Elamir Fathy Hegazy Sayed Khalaf
Current Position: Professor
Date of Birth: 1-8-1977
Place of Birth: Minia
Marital Status: Married
Nationality: Egyptian
Field: Organic Chemistry
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Summary

Professor Dr. Mohamed El-Amir Fathy Hegazy, Department of Medicinal Plants Chemistry, National Research Centre. Dr. Hegazy specializes in natural product chemistry, biochemistry, and microbial transformation of natural compounds. He has extensive expertise in the identification and biological characterization of natural compounds isolated from medicinal plants and marine organisms using 1D and 2D NMR (Nuclear Magnetic Resonance) techniques. He has received several highly competitive postdoctoral fellowships, including those from JSPS (Japan Society for the Promotion of Science) and AVH (Alexander von Humboldt), enabling him to gain international experience.

Dr. Hegazy has published approximately 184 scientific articles in international journals with an H-index of 33. In 2021, he was seconded to work at the Academy of Scientific Research and Technology – Ministry of Higher Education and Scientific Research – as a supervisor of the Technical Office. In 2022, he took on the role of supervising the Regional Development Centers at the Academy of Scientific Research and Technology.

Educational background:

- Ph.D. in Philosophy of Science – Biochemistry, Faculty of Science, Hiroshima University, Japan (March 2007)

Ph.D. in Philosophy of Science – Chemistry, Faculty of Science, Minia University, Minia, Egypt (May 2005)

- Master of Science – Chemistry, Faculty of Science, Minia University, Minia, Egypt (March 2002)

- Bachelor of Science – Chemistry, Faculty of Science, Minia University, Minia, Egypt (May 1998)

Professional Experience:

- Head of Medicinal Plants Chemistry Department, National Research Centre, Cairo, Egypt (2020 – present)
- Professor Researcher, Medicinal Plants Chemistry Department, National Research Centre, Cairo, Egypt (2017 – present)
- Assistant Professor Researcher, Medicinal Plants Chemistry Department, National Research Centre, Cairo, Egypt (2017 – 2012)
- Researcher, Medicinal Plants Chemistry Department, National Research Centre, Cairo, Egypt (2012 – 2007)
- Assistant Researcher, Medicinal Plants Chemistry Department, National Research Centre, Cairo, Egypt (2007 – 2004)
- Research Assistant, Chemistry Department, Minia University, Minia, Egypt (2002 – 1998)

Administrative Activities:

National Research Centre

- Provide job descriptions for administrative staff by defining key responsibilities and duties.
- Training young researchers by encouraging participation in scientific conferences and seminars to enhance their research experiences and skills, and to apply for internal projects, benefiting from the expertise of retired professors.
- Introducing new specialties, such as Marine Product Chemistry.
- Encouraging colleagues to apply for the registration of pharmaceutical raw materials to localize the production of local products (e.g., Silymarin extract).
- Establishing the first national laboratory in herbal medicine, funded by the Academy of Scientific Research and Technology.
- Electronic archiving of all research staff files.
- Efficient recruitment and training of human resources in various fields (Chemistry and Biochemistry) to address the human resource gap within the department and maximize their potential.
- Providing all necessary resources for the department through internal projects and collaboration among department members to ensure efficient research work.

- Collaborating with other departments to enhance the quality of research and publication in high-impact international journals.

Academy of Scientific Research and Technology

- 1- Supervisor of Regional Development Centers, Academy of Scientific Research and Technology, from 10-5-2023 to present.
- 2- Academic Supervisor of the Follow-up and Performance Evaluation Office, Academy of Scientific Research and Technology, from 25-1-2022 to 10-5-2023.

1-1. Supervisor of the Technical Office:

- Managing all calls for proposals from the Academy.
- Supervising 10 specialized scientific committees in various fields for project evaluation.
- Updating the electronic system for project submissions to avoid researchers switching roles for different projects.
- Creating a database for all ongoing and completed projects.
- Supervising the evaluation of several calls for proposals, such as:
 - Green funding
 - Blue economy
 - Dairy industry projects
 - Graduation projects
 - Maximizing the benefit from water resources
 - RESPECT for outstanding researchers and those who have received scientific awards
 - International projects with China, Hungary, and the European Union
 - Organizing the first Egypt Intellectual Property Rights Exhibition, Academy of Scientific Research and Technology, in 2022.
 - Organizing the Green Innovation Conference for the Ministry of Higher Education and Scientific Research at the Green Zone (COP27) – Sharm El Sheikh, in 2022.
 - Organizing the 7th International Cairo Innovation Conference, Academy of Scientific Research and Technology, in 2023.

2.1. Supervisor of Regional Development Centers:

- Developed an ambitious plan to enhance the work of the regional centers, enabling them to participate in national projects for the country.
- Organized administrative work for 106 staff members by defining job descriptions and key responsibilities and duties.
- Developed all regional centers (11 centers across various regions of Egypt, which serve as branches of the Academy of Scientific Research and Technology in those regions).
- Established working teams, by decision of the Academy's president, for certain centers with major projects, such as the Egyptian-Chinese Laboratory, the Palm Gene Bank, and the New and Renewable Energy Center in Borg El Arab, to retain experienced staff in each specialization.
- Prepared and trained staff at the regional centers to ensure the sustainability of completed projects, turning them into income-generating sources for the Academy of Scientific Research and Technology.
- Facilitated all procedures related to the maintenance of the regional centers.
- Initiated the creation of a gene bank at the Center for the Conservation and Preservation of Plant Genetic Resources in Matrouh.
- Established collaboration protocols with various companies to work within the regional centers.
- Worked towards making the Sohag regional center a "green" center, managing all projects with clean energy.
- Encouraged communication between the directors of all centers to exchange expertise.
- Organized regional innovation exhibitions for the first time, in collaboration with universities and research centers in each region, and coordinated with the Technology Development Sector to prepare them for participation in the International Cairo Innovation Exhibition.
- Coordinated with the National Museum Network to develop science museums in the regional centers.
- The regional centers have now become a key source of revenue for the Academy of Scientific Research and Technology.
- Contributed to collaboration and integration with the Egyptian Rural Development Company and the Sustainable Development Authority in Matrouh

to support the beneficiaries of the El-Maghara area in Matrouh through the outputs of the research farm affiliated with the Academy.

- Established the regional center for marine life conservation in Hurghada.

Organizing Conferences and Workshops:

- Participated in organizing the 7th International Cairo Innovation Exhibition 2022.
- Participated in organizing the Green Innovation Exhibition at COP27, featuring the Academy of Scientific Research and Technology's booth in 2022.
- Participated in organizing the Intellectual Property Exhibition in 2022.

Collaboration in designing future strategies:

- Participated in the BRICS preparatory activities in the field of new and renewable energy in Russia.
- Represented the President of the Academy of Scientific Research and Technology in China for the Belt and Road Initiative.
- Contributed to the development of the strategic plan to define the long-term goals of the Medicinal Plants Chemistry Department and the effective steps to achieve them.
- Participated in the Leadership Preparation Program for Department Heads at the National Research Centre in 2022.
- Participated in the Research Leadership Program for Department Heads at the National Research Centre Institutes – Strategic Planning as part of the training program, 2021, at the Leadership Development Institute in Helwan.
- Contributed to the preparation, discussions, and community dialogue workshops regarding the roadmap for pharmaceutical industries at the Drug Research Council, Academy of Scientific Research and Technology.

Scientific Competencies:

- Visiting Professor at Texas Tech University, USA.(2015 ,2010 ,2008)
- Visiting Professor at National Sun Yat-sen University, Taiwan.(2009)
- Visiting Professor at Texas Tech University, USA (1/1/2010 to 31/3/2010).
- Visiting Professor at National Sun Yat-sen University, Taiwan (31/8/2009 to 1/3/2009).
- Visiting Professor at Texas Tech University, USA (1/6/2008 to 31/8/2008).

Awards and Honors:

- Honored as part of the research team for producing the first-ever Egyptian Silymarin raw material from local plant sources in Egypt, obtaining compliance certification from the Egyptian Drug Authority for the raw material, which was entirely imported until 2024. This is part of the initiative to deepen and localize manufacturing and reduce the import bill.
- Honored in the Stanford list of the top 2% of scientists worldwide.
- Excellence Award in the field of chemical sciences and their applications from the National Research Centre for 2022.
- Professor Dr. Fayza Hamouda Award for 2018.
- Encouragement Award from the National Research Centre in the field of chemical sciences and their applications for 2016.
- Egypt's Good Foundation Award for the Best Paper Published in an International Journal in 2012-2013.
- TWAS Award for Best Young Researcher in Developing Countries for 2008-2012.
- Achievement Award for International Publications from the National Research Centre in 2010 and 2012.

International Scholarships:

- Alexander von Humboldt Fellowship, Germany.(2019-2017)
- Postdoctoral Fellowship from the Japanese Government (JSPS).(2012-2010)
- PhD Scholarship from the Japanese Government.(2007-2003)

Patents:

- A modified method for extracting leaves from the *Ficus deltoidea* plant.

Leadership Training Courses:

- Leadership Preparation Program at the National Research Centre for Department Heads.

Technical Experience:

- Established a scientific school in the field of Natural Product Chemistry and Biotransformation Chemistry, enhancing the efficacy of separated compounds using computational.
- Use of modern techniques in chromatography.
- Development of human cell culture experiments and conducting specific experiments including biological screening and exploring the mechanisms of active compounds.

Teaching Experience:

- Taught practical organic chemistry to students of various faculties at the University of Minya (Faculty of Science, Faculty of Pharmacy, Faculty of Education, Faculty of Dentistry).

Scientific Committees and Associations:

- Member of the Initiatives and Projects Committee at the Academy of Scientific Research and Technology.
- Member of the Supervision Committee for the National Research Centre Branch in 6th October (since 1-10-2023).
- Member of the Basic Sciences Committee at the Academy of Scientific Research and Technology (1-8-2021 to 24-1-2022).
- Member of the Drug Research Council at the Academy of Scientific Research and Technology.(2017-2016)
- Member of the Laboratory Preparation Committee at the National Research Centre.
- Member of the International Relations Committee (1-3-2013 to 28-2-2014).
- Member of the Egyptian Chemical Society.
- Member of the Egyptian Society for Medical Research.
- Member of the German Association for Medicinal Plant Research (GA).

- Member of the Arab Society for Medicinal and Aromatic Plants.
- Member of the Japanese Society for the Promotion of Science (JSPS).

Supporting Scientific Research Activities:

Collaboration with international institutions, such as:

- Alexander von Humboldt Foundation on various projects (AVH).
- Japan Society for the Promotion of Science (JSPS).

Scientific collaboration with prominent international researchers:

- Paul W. Paré, Department of Chemistry & Biochemistry, Texas Tech University, Lubbock, Texas, USA.
- Thomas Efferth, Department of Pharmaceutical Biology, Institute of Pharmaceutical and Biomedical Sciences, University of Mainz, Germany.
- Shinji Ohta, Graduate School of Integrated Sciences for Life, Hiroshima University, Japan.
- Hisashi Matsuda, Kyoto Pharmaceutical University, Japan.
- Scientific collaboration with researchers at various universities and research centers in diverse fields.
- Received scientific equipment as a gift for the National Research Centre worth €20,000.



Membership in International Publishing Bodies:

- Phytomedicine Plus.
- Plants Reviewing Board.
- Guest Editor for Special Issues in Marine Drugs, Molecules, and Antibiotics.

Published Research:



184 published papers in high-impact international journals.

Hirsch Index (H-index) = 33.

Participated personally or with research teams in numerous international conferences.

List of Publications:

<https://www.scopus.com/results/authorNamesList.uri?st1=Hegazy&st2=Mohamed&origin=searchauthorlookup>

<https://scholar.google.com/citations?user=L74LoSwAAAAJ&hl=en>