

Mohamed Elshorbagy

Phone: 01282371427

Email: Mohamed.elshorbagy@pharm.tanta.edu.eg

PROFESSIONAL SUMMARY

I am a pharmacist and finished my PhD in pharmacy at the University of Bradford, with over 13 years of combined research and teaching experience. Currently I am working as post-doc research assistant at the University of Bradford. My doctoral work centres on investigating plant-derived bioactive compounds as potential treatments for pulmonary arterial hypertension. Hands-on expertise spans the full experimental pipeline: from natural product extraction and chromatographic isolation, through cell culture, cell proliferation and cytotoxicity, western blotting, qPCR, and reporter gene assays, to data analysis using specialist software. Experienced in designing experiments, maintaining chemical safety standards, presenting at international conferences, and mentoring postgraduate students.

KEY SKILLS & TECHNIQUES

Molecular & Cell Biology

- Mammalian cell culture
- qPCR / PCR
- RNA & protein extraction
- cell proliferation and cytotoxicity
- Experiment design
- Western blotting
- Reporter gene assays
- Gene expression analysis

Natural Product & Analytical Chemistry

- Extraction & purification of natural products
- HPLC
- LC-MS
- Column chromatography & TLC
- NMR spectroscopy
- GC- MS

RESEARCH EXPERIENCE

Post- Doc Researcher — Pharmacognosy / Molecular Biology | *University of Bradford, UK* | Oct 2025 – Present

Investigating phytochemicals from Chinese herbal medicine for their anti-inflammatory activities.

PhD Researcher — Pharmacognosy / Molecular Biology | *University of Bradford, UK* | Jun 2021 – July 2025

- Investigating phytochemicals from *Sanicula europaea* L. as potential treatments for pulmonary arterial hypertension (PAH)
- Isolated and characterised saponin glycosides using column chromatography, TLC, HPLC, LC-MS, and NMR with TopSpin processing.
- Assessed bioactivity using in vitro models, cell viability and cytotoxicity, western blotting, qPCR, and reporter gene assays targeting disease-relevant signalling pathways.
- Designed and executed full experimental protocols from compound isolation through to functional bioassay, maintaining chemical safety and GLP standards throughout.
- Won the Poster Award at the 15th APS PharmSci International Conference 2024 (University of Huddersfield).
- Presented research at the 71st GA International Congress (Trinity College Dublin, 2023).
- Co-authored a book chapter on advanced plant secondary metabolite production strategies (CRC Press, 2024).

MSc Researcher — Natural Products Chemistry | *Tanta University, Egypt* | Oct 2013 – Oct 2018

- Investigated elicitor and precursor feeding strategies to enhance tropane alkaloid production from *Atropa belladonna* L. callus cultures.

- Applied extraction, purification, and chromatographic identification techniques (TLC, column chromatography, HPLC).
- Published findings in international journal (Int. Res. J. Pharm., 2018).

TEACHING & SUPERVISION EXPERIENCE

Assistant Lecturer, Faculty of Pharmacy | *Tanta University, Egypt* | Dec 2018 – till present

- Delivered seminars, tutorials, and workshops in pharmacognosy and natural product chemistry.
- Supervised MSc and undergraduate research projects; offered constructive guidance from design through to write-up.

Teaching Assistant, Faculty of Pharmacy | *Tanta University, Egypt* | Mar 2013 – Dec 2018

- Supported laboratory and project-based learning; prepared equipment and resources for practical classes.
- Led team-based problem-solving activities, building leadership and communication skills.

EDUCATION

PhD, Pharmacy (Pharmacognosy) | *University of Bradford, UK* | Jun 2021 – July 2025 awarded in Dec 2025

Thesis: Phytochemistry and Biological Evaluation of *Sanicula europaea* L. for Its Potential in the Treatment of Pulmonary Arterial Hypertension

MSc, Pharmaceutical Sciences (Pharmacognosy) | *Tanta University, Egypt* | Oct 2013 – Oct 2018

Thesis: Biotechnological Studies on The Production of Tropane Alkaloids from *Atropa belladonna* L.

BPharm, Pharmaceutical Sciences | *Tanta University, Egypt* | Jun 2006 – May 2011

PUBLICATIONS & CONFERENCE PRESENTATIONS

Journal Article

- Elshorbagy MI, Ibrahim SM, Abo El-Seoud KA, Abd El-Maksoud AI. Tropane alkaloids production from callus culture of *Atropa belladonna* L. as affected by elicitors and precursor feeding. Int Res J Pharm. 2018;9(7):116-125. DOI: 10.7897/2230-8407.097135

Book Chapter

- Elshorbagy MI, Haffelder J, Ulber R, Wright CW, Zayed A. Agrobacterium-Mediated Genetic Transformation: A Cutting-Edge Approach for Enhanced Secondary Metabolites Production. In: Propagation to Pharmacopeia: Modern Approaches in Medicinal Plants. CRC Press, 2024. DOI: 10.1201/9781003423416-15

Conference Posters

- Elshorbagy MI, Wright CW, Nasim MT, 196 Modulation of BMP and TGFβ signalling pathways using saponin glycosides derived from *Sanicula europaea* L. in pulmonary arterial hypertension (PAH) Heart 2026;112:A266-A267. <https://doi.org/10.1136/heartjnl-2026-BCS.284> ,BCS Annual Conference 2026
- Elshorbagy MI, Nasim MT, Wright CW. Isolation of saponin glycosides of *Sanicula europaea* L. and investigation of their effects on pathways relevant to PAH. 15th APS PharmSci International Conference, Huddersfield, 2024. [POSTER AWARD WINNER]
- Elshorbagy MI, Nasim MT, Wright CW. An Evaluation of *Sanicula europaea* L. for its Potential in the Treatment of Pulmonary Arterial Hypertension. Planta Med 2023;89(14):1345-1346. 71st GA Congress, Trinity College Dublin, 2023.
- Elshorbagy MI et al. Tropane alkaloids production from callus culture of *Atropa belladonna* L. First African Health Summit, 2019.

CERTIFICATIONS & PROFESSIONAL MEMBERSHIP

- Graduate Fellow, Higher Education Academy (HEA) — University of Bradford, July 2022