



CURRICULUM VITAE

Prof. Dr. Gehan Mostafa Badr

Professor of Physiology

Affiliation:

Department of Zoology

Faculty of Science

Ain Shams University

Cairo, Egypt

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📄 **Web of Science ResearcherID:** G-3287-2016

🏛️ **University Profile:** [ASU Faculty Page](#)

1- Personal Information

Name: Dr. Gehan Mostafa Badr Mahmoud

Date of Birth: September 11, 1972

Nationality: Egyptian

Current Position: Professor of Zoology, Faculty of Science, Ain Shams University

Specialization: Physiology and Immunology

Research Interests: Toxicology, Experimental Pharmacology, Oxidative Stress, Inflammation, Natural Product Therapeutics, and Histopathology

Address: 111 El-Banafseg, First Settlement, New Cairo, Cairo, Egypt

2- Educational background

- **Ph.D. in Animal Physiology**

Faculty of Science, Ain Shams University, Egypt – 2006

Thesis: Physiological, Molecular, and Immunological Effects of Garlic in Male Albino Rats

- **M.Sc. in Animal Physiology**

Faculty of Science, Ain Shams University, Egypt – 2001

Thesis: Protective Role of Garlic Against Metabolic Disorders in Male White Rats

- **B.Sc. in Zoology**

Faculty of Science, Ain Shams University, Egypt – 1994

3- Academic Experience & Career Progression

Period	Institution	Department	Academic Rank
Mar 2022 – Present	Faculty of Science, Ain Shams University	Department of Zoology	Professor
2016 – 2022	Faculty of Science, Ain Shams University	Department of Zoology	Associate Professor
2009 – 2019	Faculty of Science, King Faisal University, KSA	Department of Biology	Associate Professor
2006 – 2016	Faculty of Science, Ain Shams University	Department of Zoology	Lecturer
2001 – 2006	Faculty of Science, Ain Shams University	Department of Zoology	Assistant Lecturer
1996 – 2001	Faculty of Science, Ain Shams University	Department of Zoology	Demonstrator

4- Research Profile

I am an accomplished researcher with an extensive publication record in high-impact, peer-reviewed journals indexed in leading databases (Clarivate Analytics Q1–Q4, Scopus). My research program integrates cutting-edge experimental approaches with translational applications, focusing on the following key areas:

Key Areas:

Pharmacology, Toxicology, Oxidative Stress, Inflammation, Nanomedicine, and Natural Product Therapeutics.

Research Approach:

My work employs a multidisciplinary framework combining:

- **Mechanistic Investigations:** Molecular and cellular-level analysis of therapeutic targets and disease pathways
- **Translational Validation:** Preclinical efficacy and safety evaluation of bioactive compounds and therapeutic candidates
- **Technology Integration:** Application of analytical chemistry, histopathology, and nanobiotechnology approaches
- **Computational and Data-Driven Biology:** Integration of modern biostatistics, bioinformatics concepts, and computational data analysis to enhance experimental design, improve data interpretation, and support systems-level understanding of biological processes
- **Emerging Trends in Life Sciences:** Adoption of data-centric and interdisciplinary methodologies that bridge experimental biology with computational modeling, enabling more precise biomarker identification and predictive understanding of disease mechanisms

Artificial Intelligence (AI) certification:

- Certified in AI evaluation and expert-level assessment of biology-related responses for large language models (LLMs).
- Experienced in evaluating scientific accuracy, reasoning, and instruction following in AI-generated content.

Peer-Reviewed Publications (Chronologically Ordered)

Q1/Q2 Indexed Publications

1. Rekaby, M.H.A.; Tantawi, H.; **Badr, G.M.**; Darwish, S.K.; Abd El-Kareem, H.F. (2026) Anti-osteoporotic effects of *Lepidium sativum* extract and its green-synthesized silver nanoparticles via RANKL/TNF- α modulation in a rat model of osteoporosis. *Egyptian Journal of Basic and Applied Sciences* (Scopus) (Under peer review).
2. Althumairy, D.A., Abu-Khudir, R., Alandanoosi, A.I., **Badr, G.M.** (2025). Garlic peel-derived phytochemicals using GC-MS: Antioxidant, anti-inflammatory, and anti-apoptotic effects in ulcerative colitis rat model. *Pharmaceuticals*, 18, 969. <https://doi.org/10.3390/ph18070969> (IF: 4.5, Q1 – Clarivate & Scopus)
3. Arafa, N.M.S., Hummadi, H.M.A., **Badr, G.M.** (2025). The potential of aloe vera gel utilization for skin wound healing in rats based on GC–MS and HPLC chemical profile. *Journal of Basic and Applied Zoology*, 86, 6. <https://doi.org/10.1186/s41936-024-00424-3> (Clarivate-indexed)

4. Abu-Khudir, R., **Badr, G.M.**, Abd El-Moaty, H.I., et al. (2023). *Lepidium sativum* seed oil abrogates testicular oxidative injury and NF- κ B-mediated inflammation in diabetic mice. *International Journal of Molecular Sciences*, 24, 15478.
<https://doi.org/10.3390/ijms241715478> (IF: 5.57, Q1 – Clarivate & Scopus)
5. Ali, E., Al-Fwuairees, M., **Badr, G.M.** (2022). Therapeutic potential of *Calotropis gigantea* extract against invasive pulmonary aspergillosis: In vitro and in vivo. *Asian Pacific Journal of Tropical Biomedicine*, 12(6), 243–252.
<https://doi.org/10.4103/2221-1691.345516> (IF: 1.7, Q3 – Clarivate)
6. **Badr, G.M.**, Algefare, A.I., Alfwuairees, M.A. (2021). Antioxidant potential of parsley leaf (*Petroselinum crispum*) essential oil on hypothyroidism and testicular injury in mice. *BioMed Research International*, Article ID 9989174.
<https://doi.org/10.1155/2021/9989174> (IF: 3.411, Q2 – Scopus / Q3 – Clarivate)
7. Alfwuairees, M.A., Algefare, A. I., Afkar, E, Salam, S. A, El-Moaty, H.I.A., **Badr G. M.** (2021). Immunomodulatory assessment of *Portulaca oleracea* L. extract in a mouse model of colitis. *Biomed Pharmacother* ;143:112148.
<https://doi.org/10.1016/j.biopha.2021.111587> (IF: 6.529, Q1 – Clarivate & Scopus)
8. **Badr, G.M.**, Elsaywy, H., Malki, M.A., et al. (2020). Protective effects of myristicin against ulcerative colitis induced by acetic acid in male mice. *Food and Agricultural Immunology*, 31(1), 435–446. <https://doi.org/10.1080/09540105.2020.1739626> (IF: 3.101, Q2 – Clarivate / Q1 – Scopus)
9. **Badr, G.M.**, Elsaywy, H., Sedky, A., et al. (2019). Quercetin supplementation protects against cadmium-induced hematological, thyroidal, and testicular toxicity. *Environmental Science and Pollution Research*, 26, 8202–8211.
<https://doi.org/10.1007/s11356-019-04276-1> (IF: 4.223, Q2 – Clarivate & Scopus)
10. Elsaywy, H., **Badr, G.M.**, Sedky, A., et al. (2019). Rutin ameliorates CCl₄-induced hepatorenal toxicity and hypogonadism. *PeerJ*, 7, e7011.
<https://doi.org/10.7717/peerj.7011> (IF: 2.984, Q2 – Clarivate & Scopus)
11. Abdallah, B. M, Ali, E. M, Elsaywy, H., **Badr, G. M.**, et al. (2019). The Coumarin Derivative 5'-Hydroxy Auraptene Suppresses Osteoclast Differentiation via Inhibiting MAPK and c-Fos/NFATc1 Pathways. *Biomed Res Int*. 9395146.
<https://doi.org/10.1155/2019/9395146> (IF: 3.411, Q2 – Scopus / Q3 – Clarivate)
12. Abdallah, B.M., Ali, E.M., Elsaywy, H., et al. (2019). Coumarin derivative 59-hydroxy auraptene suppresses osteoclast differentiation via MAPK and NFATc1 inhibition. *BioMed Research International*, Article ID 9395146.
<https://doi.org/10.1155/2019/9395146> (IF: 3.411, Q2 – Scopus / Q3 – Clarivate)

Other Indexed and In-Press Publications

11. Emad, H., **Badr, G.M.**, Arafa, N.S. Role of periostin and cyclophilin A in diabetic nephropathy in type 2 diabetes mellitus. (under processing)
12. Erakaby, M., **Badr, G.M.**, Fathy, H., Tantawy, H., Darwish, S. Protective effect of *Lepidium sativum* seed extract and its biosynthesized nanoparticles in osteoporotic rats. (under processing)

13. **Badr, G.M.**, Arafa, N.S., Talibi, H.A. (2024). Impact of khat (*Catha edulis*) ethanol extract on the reproductive tract in female rats. (In press)
14. **Badr, G.M.**, Arafa, N.S. (2020). Synergistic effect of aged garlic extract and methotrexate in rheumatoid arthritis. *Indian Journal of Experimental Biology*, 58, 33–38. <http://nopr.niscair.res.in/handle/123456789/39> (IF: 0.818, Q4 – Clarivate)
15. Algefare, A.I., Alfwuaires, M.A., **Badr, G.M.** (2020). Baluchistan gerbil as a biomonitor for heavy metal pollution. *Indian Journal of Animal Research*, 54(2), 222–227. <https://doi.org/10.18805/ijar.B-1120> (IF: 0.44, Q4 – Clarivate)
16. **Badr, G.M.**, Al-Mulhim, J.A. (2014). Aged garlic extract and NSAID-induced gastric inflammation. *Evidence-Based Complementary and Alternative Medicine*, Article ID 759642. <https://doi.org/10.1155/2014/759642> (IF: 1.5, Q2 – Clarivate)
17. **Badr, G.M.**, Algefare, A.I. (2019). Coagulation issues due to inflammatory response in MSG-treated mice. *International Journal of Pharmaceutical Sciences & Research*, 10(3), 1133–1137. <https://doi.org/10.13040/IJPSR.0975-8232>
18. Ramadan, G., El-Beih, N.M., **Badr, G.M.** (2006). Garlic extract and immune response in rats. *Egyptian Journal of Zoology*, 46, 265–283. (Scopus)
19. El-Beih, N.M., Ramadan, G., **Badr, G.M.** (2006). Garlic extract in liver toxicity. *Egyptian Journal of Zoology*, 46, 245–264.
20. El-Shall, E.B., **Badr, G.M.** (2012). Cadmium-induced liver toxicity and parsley oil protection. *Egyptian Journal of Biomedical Sciences*, 38, 12–36. (Scopus)
21. **Badr, G.M.** (2015). Green tea extract and diabetic complications. *Egyptian Journal of Experimental Biology (Zoology)*, 11(2), 225–233. (Scopus)
22. **Badr, G.M.** (2016). Ozone therapy against cyclophosphamide nephrotoxicity. *Bulletin of the Egyptian Society of Physiological Sciences*, 36(1), 1–12.
23. **Badr, G.M.** (2016). Propolis extract and methotrexate hepatotoxicity. *Asian Journal of Applied Sciences*, 4(4), 963–972.
24. **Badr, G.M.**, Alfwuaires, M.A. (2016). Role of propolis and myrrh in hepatorenal toxicity. *Egyptian Journal of Experimental Biology (Zoology)*, 12(2), 93–103.

5-Academic Supervision and Mentorship

Supervisions and Scientific Projects

- 1- Supervised multiple undergraduate research projects, including a top-ranked project (3rd place) at the 6th Scientific Conference (2016), later presented on the Global Day for Scientific Research.
- 2- Led the supervision of two funded and award-winning student projects supported by the Deanship of Scientific Research (**Project No. 165067, 2017**).
- 3- Supervised a PhD dissertation (Marwa Hussein ElRokaby, Ain Shams University, 2020–2021)

- 4- Supervised an MSc thesis (Emad Hamdy, Ain Shams University, 2021–2022).

Funded Projects – Deanship of Scientific Research, KFU

- **Principal Investigator (PI):** Research Grants No. **130188, 160023, and 170063.**
- **Co-Investigator (Co-PI):** Research Grants No. **170061, 17122008, 186199, 186059, and 4583.**

Translation and Authorship Activities – King Faisal University

1. Contributed to the translation of Chapters 3, 6, 10, 11, and 19 in the book *Color Atlas and Text of Histology*, 6th Edition (2017), under Project No. 174007.
2. Participated in the authorship of the textbook *Physiology*, approved by the Department Board (Decision No. 11, 2017).

6- Training and Professional Development

Academic Foundations and Laboratory Training (1998–2002)

- Qualified Lecturer Training Course, Ain Shams University, 1998
- Chromosomal Aberrations Training Course, National Research Centre, 2001
- Protein and DNA Analysis Training Course, Ain Shams University, 2001
- HPLC Training Course, National Organization for Drug & Control Research, 2002

Teaching and Research Methodologies (2004–2010)

- Efficient Teaching, 2004
- Use of Technology in Scientific Research, 2004
- Scientific Research Ethics, 2004
- Credit Hours System and Academic Mentoring, 2006
- Scientific Research Planning, 2006
- Scholarly Publishing in International Journals, 2010
- Preparation of Competitive Research Projects, 2010
- Dialogue and Persuasion, 2010

Advanced Research Skills and Digital Tools (2012–2018)

- Critical Thinking Skills Development, 2012
- RefWorks and iThenticate Online Training (no certificates), 2014
- Scientific Publication Skills, 2015
- Evaluation Metrics for Journals and Author Contributions, 2015

- Research from Scratch to Publication, 2015
- EndNote Referencing Applications, 2016
- Academic Assessment for Faculty, 2017
- Community Partnership Activation, 2017
- Research Arbitration Principles, 2017
- Educational Syllabus Design, 2018
- Publishing in Indexed Journals, 2018
- Learning Outcomes and Measurement, 2018
- Leadership and Administration Skills for Faculty, 2018
- Entrepreneurial Mindset Development, 2018
- Inverse Learning, 2018
- Scholarly Publishing with Impact Factor, 2018
- Wiki for Cooperative Learning, 2018

Academic Service and Quality Assurance

- National Standards for Teaching and Learning, 2010
- Teaching Strategies and Learning Workshops, 2011
- Full Assessment Methodologies, 2011
- Blackboard Training, 2011
- Learning Outcomes Workshop (National Qualifications Framework), 2011
- Educational Syllabi Description, 2011
- Quality Assurance and Accreditation, 2011
- Academic Support and Student Services, 2011
- Learning Products and Educational Outcomes Measurement, 2011–2012
- Quantitative Research, 2012
- Project-Based Learning, 2017
- Quality Assurance Committees & Syllabi Coordination, 2017
- Problem-Based Learning, 2017

Recent Training and Skills Enhancement (2020–2021)

- Fulfillment of Criteria for Postgraduate Studies, 2020

- Scientific Writing, 2021
- Microsoft Office 365 Applications, 2021
- Advanced PowerPoint Skills, 2021
- Egypt's Vision 2030 and Anti-Corruption, 2021
- Sustainable Development, 2021
- EKB Training Course, 2021

7- Professional Development: Conferences and Workshops

Conferences:

- 2nd World Conference of Advanced Cardiological Science, Hassa, Saudi Arabia, 2008
- 25th Meeting of the Saudi Arabian Society for Biological Sciences, Hassa, Saudi Arabia, 2010
- Workshop on Scientific Research Strategies, King Faisal University, 2010
- Antibiotic Resistance: Major Medical Challenge, Faculty of Medicine, King Faisal University, 2014
- Abstract Presentation, 6th International Conference on Traditional & Alternative Medicine, Amsterdam, 2016
- MERS-CoV: Challenges and Future Prospects, 2016
- Jojoba Workshop, 2017
- Organic Pollutants in Saudi Arabia Conference, 2018
- EndNote and Clarivate Analytics Workshop, 2018
- Poster Presentation, International Conference on Hematological Diseases (21 CME credits), 2019
- 3rd Annual Conference of the Egyptian Society of Histology and Cytology, 2019
- 2nd Annual Conference of Medical Microbiology and Immunology (COVID-19), Online, 2020
- Supervisor, 6th Student Conference, Jeddah, Saudi Arabia, 2015–2016

Workshops and Lectures:

- iThenticate Plagiarism Checker Workshop, 2014
- Presented “Student Scientific Writing Strategies,” 2015
- Lectures on Biofuel Production; Cancer Treatment; Leishmania, 2016
- Modern Chemical Analysis Techniques Workshop, 2016

- Nuclear Biosynthesis Lecture, 2016
- Problem-Based Learning Workshop, 2017
- Workshop for Lab Technicians and Teaching Assistants, Department of Biology, 2017
- Training on Immune System Disorders and Abortion, 2017
- Training on Climate Change Effects on Humans, 2017
- Lectures on Healthy Nutrition and Body Immunity; Creativity, 2018–2019

8- Academic Service and Community Engagement

- Contributed to the development and specification of courses for undergraduate and postgraduate programs.
- Contributed to the design and specification of Research Methodology and Scientific Thesis Writing
- Contributed to the development of the Master's Program in Zoology and postgraduate course specifications at King Faisal University.
- Participated in the preparation of the Life Sciences Program Self-Study Report.
- Developed and implemented the program “Using Herbs in Treatment of Diabetes and Associated Microbial Diseases,” Fatat Al-Ahsa Charity and Development Society, April 2016
- Attended training on the Role of Teaching Staff in Activating Community Partnership, August 2017
- Supervised and coordinated the Scientific Forum, King Faisal University, 2017
- Nominated by King Faisal University to arbitrate research by secondary school students at the 4th Scientific Conference in the Eastern Area, 2018–2019
- Presented lectures on Vitamin D Deficiency (Feb 2018) and Effective Presentation Skills (May 2017)
- Prepared and led workshop on Biological Techniques and Handling Experimental Animals, 2018–2019

9- Teaching Activities

Course Title	Undergraduate	Postgraduate
Molecular Cell Physiology	✓	✓
Human Physiology	✓	✓
Immunology	✓	✓
Nutrition	✓	✓
Metabolism	✓	✓

Course Title	Undergraduate	Postgraduate
Enzymology	✓	✓
Hematology	✓	✓
Endocrinology and Muscles		
Graduation Project Course		✓
General Zoology (Functional Morphology)	✓	
General Biology	✓	
Animal Physiology 1 & 2 (All Human Systems)	✓	
Health Education	✓	
Embryology		✓
Preparation of Course Description (Human Physiology)	✓	
Preparation of Course Description (Zoology Program)	✓	✓
Participation in Course Descriptions for Research Projects and Theses	✓	✓
Participation in Quality Assurance Reports for Zoology Self-Study Courses		✓

10-Scientific Committees and Professional Societies

- Egyptian Syndicate of Scientific Professions, 1994–Present
- Egyptian Society for Biosciences Advancement, 2001–Present
- Egyptian Society of Experimental Biology, 2018–Present
- Saudi Biological Society, 2010–Present

11- Administrative Duties

King Faisal University

- Chief, Student Activity Committee
- Chief, Exam and Control Organization
- Member, Quality Assurance Committee
- Member, Deanship of Scientific Research
- Member, Academic Guidance Committee
- Administrator of Academic Syllabi via Blackboard
- Organizer, General Syllabi Committee for Associate Students
- Presenter, Methodological Activities, Biology Department Exhibition

- Member, Cultural Activities Committee (Department Representative)
- Organizer of Student and Graduation Ceremonies, Faculty of Science
- Participant in various exhibitions: Immunity & Physiology (2017), Recycling (2017), Plants and Animals (2018), Excerpts of Science (2019)
- Supervisor of winning research projects at Scientific Forums
- Member, Report-writing Committee for Zoology Self-study Program

Ain Shams University (2019–Present)

- Member, Student Mentorship Committee (2019)
- Chief, Student Mentorship Committee (2020–Present)
- Coordinator, Quality Standards in Zoology Department
- Member, Quality Assurance Committee (2020–Present)
- Member, Animal Committee
- Member, Exam and Control Organization (2020–Present)

12- Awards and Honors

- Incentive Award for Publishing in Impact Factor Journals (ISI)
- Research Publication Award, King Faisal University, Deanship of Scientific Research
- Award for Supervision of a Student Research Project Ranked 3rd in Saudi Arabia
- Award for Supervision of Two Winning Research Projects, King Faisal University (2016)
- Award for Scholarly Publishing, Ain Shams University

Name: Prof. Dr. Gehan M. Badr

Signature: *Gehan Badr*

Date: 2026