

Curriculum vitae

PERSONAL INFORMATION

Dr.-Ing. Ahmed Elsayed Ahmed Farag Zayed

Born in 10.09.1981 in Tanta, Egypt

Associate Professor

Faculty of Pharmacy – Department of Pharmacognosy – Tanta University, Tanta (Egypt)



- **Address:** Imam Malek Street, 31526 Tanta, Egypt
- **Marital status:** Married with 2 children
- **Tel.:** +20 (0)1554052032
- **E-Mail:** ahmed.zayed1@pharm.tanta.edu.eg, and ahmezayed@gmail.com

WORK EXPERIENCE

- 11/2003 **Teaching assistant**
Faculty of Pharmacy - Department of Pharmacognosy, Tanta University, Tanta (Egypt)
- 01/05/2012–31/03/2014 **Assistant lecturer**
Faculty of Pharmacy - Department of Pharmacognosy, Tanta University, Tanta (Egypt)
- 01/04/2014–31/08/2018 **Research assistant**
TU Kaiserslautern (Institute of Bioprocess Engineering, Germany (Group of Prof. Dr. rer. nat. R. Ulber)
- 1/09/2018 – 30/11/2018 **Research assistant**
Faculty of Pharmacy – Department of Pharmacognosy – Tanta University, Tanta (Egypt)
- 01/04/2019 – 30/06/2019 **Postdoc. (Visiting Scholar)**
Institute of Bioprocess Engineering, RPTU Kaiserslautern, Kaiserslautern (Germany)
- 01/03/2020 – 31/08/2020
- 01/03/2022 – 31.01.2023
- 28/11/2018 – 28/11/2023 **Assistant Professor (Lecturer)**
Faculty of Pharmacy – Department of Pharmacognosy – Tanta University, Tanta (Egypt)
- 29/11/2023 - Present **Associate Professor**
Faculty of Pharmacy – Department of Pharmacognosy – Tanta University, Tanta (Egypt)

EDUCATION AND TRAINING

- 1998–2003 **B. Sc. in Pharmaceutical sciences**
Faculty of Pharmacy, Tanta (Egypt)
Excellent with honor, Rank: 4th
- 2004–2006 **Pre-master courses**
Faculty of Pharmacy - Department of Pharmacognosy, Tanta (Egypt)
Chemistry and pharmacology of natural products

- 5/2012 **M. Sc. of Pharmaceutical Sciences (Pharmacognosy)**
Faculty of Pharmacy - Department of Pharmacognosy, Tanta (Egypt)
Title: **Phytochemical, and Tissue culture Studies of Some Gymnosperms Growing in Egypt**

- 10/2013–04/2018 **DAAD scholarship holder (GERLS Program, 5th Call)**
TU Kaiserslautern, Kaiserslautern (Germany)

- 01/04/2018–31/08/2018 **MV/BioVT institutional scholarship holder**
TU Kaiserslautern, Kaiserslautern (Germany)
Department of Mechanical and Process Engineering
Institute of Bioprocess Engineering
Prof. Dr. R. Ulber

- 04/2014–07/2018 **Doctoral student**
TU Kaiserslautern, Kaiserslautern (Germany)
Department of Mechanical and Process Engineering
Institute of Bioprocess engineering
Prof. Dr. R. Ulber

- 26/06/2018 **Doctor of Philosophy (Dr.-Ing.)**
TU Kaiserslautern, Kaiserslautern (Germany)
Very good - MAGNA CUM LAUDE
Title: **Bioactive Compounds from Marine Sources**

Personal Skills

Mother Language Arabic

Foreign language(s)

- English (TOEFL, used Language of B. Sc., M. Sc. and Ph.D studies and thesis)
- German (German course at Goethe Institute-Kairo and CDC- Köln, B2 level)

Communication skills

- good communication skills acquired with students during my work as a teaching assistant, assistant lecturer and Lecturer at Tanta University and TU Kaiserslautern

Organizational / managerial skills

- good organizational and team-leading skills gained as a member of the quality and accreditation program (QAU) in 2009-2012 and the technical team for purchasing spectroscopic instruments.
- good organizational and managerial skills gained through the attendance of many workshops in the Faculty and Leadership Development Project (FLDP) delivered by The National Center for Faculty and Leadership Development (NCFLD) in 2006 - 2012. In addition, participation of the "Human Rights Basics Training Course" delivered by The American University in Cairo (AUC) in March 2008.
- ICDL certificate in computer sciences in 2008.

Job-related skills

- good command of natural bioactive products' downstream processes including extraction, purification and structure elucidation either from terrestrial plants or marine algae,
- good command of development, sub-culture and single cell isolation from a plant callus growth,
- good command of marine biotechnology (e.g., macroalgae tissue culture, heterologous expression of algal enzymes),
- good command of gene cloning using classical and Gibson assembly techniques and heterologous expression of enzymes in *E. coli*,
- good command of *E. coli* cultivation in bioreactors and shaking flasks, in addition to subsequent products downstream processes, including cell digestion, protein purification and kinetic analysis,
- good command of cultivation of brown macroalgae in wave-bag bioreactor, shaking flasks and solid media,
- good command of spectroscopic techniques (e.g., UV-Vis, Fluorescence, FT-IR, 1D- and 2D-NMR),
- good command of natural anti-coagulants, anti-viral and cytotoxic compounds (e.g., fucoidan),
- teaching Pharmacognosy and chemistry of natural Products courses (e.g., Pharmacognosy, medicinal plants, Phytochemistry, etc.) at Tanta University (2003-present)
- teaching Pharmacognosy and chemistry of natural Products courses (e.g., Pharmacognosy, Phytochemistry, etc.) at HUE (2024-present)
- teaching Practical courses of Basics of Bioprocess Engineering at TU Kaiserslautern, Germany
- teaching of Pharmaceutical Biotechnology course for B.Sc. Students at Faculty of Science, Tanta University

Projects

- Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), Sonderforschungsbereich 926 (SFB 926, Collaborative Research Center 926), Part project C03, Project-ID 172116086-SFB 926, Germany (2016 – 2023)
- State Government of Rhineland-Palatinate (Germany) within the framework of the Biotech Fellow International Research for funding the project “Intensification of the Production of Biologically Active Substances: Plant Cell Cultures as Production Systems”, Germany (2025-2027)

Editorial Roles

- Co-Guest Editor: Marine Drugs „Fucoidans: From Production to Applications”. https://www.mdpi.com/journal/marinedrugs/special_issues/Fucoidans_Production_Application
- Associate Editor of Science and Technology Nexus (STN). <https://stnjournal.com/>

Reviews in peer reviewed journals

1. Carbohydrate Polymers
 2. Natural Products Research
 3. Journal of Inflammation Research
 4. Chemistry and Biodiversity
 5. Journal of Chromatography A
 6. Molecules
 7. Marine Science and Engineering
 8. Processes
 9. Food Bioscience
 10. eFoods
- Others etc.

Awards

- DAAD (GERLS) for PhD scholarship in Germany 2013
 - Tanta University award for Young Researchers 2021
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Names of referees

- **Prof. Dr. Mohamed A. Farag**
Pharmacognosy Department, College of Pharmacy, Cairo University, Kasr El-Aini St., Cairo, Egypt. E-mail: mohamed.farag@pharma.cu.edu.eg
- **Prof. Dr. Shahira M. Ezzat**
Department of Pharmacognosy, Faculty of Pharmacy, Cairo University, Kasr El-Aini Street, Cairo, Egypt. E-mail: shahira.ezzat@pharma.cu.edu.eg
Department of Pharmacognosy, Faculty of Pharmacy, October University for Modern Sciences and Arts (MSA), Giza, Egypt.
- **Prof. Dr. Gamal El Maghraby**
Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Tanta, Tanta, Egypt. E-mail: gamal.elmaghraby@pharm.tanta.edu.eg
- **Prof. Dr. rer. nat. Roland Ulber**
Institute of Bioprocess Engineering, Technical University of Kaiserslautern, Gottlieb-Daimler-Straße 49, Kaiserslautern, Germany. E-mail: roland.ulber@mv.rptu.de

Publications in peer-reviewed journals and conferences

- **Scopus data:** 112 publications, h-index: 29, No. of citations: 2838 (accessed on 31.08.2026)
- **Google scholar data:** No. of total citations: 3562, h-index: 35, i10: 67 (accessed on 31.08.2026)
- **ORCID No.:** 0000-0001-5747-6972
- **Scopus account:** <https://www.scopus.com/authid/detail.uri?authorId=57930097100>
- **RG account:** https://www.researchgate.net/profile/Ahmed-Zayed-6?ev=hdr_xprf
- **Google scholar account:** <https://scholar.google.com/eg/citations?user=Mga7vo8AAAAJ&hl=en>

Journals

2026

1. A. A. Abdella, R. M. El-Shabasy, D. Finkelmeier, A. Burger-Kentischer, **A. Zayed**, R. Ulber. Natural polysaccharide-based molecularly imprinted polymers as sorbents for selective removal of amino acids as a potential approach for management of aminoacidopathies: Template and monomer selection study. *Journal of Chromatography A* (2026), 467364. DOI: <https://doi.org/10.1016/j.chroma.2026.467364>
2. N. H. Shady, A. Gamal, A. E. Fekry, A. M. Sayed, Z. E. Afify, Z. A. Mohamed, I. M. Hashad, M.I. Rushdi, **A. Zayed**, U. R. Abdelmohsen. Plant-derived natural products against hepatocellular carcinoma: chemical diversity, mechanisms of action, and organ-based classification. *Nat Prod Res* (2026): 1-17. DOI: <https://doi.org/10.1080/14786419.2026.2711122>
3. R. M. Ibrahim, S. Alseekh, J. Haffelder, N. S. Ramadan, G. M. Abbas, A. R. Fernie, R. Ulber, **A. Zayed**. *Algal Res* (2026). 96, 104748. DOI: <https://doi.org/10.1016/j.algal.2026.104748>
4. S. El-Shamy, S. M. Bakry, **A. Zayed**, M. A. Farag. Gut microbiota-driven remodeling of fresh and oxidized edible oils revealed by integrated GC-MS and UPLC-HRMS/MS metabolomics. *npj Sci Food* 10, 144 (2026). DOI: <https://doi.org/10.1038/s41538-026-00861-0>
5. M.H. Baky, M.B. Abouelela, M. A. Farag, R. Ulber, **A. Zayed**. Unraveling elicitor responses in plant cell cultures through multi-platform metabolomics: biotechnological implications for phytochemical enhancement. *Plant Cell Tiss Organ Cult* **165**, 18 (2026). DOI: <https://doi.org/10.1007/s11240-026-03413-2>
6. S. Abdelrahman, R. Zahran & **A. Zayed**. Fucoidan-active enzymes: Recent progress in their heterologous expression and future prospects for applications. *J Appl Phycol* (2026): In Press. DOI: <https://doi.org/10.1007/s10811-026-03834-8>
7. A. M. Akar, N. M. Hegazi, **A. Zayed**, S. M. Ibrahima. Optimization of phenolics extraction and isolation from gymnosperms growing in Egypt using response surface methodology: *Dioon edule* Lindl leaves as a case study. *RSC Adv.*, 2026,16, 16290-16309. DOI: <https://doi.org/10.1039/D6RA00755D>
8. A. H. Elmaidomy, **A. Zayed**, G. M. Abbas, N. H. Badr, G. Bringmann, J. Wuf, U. R. Abdelmohsen. Exploring natural colorants from plants to insects: chemistry, functions, and modern uses. *RSC Adv.*, 2026,16, 7097-7119. DOI: <https://doi.org/10.1039/D5RA09252C>
9. M. Said, M. Khalaf, M. Hamdy, M. Shehab, M. Elsebai, M. Ghoneim, N. H. Badr, N. A. Shoeib, **A. Zayed**. From Ocean to Skincare: Emerging Technologies Driving Marine-Derived Cosmetic Innovations. *Sci Tech Nex*. In Press. DOI: https://doi.org/10.25259/STN_33_2025
10. A. A. Abdella & **A. Zayed**. Polysaccharide-based molecularly imprinted polymers: Design, synthesis, sustainability, characterization, and applications. *Carbohydrate Polymers* (2026), 378,124889. DOI: <https://doi.org/10.1016/j.carbpol.2026.124889>
11. N. S. Ramadan, **A. Zayed**, M. M. El-Sayed, T. A. Mohamed, R. S. Mohamed, K. Fouda, M. A. Farag. Metabolomic and biofunctional insights into lemon-ginger mixture protection against heated oil hepatotoxicity. *Food Research International* (2026), 223, Part 1,117936. DOI: <https://doi.org/10.1016/j.foodres.2025.117936>
12. R. M. El-Shabasy, **A. Zayed**, M. A. Farag, K. R. Shoueir. Green synthesis of relevant and sustainable bio-applications of few-layer graphene: A multi-faceted review and future perspectives. *Materials Today Sustainability* (2026), 33, 101259. DOI: <https://doi.org/10.1016/j.mtsust.2025.101259>

2025

1. L. Azmy, E. Al-Olayan, M. A. A. Abdelhamid, I. B. M. Ibraheem, **A. Zayed**, S. F. Gheda, K. A. Youssif, H. A. Abou-Zied, U. R. Abdelmohsen, S. P. Pack, H. O. Khalifa & K. N. M. Elsayed. Network pharmacology and molecular docking reveal antiviral mechanisms of silver nanoparticles synthesized by *Oscillatoria* sp. against HCV pathogenesis. *Sci Rep* (2025), 15, 43891. DOI: <https://doi.org/10.1038/s41598-025-26310-8>
2. **A. Zayed**, S. Abdelkareem, N. Talaat, D. Abdel Dayem, M. A. Farag. Tannin in foods: Classification, Dietary Sources, and Processing Strategies to Minimize Anti-Nutrient Effects. *Food Bioprocess Technol* (2025). DOI: <https://doi.org/10.1007/s11947-025-04020-3>
3. M. H. Baky, H. A. Zahran, I. Khalifa, E. K. Nabih, **A. Zayed**, E. Capanoglu, M. A. Farag. Sustainable valorization of olive by-products: environmental impact, biotechnological and probiotic approaches for bioactive recovery in alignment with circular bioeconomy. *Critical Reviews in Food Science and Nutrition* 2025. In Press. DOI: <https://doi.org/10.1080/10408398.2025.2555406>
4. **A. Zayed**, G. M. Adly, L. Khaled, M. S. Abd El-Al, M. A. Farag. Citrus-Derived Prebiotics: Influence on Gut Microbiota Composition, Fermentation Metabolites, and Functional Health Effects. *Food Bioscience* 2025, 107535. DOI: <https://doi.org/10.1016/j.fbio.2025.107535>
5. H. A. Zahran, S. Fayed, **A. Zayed**, M. A. Azab, N. M. Fayek, L. Zhang, E. Capanoglu, M. A. Farag. Integrated metabolomic profiling of olive oil, olive mill wastewater, and pomace from Egyptian cultivars based on UHPLC-MS/MS and NMR coupled with chemometrics. *Journal of Advanced Research* 2025. DOI: <https://doi.org/10.1016/j.jare.2025.08.068>
6. R. M. El-Shabasy, A. A Abdella, **A. Zayed**. Marine polysaccharides as sustainable precursors for carbon dots and metal nanoparticles: Preparation and biomedical applications. *Bioresource Technology*, 2025, 438,133227. DOI: <https://doi.org/10.1016/j.biortech.2025.133227>
7. A. F. Fakhri, So. M Ibrahim, N. Shouaib, **A. Zayed**. Phytochemical composition and cytotoxic potential of Red Sea macroalgae from Egypt. *Egyptian Journal of Phycology* 2025, 26(1), 90-100. DOI: 10.21608/egyjs.2025.375907.1045
8. **A. Zayed**, K. Sayah, K. Sharma, R. A. Radwan, S. M. Ezzat. β -Galactosidase inhibition explored by biochemical methods and in silico studies for plant polyphenols. *Arch. Biochem. Biophys.* 2025, 772, 110568. DOI: <https://doi.org/10.1016/j.abb.2025.110568>
9. T. A. Mohamed, **A. Zayed**, E. A. AlSherif, M. A. Farag, H. M. Abdalla. NMR-based metabolomics for unraveling oleo-gum resin metabolome of rare Commiphora species: insights into taxonomic variation and tree sex differences. *J. Nat. Med.* (2025). DOI: <https://doi.org/10.1007/s11418-025-01914-6>
10. W. M. Ismail, **A. Zayed**, N. S. Ramadan, S. T. Sakna, M. A. Farag. GC-MS based nutritional and aroma profiling of date palm seeds collected from different Egyptian cultivars for valorization purposes. *Sci. Rep.* 15(1):16531 (2025). DOI: <https://doi.org/10.1038/s41598-025-00171-7>
11. **A. Zayed**, B. Ledermann, T. Fischöder, L. Elling, N. Frankenberg-Dinkel, R. Ulber. Heterologous Expression of Algal Fucosyltransferases and Sulfotransferases in *Escherichia coli*, *Biochem. Eng. J.*, 2025, 218, 109690. DOI: <https://doi.org/10.1016/j.bej.2025.109690>.
12. **A. Zayed**, G. M. Adly, M. A. Farag. Management Strategies for the Anti-nutrient Oxalic Acid in Foods: A Comprehensive Overview of Its Dietary Sources, Roles, Metabolism, and Processing. *Food Bioprocess Technol.* 2025. 18, 4280–4300. DOI: <https://doi.org/10.1007/s11947-024-03726-0>

2024

1. S. Abdelghany, S. Simancas, **A. Zayed**, M. A. Farag; How does the coral microbiome mediate its natural host fitness under climate stress conditions? Physiological, molecular, and biochemical mechanisms. *Mar. Environ. Res.* 2025, 204, 106920. DOI: <https://doi.org/10.1016/j.marenvres.2024.106920>
2. H. M. El-Seadawy, R. M. El-Shabasy, **A. Zayed**; Rediscovering the chemistry of the *Cunninghamella* species: potential fungi for metabolites and enzymes of biological, industrial, and environmental values. *RSC Adv.* 2024,14, 38311-38334. DOI: <https://doi.org/10.1039/D4RA07187E>
3. **A. Zayed**, H. A. Zahran, Z. Li, I. Khalifa, A. Serag, N. M. Fayek, Al. Nicolescu, A. Mocan, E. Capanoglu, M. A. Farag; Olive solid wastes: UHPLC-MS/MS-based biochemometric approach for investigating the effect of conventional versus modern extraction methods on *in vitro* antioxidant, α -glucosidase, and lipase actions. *Food Biosci* 2024, 62, 105496. DOI: <https://doi.org/10.1016/j.fbio.2024.105496>

4. N. M. Fayek, **A. Zayed**, H. A. Zahran, N. S. Ramada, E. Capanoglu, Z. Li, Y. Fang, I. Khalifa, M. A. Farag; Effect of cultivar type, ontogeny and extraction methods as determinant factors of olive leaf metabolome: A case study in 8 Egyptian cultivars as analyzed using LC/MS-based metabolomics. *Ind. Crops Prod.* 2024; 222(5), 120085. DOI: <https://doi.org/10.1016/j.indcrop.2024.120085>
5. **A. Zayed**, V. Goyal, K. Kiran, H. Attia, M. A. Farag; Analysis of salinity-induced metabolome changes in Indian mustard (*Brassica juncea*) roots and shoots: hydroponic versus microplot cultivation. *J. Sci. Food Agric.* DOI: <https://doi.org/10.1002/jsfa.13996>
6. L. Azmy, E. Al-Olayan, M.A.A. Abdelhamid MAA, **A. Zayed**, S. F. Gheda, K. A. Youssif, H. A. Abou-Zied, U. R. Abdelmohsen, I. B. M. Ibraheem, S. P. Pack, K. N. M. Elsayed. Antimicrobial Activity of *Arthrospira platensis*-Mediated Gold Nanoparticles against *Streptococcus pneumoniae*: A Metabolomic and Docking Study. *Int. J. Mol. Sci.* 2024; 25(18):10090. DOI: <https://doi.org/10.3390/ijms251810090>
7. **A. Zayed**, H. M. El-Seadawy, E. Z. Attia, M. I. Rushdi, and Abdelmohsen UR. Adopting biorefinery and a circular bioeconomy for extracting and isolating natural products from marine algae. *Front. Nat. Prod.* 2024. 3:1425242. DOI: <https://doi.org/10.3389/fntpr.2024.1425242>
8. L. Azmy, L., I.B.M. Ibraheem, S.A. Alsalamah, M.I. Alghonaim, **A. Zayed**, R.H. Abd El-Aleam, S.A. Mohamad, U.R. Abdelmohsen, K.N.M. Elsayed. Evaluation of Cytotoxicity and Metabolic Profiling of *Synechocystis* sp. Extract Encapsulated in Nano-Liposomes and Nano-Niosomes Using LC-MS, Complemented by Molecular Docking Studies. *Biology* 2024, 13, 581. DOI: <https://doi.org/10.3390/biology13080581>
9. A. M. K. Mahrous, M. S. Hifnawy, R. M. S. Ashour, M. Y. Issa, **A. Zayed**. Phytochemical profiling of *Livistona carinensis* leaf extract via UHPLC-QTOF-MS/MS with assessment of its antiviral mechanisms. *RSC Adv.* (2024), 14, 21300-21306. DOI: <https://doi.org/10.1039/D4RA02705A>
10. M. Mahboubifar, C. Zidorn, M. A. Farag, **A. Zayed**, A. R. Jassbi. Chemometric-based drug discovery approaches from natural origins using hyphenated chromatographic techniques. *Phytochem. Anal.* (2024); 1-27. DOI: <https://doi.org/10.1002/pca.3382>
11. M. El Jemli, S.M. Ezzat, M. Kharbach, E.S. Mostafa, R.A. Radwan, Y. El Jemli, O. El-Guourrami, S. Ahid, Y. Cherrah, **A. Zayed**, K. Alaoui, Bioassay-guided isolation of anti-inflammatory and antinociceptive metabolites among three Moroccan Juniperus leaves extract supported with in vitro enzyme inhibitory assays, *J. Ethnopharmacol.* 331 (2024) 118285. DOI: <https://doi.org/10.1016/j.jep.2024.118285>
12. A. Schmeckebier, C. Ebel, J. Haffelder, C. Müller-Renno, C. Ziegler, **A. Zayed**, J. Stiefelmaier, R. Ulber; Short Communication: A method for cell separation of *Ocimum basilicum* CMC cells for AFM measurement; *Plant Cell Tiss Organ Cult* 156, 86 (2024). DOI: <https://doi.org/10.1007/s11240-024-02708-6>
13. R. M. El-Shabasy, T. F. Eissa, Y. Emam, **A. Zayed**, N. Fayek & M. A. Farag; Valorization potential of Egyptian mango kernel waste product as analyzed via GC/MS metabolites profiling from different cultivars and geographical origins. *Sci Rep* 14, 2886 (2024). DOI: <https://doi.org/10.1038/s41598-024-53379-4>
14. Javad Sharifi-Rad, Maria Magdalena Quetglas-Llabrés, Antoni Sureda, Lorena Mardones, Marcelo Villagran, Eda Sönmez Güner, Jelena Živković, Shahira M. Ezzat, **A. Zayed**, Safa Gümüşok, Ceyda Sibel Kılıç, Babatunde Fasipe, Ismail Laher, Miquel Martorell; Supercharging metabolic health with *Lycium barbarum* L.: A review of the therapeutic potential of this functional food for managing metabolic syndrome. *Food Frontiers* 2024, 5, 420–434. DOI: <https://doi.org/10.1002/fft2.327>

2023

1. **A. Zayed**, D.A. Al-Saedi, E.O. Mensah, O.N. Kanwugu, P. Adadi, R. Ulber; Fucoidan's Molecular Targets: A Comprehensive Review of Its Unique and Multiple Targets Accounting for Promising Bioactivities Supported by In Silico Studies; *Mar. Drugs* (2024) 22(1), 29. DOI: <https://doi.org/10.3390/md22010029>
2. M. M. Salama, N. M. Aborehab, N. M. El Mahdy, **A. Zayed**, S. M. Ezzat; Nanotechnology in leukemia: diagnosis, efficient-targeted drug delivery, and clinical trials. *Eur J Med Res* 2023; 28, 566. DOI: <https://doi.org/10.1186/s40001-023-01539-z>
3. I. M. Kamal, **A. Zayed**, T. F. Eissa, M. A. Farag; Aroma-based discrimination of Egyptian versus Indian guava fruits and in response to probiotics as analyzed via SPME/GC–MS and chemometric tools. *Sci Rep* 2023; 13: 18420. DOI: <https://doi.org/10.1038/s41598-023-45686-z>

4. N. H. Shady, **A. Zayed**, R. Alaaeldin, M. Hisham, M. Gawesh, R. Mohammed, M. A. Elrehany, U. R. Abdelmohsen; Plant and endophyte-derived anti-hyperlipidemics: A comprehensive review with *in silico* studies. *S. Afr. J. Bot.* 2023;163, 105-120. DOI: <https://doi.org/10.1016/j.sajb.2023.10.034>
5. A.-R.S. Ibrahim, M.K. Mansour, M.M.A. Ahmed, R. Ulber, **A. Zayed**; Metabolism of natural and synthetic bioactive compounds in *Cunninghamella* fungi and their applications in drug discovery; *Bioorg. Chem.* 2023; 140, 106801. DOI: <https://doi.org/10.1016/j.bioorg.2023.106801>
6. M. A. Farag, A. Reda, M. Nabil, D. M. Elimam, **A. Zayed**; Evening primrose oil: a comprehensive review of its bioactives, extraction, analysis, oil quality, therapeutic merits, and safety; *Food Funct.* 2023, 14, 8049-8070. DOI: <https://doi.org/10.1039/D3FO01949G>
7. A.A. Abdella, R. Ulber, **A. Zayed**; A spectroscopic response factor-based toluidine blue assay towards a universal assay protocol for sulfated polysaccharides: Application to fucoidan content in crude extract; *J. Pharm. Biomed. Anal.*, 235, 115616, <https://doi.org/10.1016/j.jpba.2023.115616>
8. **A. Zayed**, H.T.T. Cao, V.T.D. Trang, R. Ulber; Structural tailoring of fucoidans backbone for maximizing their benefits: Enzymatic, chemical, and physical strategies. *J. Appl. Phycol.* 2023. 35, 2445–2462. DOI: <https://doi.org/10.1007/s10811-023-03036-6>
9. **A. Zayed**, M.A. Farag, A. Mehring, M.A. Salem, R.M. Ibrahim, S. Alseekh, A.R. Fernie, R. Ulber; Methyl jasmonate elicitation effect on the metabolic profile of cambial meristematic cells culture derived from sweet basil (*Ocimum basilicum* L.) in relation to antioxidant activity: Untargeted metabolomics study in a time-based approach; *Phytochem.* 2023. 113777. DOI: <https://doi.org/10.1016/j.phytochem.2023.113777>
10. H. M. Selim, W.A. Negm, M.F. Hawwal, I. A. Hussein, E. Elekhawy, R. Ulber, **A. Zayed**; Fucoidan mitigates gastric ulcer injury through managing inflammation, oxidative stress, and NLRP3-mediated pyroptosis. *Int. Immunopharmacol.* 2023. 120, 110335. DOI: <https://doi.org/10.1016/j.intimp.2023.110335>
11. **A. Zayed**, M.A. Salem, W.A. Negm, S. M. Ezzat; Validation of Anti-pyretic-Derived Natural Products and Their Potentials for Drug Discovery. *Rev. Bras. Farmacogn.* 2023. 33, 696–712. DOI: <https://doi.org/10.1007/s43450-023-00403-9>
12. I. Abou El-Enain, A. Zeatar, **A. Zayed**, M. Elkhawaga, Yehia Mahmoud; Diisooctyl phthalate as a secondary metabolite from actinomycete inhabit animal's dung with promising antimicrobial activity. *Egypt. J. Chem.* In Press. DOI: [10.21608/EJCHEM.2023.172600.7412](https://doi.org/10.21608/EJCHEM.2023.172600.7412)
13. A. Serag, **A. Zayed**, A. Mediani, M. A. Farag; Integrated comparative metabolite profiling via NMR and GC-MS analyses for tongkat ali (*Eurycoma longifolia*) fingerprinting and quality control analysis. *Sci. Rep.*, 13, 2533. DOI: <https://doi.org/10.1038/s41598-023-28551-x>
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