

CURRICULUM VITAE FOR MOHAMMAD S. MUBARAK



PERSONAL DATA

NAME: Mohammad S. Mubarak
DATE OF BIRTH: July 22, 1954
NATIONALITY: American
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Google Scholar Link: https://scholar.google.com/citations?user=1Z3C7_gAAAAJ&hl=en

EDUCATION

1. Ph.D. Chemistry, July 1982. Indiana University, Bloomington, IN. 47405, U.S.A. **(GPA 3.93/4)**
2. M.Sc. Chemistry, February 1978. The University of Jordan, Amman, Jordan Average: **87.2% (TOP OF CLASS)**
3. B.Sc. Chemistry with a minor in Education, February 1976. The University of Jordan, Amman, Jordan. Average: **78.9% (TOP OF CLASS)**.

ADMINISTRATIVE POSITIONS

1. **Chairman of the Department of Chemistry, The University of Jordan**; Sept. 2008 to Dec. 2009.
2. **Vice Dean of the Faculty of Science**, the University of Jordan, Dec. 6, 2009 to Sept. 10, 2011.

3. **Academic Consultant and Vice Dean**, Al-Ghad International Colleges for Health Sciences, Riyadh, Saudi Arabia, Sept. 10, 2011 to Sept. 2012.

COMMITTEES

1. Member of the **Faculty of Science council** for the years 95/96, 96/97, and 2003/2004
2. Member of the **University council** as a representative of the faculty of science for the year 2001/2002.
3. Chairman of the **Faculty of Science** sports and social committee for the years 96/97 and 97/98.
4. Member of the **Faculty of Science** appointment and promotion committee for the year 2004/2005.
5. Member of the **Faculty of Science** Students' disciplinary Committee for the years 96/97, 2001 to present.
6. Member of the **Faculty of Science** research committee for the year 2007/2008.
7. Member of the **Faculty of Science** graduate studies committee for the year 2008/2009.
8. Member in several **departmental committees** for a number of years including: Scientific Research Committee, Graduate studies committee, Curriculum committee, Conferences, Seminars, and Symposia Committee.
9. **Chairman of the Faculty of Science** appointment and promotion committee from Dec. 6, 2009 to Sept. 2011.
10. **Chairman of the Faculty of Science scientific** research committee from Dec. 6, 2009 to Sept. 2011.
11. **Chairman of the Faculty of Science graduate studies** committee from Dec. 6, 2009 to Sept. 2011.
12. **Chairman of the Faculty of Science** curriculum committee from Dec. 6, 2009 to Sept. 2011.
13. **Member of the university research council** for a two-year term starting in November, 2009 to Sept. 2011.
14. Member of the **graduate studies committee of the integrated water resources management program**, Dec. 2009 to Sept. 2011.
15. **Member of the university research council** for a two-year term starting in October, 2012.

RESEARCH INTERESTS

Our research interests focus on the following areas:

1. Synthetic organic chemistry in its very broadest sense. Generally, our

Efforts are focused on the preparation of organic compounds and new heterocyclic compounds that may display biological activity and may have pharmacological significance. Present studies are directed toward the synthesis of new agents that may have anti-parasitic, antimicrobial, and antitumor activities. Several spectroscopic techniques, such as NMR spectroscopy, FTIR, Mass spectrometry, will be utilized for the identification of the new products, in addition to microanalysis. Examples of research projects ongoing in our laboratory include the following: (1) Synthesis of new coumarin derivatives that may have some antitumor activities. (2) Development of synthetic strategies for the preparation of new heterocyclic compounds that incorporate imidazole moieties.

2. Medicinal Chemistry, involving bioactive compounds.
3. Chemistry of Natural Products.
4. Drug Discovery and Drug design.
5. Organic electrochemistry; use of electroanalytical, methods (cyclic Voltammetry and coulometry) to investigate the mechanisms of reduction and oxidation processes involving organic and organometallic species at various electrodes in nonaqueous solvents. This kind of work is normally done in collaboration with Indiana University, Bloomington, In. USA.
4. Medicinal chemistry, natural products, and medicinal plants.

PROFESSIONAL ORGANIZATIONS

1. The American Chemical Society, many years
2. The Jordanian Chemical Society, many years
3. The Electrochemical Society, Active member for many years
4. Member in the Advisory Board of *Jordan Journal of Applied Science, Natural Sciences* published by the Deanship of Scientific Research, Applied Science University.
5. Member of the editorial board of **Jordan Journal of Chemistry** from June 20, 2007 to May 2011.
6. Member of the editorial board of **Journal of Organic Chemistry Research-Natural Sciences Publishing**, An International Journal from March 2012.
7. Member of the editorial board of **Journal of Chemistry and Applications**, Avens Publishing Group, Since July 2014.
8. Member of the editorial board of **Journal of Chemistry & Applied Biochemistry**, Open Science Publications, since July 2014.
9. Member of the editorial board of **International Journal of Advanced Research and Review (IJARR)**.
10. Member of the editorial board of **International Journal of Nanomaterial and Chemistry**, Natural Sciences Publishing.
11. Member of the editorial board of **International Journal of Pharmaceutics and Pharmacology**, Publisher: Edwiser International.
12. **Anti-Cancer Agents in Medicinal Chemistry, Bentham**

HONORS AND AWARDS

1. Royal Award for first place B. Sc. Students awarded by His Majesty, the late King Hussein of Jordan, 1976.
2. Royal Award for first place M. Sc. Students awarded by His Majesty, The late King Hussein of Jordan, 1978.
3. Recipient of the 2006/2007 Distinguished Researcher Award from University of Jordan.
4. Recipient of an award from the University of Jordan for bringing external fund from the EU, 2006/2007.
5. Jordan Scopus Award of Most Active Author at the University of Jordan, March 31, 2009, under the patronage of HRH Princess Sumaya Bint El Hassan.
6. Adjunct Professor of Chemistry, Indiana University, Bloomington, In. 47405, USA. March 2009-March 2012.
7. Recipient of distinguished researcher award from the University of Jordan, for 2009.
8. Recipient of distinguished researcher award from the University of Jordan, for 2010.
9. Recipient of distinguished researcher award from the University of Jordan, for 2011.
10. The Ali Mango award for the distinguished scientist of the year 2011, awarded by Hamdi Mango Center of Scientific Research, The University of Jordan, on April 26, 2012.
11. Distinguished Researcher, The University of Jordan, 2017/2018.
12. Highly cited Researcher, 2022.
13. Highly cited Researcher, 2023.

Funded Research Projects

1. Synthesis and biological activity of some derivatives of N1-(5-nitrothiazol-2-yl) amidrazones, **2011**. Haythem a. Saadeh and Mohammad S. Mubarak. Project funded by Deanship of Scientific Research, The University of Jordan, 9900 JD.
2. Discovery of new HER2 inhibitors *via* Ligand-Based Pharmacophore Modeling and hit optimization for potential use in cancer disease, **2012**. Hiba M. Zalloum, Mohammad S. Mubarak, and others. Project funded by Deanship of Scientific Research, The University of Jordan, 20600 JD.
3. Investigation, Revival and Optimization of Traditional Mediterranean Coloring Technology for the Conservation of the Cultural Heritage (MED-COLOUR-TECH), **Jan 2006-Dec. 2008**. Mohammad S. Mubarak and Mahmoud Alawi in addition to partners from seven other Mediterranean institutions. Project funded by the European Community under the Sixth Framework Program Integrating and strengthening the European

research area INCO CT 2005 015406 MED-COLOUR-TECH. EU 142,000 € (total Budget 1,200,000 €).

4. Synthesis and Bioassay of some N1-(coumarin-7-yl) amidrazones and related congeners, **2010**. Mohammad S. Mubarak and Mustafa M. El Abadelah; Project funded by Deanship of scientific research, The University of Jordan, 16,600 JD.
5. Synthesis and Bioassay of some N1-(falvon-7-yl)amidrazones and related congeners, **2010**. Mohammad S. Mubarak and Mustafa M .El-Abadelah. Project funded by Deanship of Scientific Research, The University of Jordan, 9000 JD.
6. Immobilization of 1-hydroxy-2-pyridinethione-4-carboxylic acid on Chitosan and the sorption properties of the newly modified chitosan toward some heavy metal ions (lead, copper, zinc, and nickel, **2010**. Mohammad S. Mubarak and Kamal I. Abu-Dari Project funded by Deanship of Scientific Research, The University of Jordan 12800 JD.
7. Discovery of new inhibitors of glucosidases through molecular modeling and *in silico* screening and *in vitro* evaluation and subsequent chemical optimization into more potent leads, **2008**. Mutasem Taha and Mohammad Mubarak, Project funded by Deanship of Scientific Research, The University of Jordan, 13,000 JD.
8. Synthesis, Characterization, and Possible Biological Activities of New 1,2,4-Triazoles and 1,2,4-thiazole-3-thiones, **2007**. Mohammad S. Mubarak and Haythem A. Saadeh. Project funded by Deanship of Scientific Research, The University of Jordan, 2750 JD.
9. Synthesis and Characterization of Novel Pyridine-Based Polymers and their Chelating Properties Towards Heavy metal Ions in Aqueous solutions, **2006**. Mohammad S. Mubarak and Haythem A. Saadeh Project funded by Deanship of Scientific Research, The University of Jordan, 5550 JD.

Chelation Properties of Modified Chitosan towards Heavy Metal Ions, **2005**. Mohammad S. Mubarak. Project funded by Deanship of Scientific Research, The University of Jordan, 5400 JD.
10. Synthesis and Characterization of Some 2-Glucosaminobenzimidazole, **2002**. Mohammad S. Mubarak and Raid J. Abdel-Jalil. Project funded by Deanship of Scientific Research, The University of Jordan, 4500 JD.
11. Synthesis and Properties of Some Oxime-Containing Mannich Polymers, **1999**. Kais A. Ibraheem and Mohammad S. Mubarak Project funded by Deanship of Scientific Research, The University of Jordan, 6000 JD.

12. Direct and Indirect Electrochemical Reduction and Oxidation of Organic Compounds and Some Biologically Important Ligands and Complexes, **1996**. Mohammad S. Mubarak. Project funded by Deanship of Scientific Research, The University of Jordan, 11,000 JD.
13. Synthesis and Chelate-forming Properties of Some Phenol-Formaldehyde Polymers and Related derivatives, **1995**. Kais A. Ibraheem; Fawwaz Khalili; Mohammad S. Mubarak. Project funded by Deanship of Scientific Research, The University of Jordan, 6400 JD.

ADVISOR AND/OR CO-ADVISOR OF THE FOLLOWING M.SC. THESES

1. Majed Hammad Mohammad Attari "Synthesis and Characterization of New Schiff Bases and their Complexes With Some Metal Ions. 15/11/1995
2. Khaldoon A. Al-Sou'od "Preparation and Characterization of New Oxadiazole Derivatives and their Complexes With Some Metal Ions". 10/2/96
3. Abeer Farid Sweiss "Synthesis and Characterization of Some 1,2-Disubstituted Ethenediol Diesters". 2/12/1997.
4. Ziad Yassein "Synthesis of Some Phenol-Formaldehyde Polymers and Their chelate-Forming Properties With Some Heavy Metal Ions". 15/12/1996.
5. Samer Al-Gharabili "Synthesis, Characterization, and Chelation Properties of Some Oxime Containing Polymers". 14/4/1998.
6. Nuha Salem "Synthesis, Characterization, and Chelation Properties of New Polymers Through Mannich-Type Condensation". 20/9/2000.
7. Ali I. Ismail "Synthesis and Chelation Properties, Toward Some Trivalent Lanthanide Ions, of New Polymers via Mannich-Type Condensation". 16/9/2001.
8. Fuad Rimawi "Chelation Properties of Some Phenolic-Formaldehyde Polymers Toward Some Trivalent Lanthanide Ions". 28/5/2002
9. Ayman Ahmad "Chelation Properties of Some Condensation Polymers Toward Some Trivalent Lanthanide Ions by Complexometric Titrations". 31/7/2002
10. Remah N. Yaghmour "Chelation Properties of Modified Humic Acids Towards Some Trivalent Lanthanide Ions" 15/1/2003

11. Ibraheem Ezziddin "Synthesis and Characterization of Some New Pentadienoic Acid Derivatives". 8/2003
12. Kifah Salladdin Mohammad Saleh" Synthesis of Some New Coumarin Derivatives" 20/5/2004
13. Chelation Properties of Some Mannich-Type Polymers Towards Some Metal Ions". 23/2/2004.
14. Fadi Al-Akhras "Chelation Properties of Some Poly Amidoxime-Hydroxamic Acid Polymers Towards Some Trivalent Lanthanide Ions". 8/7/2004.
15. Khadejeh H. A. Al-Zghoul "Synthesis and Characterization of New Coumarin Derivatives, Part II" 23/12/2004.
16. Eman M. Hammad "Chelation Properties of Poly(B-diketone)polymer and its Oxime Toward Heavy Metal-ions". 29/12/2004.
17. Hiba Zalloum"Chelation and Isothermal Behavior of Copper(II) Ions with Chitosan-Derived Sciff-Bases". December 7, 2005.
18. Ruba Zalloum" Chelation and Isothermal Behavior of Copper(II) Ions with Poly(2-Hydroxy-4-acryloyloxybenzophenone) Resins". December, 15, 2005.
19. Eman A. Abu-Shaireh "Synthesis and Characterization of New Metronidazole Derivatives" May, 16, 2007.
20. Aymen S. Abu-Hatab "Synthesis and Reactions of Some New 4-Substituted-3-alkoxy-2-butenic Acid Ester Derivatives". Oct. 26, 2007.
21. Ahmed T. Al-Masri "Synthesis, characterization, and Biological Activities of New Compounds Derived from Metronidazole and Amino Acids and Their Esters". May, 13, 2008.
22. Ahmed Mutanabbi Abdula"Design, Discovery and Synthesis of New β -D-Glucosidase and β -D-Galactosidase Inhibitors" March, 2009.
23. Maysoon M. Alkiswani" Synthetic Studies on Ethyl (2E)-4-Bromo-3-ethoxybut-2-enolate: Synthesis of Some New Five-Membered Heterocyclic Compounds", April 19, 2009.
24. Nouredine Charef" Sorption Properties of Functionalized Metal-Chelate Resin Toward Divalent Metals And Human Immunoglobulin G", May, 12, 2009.
25. Asma'a A. Al-Rifai" Synthesis of Some Coumarin Derivatives With expected Biological activity" Dec., 6, 2009.
26. Mohammad S. Mustafa"Synthesis and Bioassay of some N1-(coumarin-7-yl)amidrazones and Related Congeners" Dec. 2010.

27. Rabab F. Tayyem" Discovery and Optemization of New Fructose-1,6-Bisphosphatase (FBPase) Inhibitors as Potential Antidiabetic agents", April 14, 2011.
28. Faryza J. Muhanna" Synthesis, characterization, and chelation Properties Towards Heavy Metal ions of a Chitosan-linked 1-Hydroxy-2-pyridinethione Polymer" April 27, 2011.
29. Eman D. Awad" Synthesis, Characterization, and Biological Activity of Some 3-(Piperazin-1-yl)cinnoline derivatives", May 2, 2011.
30. Marwa Abu Aisheh"Synthesis and Bioassay of Some N1-(Flavon-7-yl)amidrazones and Related Congeners" July 12, 2011.
31. Nabil Elbezri Kassan " Synthesis and Biological Activity of Novel Schiff Bases Derived from Metronidazole" August 7, 2011.
32. Abla Salman Al-Zaganeem"Synthesis and Bioassay of Novel Substituted Pyrano[2,3-f]cinnolin-2-ones" August 10, 2011.
33. Hadeel Tahseen Al-Sinjilawi " Synthesis and Biological Activity of Novel 4-Oxopyrido[2,3-a]phenothiazines" August 11, 2011.
34. Dua'a Yusef Mohammad Alawadi" Synthesis and Characterization of New Metronidazole Diamide" May 3, 2012.
35. Malath Ahmad Al-Haj Saleh Alqtaitat "Synthesis and Characterization of New Metronidazole Derivatives Containing Piperazine Group" May 3, 2012.
36. Yasmin Rabah Hasan AL-Haj Saleh" Synthesis of Novel Hybrid Compounds Containing 5-Nitrothiazole Moiety as Potential Antiparasitic Agents" Dec. 29, 2013.
37. Bushra Nayef Khalifeh"Synthesis of D-Glucosamine Derivatives of 1-Hydroxy-2-pyridinethione-4-carboxylic Acid and Their Zinc, Copper, And Nickel Complexes" Jan.2, 2014.

TEACHING EXPERIENCE:

- I. **The University of Jordan, Department of Chemistry, Amman 11942, Jordan:**
Associate professor, Jan. 1993 to Feb. 8, 1998
Professor: Feb. 8, 1998 to present

Courses taught:

1. General Chemistry for medical and dentistry students.
2. General Chemistry for engineering students.

3. Organic Chemistry 1, 2, and 3 for Chemistry majors.
4. Pharmaceutical Organic Chemistry 1 and 2 for Pharmacy students.
5. Organic Chemistry for non-chemistry majors.
6. Electroanalytical chemistry for chemistry M.Sc. and Ph. D. students.

II. **King Saud University at Abha**, Department of Chemistry, Abha, Saudi Arabia
Assistant Professor, September 1983 to Sept. 1992
Associate Professor, October 1992

Courses taught:

1. General and Organic chemistry for junior and senior level Undergraduates
2. Organic reaction mechanisms for seniors.

Coordinator of the Premedical Program. September 1986 to Sept. 1992.

III. **University of Oklahoma**, Department of Chemistry, Norman, Oklahoma 73019, U.S.A.
Post - Doctorate Research Fellow, October 1982 to June 1983.

IV. **Indiana University**, Department of Chemistry, Bloomington, Indiana 47405, U.S.A.

Visiting Professor: Summer of 1996, summer of 1997, and summer of 1999.

Courses taught: C341 (Organic Chemistry 1), C342 (Organic Chemistry 2), and C125 (General Chemistry Laboratory).

Visiting Scientist: Summer of 1984, 1989, 1990, 1994, 2005, 2006, and 2008.

Associate Instructor: January 1979 to May 1982

Courses taught: Organic laboratory courses for junior and senior level undergraduates; Duties included teaching basic organic chemistry techniques and the systematic identification of organic compounds. Also taught freshman chemistry laboratory courses.

PUBLICATIONS

1. Jarrar, A. A.; El-Zaro, R. A.; **Mubarak, M. S.** "Kinetics of Oxidation of Benzoin by Hexacyano-ferrate (III) in an Alkaline Medium" *Dirasat-Natural Sciences*. **1979**, 6, 7–18.
2. **Mubarak, M. S.**; Peters, D. G. "Electrochemical Reduction of 2-Iodo-octane and 2-Bromo-octane at Mercury Cathodes in Dimethylformamide" *J. Org. Chem.* **1982**, 47, 3397–3403.
3. **Mubarak, M. S.**; Peters, D. G. "Electrochemical Reduction of

- Diphenyliodonium Salts and Phenyl Mercuric Halides in Dimethylformamide" *J. Electroanal. Chem. Interfacial Electrochem.* **1983**, 152, 183-196.
4. Vieira, K. L.; Mubarak, M. S.; Peters, D. G. "Use of Deuterium Labeling to Assess the Roles of Tetramethylammonium Cation, Dimethylformamide, and Water as Proton Donors for Electro-generated tert-Butyl Carbanions: Evidence for the Formation of an Ylide (Trimethylammonium Methylide)" *J. Am. Chem. Soc.* **1984**, 106, 5372-5373.
 5. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of Asymmetrically Substituted Diphenyliodonium Salts at Mercury Cathodes in Dimethylformamide" *J. Org. Chem.* **1985**, 50, 673-677.
 6. Cleary, J. A.; Mubarak, M. S.; Vieira, K. L.; Anderson, M. R.; Peters, D. G. "Electrochemical Reduction of Alkyl Halides at Vitreous Carbon Cathodes in Dimethylformamide" *J. Electroanal. Chem. Interfacial Electrochem.* **1986**, 198, 107-124.
 7. Mubarak, M. S.; Peters, D. G. "Use of Nafion Coatings on Glassy Carbon Electrodes as Localized Sources of Protons for Electrogenenerated Radical-Anions in Acetonitrile" *J. Electroanal. Chem. Interfacial Electrochem.* **1989**, 273, 283-292.
 8. Mubarak, M. S.; Karras, L. L.; Murcia, N. S.; Bart, J. C.; Stemple, J. Z.; Peters, D. G. "Electrochemical Reduction of 4-Iodo- and 4-Bromoanisole at Mercury and Carbon Cathodes in Dimethyl-formamide" *J. Org. Chem.* **1990**, 55, 1065-1070.
 9. Mubarak, M. S.; Nguyen, D. D.; Peters, D. G. "Electrochemical Reduction and Intramolecular Cyclization of 6-Iodo-1-phenyl-1-hexyne at Vitreous Carbon Cathodes in Dimethylformamide" *J. Org. Chem.* **1990**, 55, 2648-2652.
 10. Urove, G. A.; Mubarak, M. S.; Peters, D. G. "Electrolytic Reductions of Heptanoyl Chloride, Phthaloyl Dichloride, and Benzoyl Chloride at Carbon and Mercury Cathodes in Acetonitrile" In **Electroorganic Synthesis-Festschrift for Manuel M. Baizer**, R. D. Little and N. L. Weinberg, eds., Marcel Dekker, New York, **1991**, pp. 91-98.
 11. Urove, G. A.; Peters, D. G.; Mubarak, M. S. "Production of Aldehydes via Electrochemical Reduction of Acyl Halides at Mercury and Carbon Cathodes in Acetonitrile" *J. Org. Chem.* **1992**, 57, 786-790.
 12. Mubarak, M. S.; Peters, D. G. "In Situ Electrogeneration of [2,2'-Ethylenebis(nitriblomethylidyne)diphenolato]nickelate (I)-Nickel (I) Salen-As a Catalyst for Reductive Intramolecular Cyclizations of 6-Iodo- and 6-Bromo-1-phenyl-1-hexyne" *J. Electroanal. Chem. Interfacial Electrochem.* **1992**, 332, 127-134.
 13. Mubarak, M. S.; Urove, G. A.; Peters, D. G. "Electrochemical Reduction of Phenylacetyl Chloride and Hydrocinnamoyl Chloride at Mercury Cathodes in Acetonitrile" *J. Electroanal. Chem. Interfacial Electrochem.* **1993**, 350, 205-216.
 14. Mubarak, M. S.; Peters, D. G. "Quantitative Electrochemical Reduction of 1-Adamantanecarbonyl Chloride to 1-Adamantanecarboxaldehyde at Carbon and Mercury Cathodes in Acetonitrile" *J. Electrochem. Soc.* **1995**, 142, 713-715.
 15. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of 1,6-

- Dihaloalkanes at Carbon Cathodes in Dimethylformamide" *J. Org. Chem.* **1995**, 60, 681–685.
16. Mubarak, M. S.; Peters, D. G. "Homogeneous Catalytic Reduction of α,ω -Dihaloalkanes with Electrogenerated Nickel(I) Salen" *J. Electroanal. Chem. Interfacial Electrochem.* **1995**, 388, 195–198.
 17. Peters, D. G.; Dahm, C. E.; Bhattacharya, D.; Butler, A. L.; Mubarak, M. S. "Use of Transition-Metal Complexes as Homogeneous and Polymer-Based Catalysts for Electroorganic Synthesis" In **Novel Trends in Electroorganic Synthesis**, S. Torii, ed., Kodansha, Tokyo, **1995**, pp. 67–70.
 18. Mubarak, M. S. "Electrochemical Reduction of 2-Thiophenecarbonyl Chloride at Carbon and Mercury Cathodes in Acetonitrile" *J. Electroanal. Chem. Interfacial Electrochem.* **1995**, 394, 239–243.
 19. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of 1,8-Dibromo- and 1,8-Diiodooctane and of 1,10-Dibromo- and 1,10-Diiododecane at Carbon Cathodes in Dimethylformamide" *J. Electrochem. Soc.*, **1996**, 143, 3833–3838.
 20. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of Mono- and Dihalothiophenes at Carbon Cathodes in Dimethylformamide. First Example of an Electrolytically Induced Halogen Dance" *J. Org. Chem.* **1996**, 61, 8074–8078.
 21. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of Mono- and Dihalopyridines at Carbon Cathodes in Dimethylformamide" *J. Electroanal. Chem. Interfacial Electrochem.*, **1997**, 425, 13–17.
 22. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of Di-, Tri-, and Tetrahalobenzenes at Carbon Cathodes in Dimethylformamide. Evidence for a Halogen Dance During the Electrolysis of 1,2,4,5-Tetrabromobenzene" *J. Electroanal. Chem. Interfacial Electrochem.* **1997**, 435, 47–53.
 23. Attari, M. H.; Mubarak, M. S.; and Khalili, F. I. "Preparation and Characterization of Some Tetradentate Schiff Bases and Their Complexes with Co(II), Ni(II), and Cu(II)". *Synth React. Inorg. Met.- Org. Chem.* **1997**, 27, 1–16.
 24. Ebraheem, K. A. K.; Mubarak, M. S.; Yassien, Z. J.; and Khalili, F. "Chelation Properties of Poly(8-hydroxyquinoline 5,7-diylmethylene) towards some Trivalent Lanthanide Metal Ions. *Solvent Extraction and Ion Exchange*, **1998**, 16, 637–649.
 25. Mubarak, M. S.; Pagel M.; Marcus, L. M.; and Peters D. G. "Formation of 2-(3'-Oxocyclohexyl)-2-cyclohexene-1-one via Reduction of 2-Cyclohexene-1-one with Electrogenerated Nickel(I) Salen" *J. Org. Chem.* **1998**, 63, 1319–1322.
 26. Mubarak M. S.; *Introduction to Chemistry*, a text book in Arabic published by King Saud University, Saudi Arabia, **1998**.
 27. Alleman, K. S.; Samide, M. J.; Peters, D. G.; and Mubarak, M. S. "Catalytic Reduction of Organohalogen Compounds with Electrogenerated Homogeneous-Phase and Polymer-Bound Cobalt(I) and Nickel(I) Salen" In *Current Topics in Electrochemistry*, J. O. M. Bockris, E. J. Cairns, M. Forment, Z. Galus, Y. Ito, S. Trasatti, and T. J. Vander Noot, eds., Research Trends, Trivandrum, India, **1998**.
 28. Mubarak, M. S.; Peters, D. G. "Addition to Activated Olefins of Radicals

- Formed from Reaction of Alkyl Halides with Electrogenerated Ni(I) Salen". *J. Saudi Chem. Soc.* **1999**, 3, 135–146.
29. Sweiss, A. F.; Mubarak, M. S. "Synthesis and Characterization of Some 1,2-Disubstituted Ethenediol Diesters", *J. Saudi Chem. Soc.* **2000**, 4(1), 95-102.
 30. Al-Sau'd, K. A.; Khalili, F. I.; and Mubarak, M. S. "Preparation and Characterization of New Oxadiazole Derivatives and their Complexes with Some Metal Ions" *J. Saudi. Chem. Soc.* **2000**, 4(2), 143–152.
 31. Ebraheem, K. A. K.; Mubarak, M. S.; Yassien, Z. J.; and Khalili, F. "Chelation Properties of Poly(8-hydroxyquinoline 5,7-diylmethelene) Crosslinked with Bisphenol-A Towards La(III), Ce(III), Nd(III), Sm(III), and Gd(III) Ions" *Separation Science and Technology*, **2000**, 35(13), 2115–2125.
 32. Mubarak, M. S. and Peters, D. G. "Survey of the Electrochemical Behavior of Chlorinated Pyrazines, Quinoxalines, and Pyridazines at Carbon and Mercury Cathodes", *J. Electroanal. Chem.* **2001**, 507(1-2), 110–117.
 33. Ji. C., Mubarak, M. S., Peters, D. G., Karty, J. A., and Reilly, J. P. "Direct and Catalytic Reduction of 2,6-Bis(chloromethyl)pyridine at Carbon Cathodes in Acetonitrile", *Reactive Intermediates in Organic and Biological Electrochemistry: Proceedings of the Symposium in Honor of the Late Professor Eberhard Steckhan*, D. G. Peters, H. J. Schäfer, M. S. Workentin, and J. –I. Yoshida, eds., The Electrochemical Society, Inc., Pennington, New Jersey, **2001**, pp. 85–88.
 34. Fang, D. M.; Peters, D. G.; and Mubarak, M. S. "Catalytic Reduction of 6 Bromo-1-hexene by Nickel(I) Salen Electrogenerated at Glassy Carbon Cathodes in Acetonitrile", *J. Electrochem. Soc.* **2001**, 148(12), E464–E467.
 35. Ji, C.; Peters, D. G.; Karty, J. A., Reilly, J. P.; and Mubarak, M. S., "Direct and Cobalt(I) Salen-Catalyzed Reduction of 2,6-Bis(chloromethyl)pyridine at Carbon Cathodes in Acetonitrile", *J. Electroanal. Chem.* **2001**, 516(1 2), 50–58.
 36. Al-Gharabli, S. I.; Ebraheem, K. A. K.; and Mubarak, M. S., " Synthesis and Chelation Properties of a New Copper Selective Mannich Polymer Containing a 2,4-Dihydroxybenzaldoxime Group", *J. Saudi Chem. Soc.*, **2001**, 5(3), 399–406.
 37. Ebraheem, K. A. K.; Mubarak, M. S.; and Al-Gharabli, S. I "Synthesis And Chelation Properties Of Some New Mannich Condensation Polymers Containing A Salicylaldoxime Group" *J. Macromol. Sci.-Pure and Appl. Chem.*, **2002**, A39(3), 217–229.
 38. Mubarak, M. S. "Electrochemical Reduction of Dihalo-2,2'-bithiophenes at Carbon cathodes in Dimethylformamide", *J. Electrochem. Soc.*, **2002**, 149(6), E222-E226.
 39. Ismail, A. I.; Ebraheem, K. A. K.; Mubarak, M. S.; and Khalili, F. I. "Chelation Properties of Some Mannich-Type Polymers Toward Lanthanum(III), Neodymium(III), Samarium(III), and Gadolinium(III), *Solvent Extraction and Ion Exchange*, **2003**, 21(1), 125–137.
 40. Awadallah, S. M.; Salem, N. M.; Saleh, S. A.; Mubarak, M. S.; and Elkarmi, A. Z. "Zinc, Magnesium, and Gamma Glutamyltransferase Levels in Human Seminal Fluid", *Bahrain Med. Bull.*, **2003**, 25(3), 122–126.
 41. Salem, N. M.; Ebraheem, K. A. K.; and Mubarak, M. S. "The Effects of

- Spacer Groups on the Chelation Characteristics of Some New Mannich Polymers Containing 8-Hydroxyquinoline" *Reactive and Functional Polymers*, **2004**, 59(1), 63–69.
42. Awadallah, S. M.; Abu-Elteen, K. H.; Elkarmi, A. Z.; Qaraein, S. H., Salem, N. M.; and Mubarak, M. S. "Maternal and Cord Blood Serum Levels of Zinc, Copper and Iron in Healthy Pregnant Jordanian Women", *J. Trace Elem. Exp. Med.*, **2004**, 17(1), 1–8.
 43. Al-Rimawi, F.; Ahmad, A. A.; Khalili, F. I.; and Mubarak, M. S. "Chelation Properties of Some Phenolic-Formaldehyde Polymers Toward Some Trivalent Lanthanide Ions" *Solvent Extraction and Ion Exchange*, **2004**, 22(4), 721–735.
 44. Ahmad, A. A.; Al-Rimawi, F.; Khalili, F. I.; and Mubarak, M. S. "Chelation Properties of Some Condensation Polymers Toward Some Trivalent Lanthanide Ions" *J. Saudi Chem. Soc.*, **2005**, 9(2), 331–340.
 45. Izeddin, I.; Abu-Safieh, K.; Ayoub, M. T.; and Mubarak, M. S. "Synthesis and Characterization of Some New Pentadienoic Acid Derivatives" *J. Saudi Chem. Soc.*, **2005**, 9(1), 151–160.
 46. Alakhras, F. A.; Abu Dari, K.; and Mubarak, M. S. "Synthesis and Chelating Properties of Some Poly(amidoxime-hydroxamic acid) Resins Toward Some Trivalent Lanthanide Metal Ions" *J. Appl. Polym. Sci.*, **2005**, 97, 691–697.
 47. Al-Zghoul, K. H. A.; Salih, K. S. M.; Ayoub, M. T.; and Mubarak, M. S. "A Convenient Procedure for the Synthesis of Substituted 4-Methylaminocoumarin" *Heterocycles*, **2005**, 65(12) 2937–2947.
 48. Wolf, N. L.; Peters, D. G.; and Mubarak, M. S. "Electrochemical Reduction of 1-Halooctanes at Platinized Platinum Electrodes in Dimethylformamide Containing Tetramethylammonium Tetrafluoroborate" *J. Electrochem. Soc.*, **2006**, 153(1), E1–E4.
 49. Salih, K. S. M.; Al-Zghoul, K. H. A.; Mubarak, M. S.; and Ayoub, M. T. "Synthesis of Coumarinsulfonamides With Potential Pharmacological Interest, *J. Saudi Chem. Soc.*, **2006**, 9(3), 623–630.
 50. Awadallah, S. M.; Hamad, M.; Jbarah, I.; Salem, N. M.; and Mubarak, M. S. "Autoantibodies against oxidized LDL correlate with serum levels of ceruloplasmin in patients with cardiovascular disease" *Clin. Chim. Acta* **2006**, 365(1-2), 330–336.
 51. Ischay, M. A.; Mubarak, M. S.; and Peters D. G. "Catalytic Reduction and Intramolecular Cyclization of Haloalkynes in the Presence of Nickel(I) Salen Electrogenerated at Carbon Cathodes in Dimethylformamide" *J. Org. Chem.* **2006**, 71(2), 623–628.
 52. Mubarak, M. S.; Gach, P. C.; and Peters, D. G. "Electrochemical Reduction of 4,4'-(2,2,2-Trichloroethane-1,1-diyl)bis(chlorobenzene) (DDT) and 4,4'-(2,2-Dichloroethane-1,1-diyl)bis(chlorobenzene) (DDD) at Carbon Cathodes in Dimethylformamide" *Electroanalysis*, **2006**, 18(4), 417–422.
 53. Goken, D. M.; Ischay, M. A.; Peters, D. G.; Tomaszewski, J. W.; Karty, J. A.; Reilly, J. P.; and Mubarak, M. S. "Alkyl Group Incorporation into Nickel Salen during Controlled-Potential Electrolyses in the Presence of Alkyl Halides" *J. Electrochem. Soc.*, **2006**, 153(3), E71–E77.
 54. Shafa-Amry, N. N.; Khalili, F. I.; Ebraheem, K. A. K.; and Mubarak, M. S.

- "Synthesis and Chelation Properties of Mannich Polymers Derived from Piperazine and some Hydroxy Benzaldoximes" *Reactive and Functional Polymers*, **2006**, 66(7), 789–794.
55. Gach, P. C.; Mubarak, M. S.; Karty, J. A.; and Peters, D. G. "Catalytic Reduction of 4,4'-(2,2,2-Trichloroethane-1,1-diyl)bis(chlorobenzene) (DDT) with the use of electrochemically formed Cobalt(I) Salen" *J. Electrochem. Soc.* **2007**, 154(1), F1–F6.
 56. Raess, P. W.; Mubarak, M. S.; Ischay, M. A.; Foley, M. P.; Jennermann, T. B.; Raghavachari, K.; and Peters, D. G., "Catalytic reduction of 1-iodooctane by nickel(I) salen electrogenerated at carbon cathodes in dimethylformamide. Effects of added proton donors and a mechanism involving both metal- and ligand-centered one-electron reduction of nickel(II) salen" *J. Electroanal. Chem.* **2007**, 603(1), 124–134.
 57. El-Barghouthi, M. I.; Abu-safieh, K. A.; Ayoub, M. T.; and Mubarak, M. S., "Ring Substitutional Requirement For Biological Activity Of 5-Aryl-3-Alkoxy-(2e,4e)-2,4-Pentadienoic Acids As New Growth Regulators. Theoretical Treatment" *J. Saudi Chem. Soc.* **2007**, 11(2), 341–350.
 58. Yaghmour, R. N.; Khalili, F. I.; and Mubarak, M. S. "Chelation Properties of Modified Humic Acids Towards Some Trivalent Lanthanide Ions" AIP Conference Proceedings (Solid State Science and Technology), **2007**, 909, 26–33.
 59. Mubarak, M. S.; Ayoub, M. T., "Recent Approaches In The Synthesis And Reactions Of Pyranones And Their Benzoderivatives" in *Modern Approaches to the Synthesis of O- and N-Heterocycles* Vol. 1, p. 47–97, Teodor S. Kaufman and Enrique L. Larghi, eds., Research Signpost, Trivandrum, India, **2007**.
 60. Salih, K. S., M.; Ayoub, M. T.; Saadeh, H. A.; Al-Masoudi, N. A.; and Mubarak, M. S. "Synthesis, Characterization, And Biological Activities Of New Benzofuran Derivatives" *Heterocycles*, **2007**, 71(7), 1577–1587.
 61. Mubarak, M. S.; Barker IV, W. E.; and Peters, D. G., "Catalytic Reduction of 1-Haloalkyl-2-oxocycloalkanecarboxylates in the Presence of Nickel(I) Salen Electrogenerated at Carbon Cathodes in Dimethylformamide: Three- and Four-carbon Ring Expansions" *J. Electrochem. Soc.*, **2007**, 154(11), F205–F210.
 62. Mubarak, M. S.; Jennermann, T. B.; Ischay, M. A.; and Peters, D. G. "Catalytic Reduction of Phenyl-Conjugated Acetylenic Halides by Nickel(I) Salen Electrogenerated at Carbon Cathodes in Dimethylformamide: Cyclization versus Coupling" *Eur. J. Org. Chem.*, **2007**, 5346–5352.
 63. Du, Peng; Mubarak, M. S.; Karty, J. A.; and Peters, D. D., "Electrosynthesis of 4-Methylcoumarin via Cobalt(I)-Catalyzed Reduction of 2-Acetylphenyl 2-Chloroacetate or 2-Acetylphenyl 2,2-Dichloroacetate" *J. Electrochem. Soc.*, **2007**, 154(12), F231–237.
 64. Charef, N.; Arrar, L.; and Mubarak, M. S., "Sorption Properties of the Iminodiacetate Ion Exchange Resin, Amberlite IRC-718, Toward Divalent Metal Ions". *J. Appl. Polym. Sci.*, **2008**, 107(2), 1316–1319.
 65. Al-Soud, Y. A.; Al-Sa'doni, H. H.; Amajaour, H. A. S.; Salih, K. S. M.; Mubarak, M. S.; Al-Masoudi, N. A.; and Jaber, I. H. "Synthesis, Characterization and anti-HIV and Antitumor Activities of New Coumarin Derivatives" *Z. Naturforsch. B*, **2008**, 63(1), 83–89.

66. Hammad, E. M.; Mubarak, M. S. "Chelation Properties Of Poly(β - Diketone) Polymer And Its Oxime Toward Heavy Metal-Ions" *J. Appl. Polym. Sci.* **2008**, *108*, 2415–2420.
67. Zalloum, R. M.; Mubarak, M. S. "Chelation properties of poly(2- hydroxy-4-acryloyloxybenzophenone) resins toward some divalent metal ions" *J. Appl. Polym. Sci.*, **2008**, *109*, 3180–3184.
68. Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of 4-(Bromomethyl)-2H-chromen-2-ones at Carbon Cathodes in Dimethylformamide" *J. Electrochem. Soc.*, **2008**, *155*(8), F184-F189.
69. Abu Hatab, A. S.; Ayoub, M.T.; and Mubarak, M. S., "Synthesis of New 4-Substituted-3-alkoxy-2-butenic Acid Esters and Pyrazole-3-one derivatives, *J. J. Chem.* , **2008**, *3*(3), 211–221.
70. Zalloum, H. M.; Al-Qodah, Z.; and Mubarak, M. S." Copper Adsorption on Chitosan-Derived Schiff Bases" *J. Macromol. Sci.-Pure and Appl. Chem.*, **2009**, *46*, 46-57.
71. Saadeh, H. A.; Mosleh, I. M.; and Mubarak, M. S." Synthesis of novel hybrid molecules from known antiparasitic agents" *Molecules*, **2009**, *14*, 1483–1494.
72. Karapanagiotis, I.; Mantzouris, D.; Chrysoulakis, Y.; Saadeh, H. A.; Alawi, M. A.; Mubarak, M. S.; Karadag, R.; Yurdun, T.; AlSaad, Z.; Abdel-Kareem, O.; Puchinger, L.; and Sauter, F." Inter-Laboratory Chemical Study of Natural Materials from the Historical Wiesner Collection" *J. J. Chem.*, **2009**, *4*(2), 195–208.
73. Abu Shairah, Eman Ahmad Mohammad; Saadeh, Haythem Ali Mohammad; Mosleh, Ibrahim Mousa Ibrahim; Al Arif, Mikidad Tawfig Ayoub; Mubarak, Mohammad Suleiman "Preparation of metronidazole derivatives as antiparasitic agents" *Eur. Pat. Appl. EP 2985394 A2* (**2009**), 19 pp.
74. Charef, N.; Arrar, L.; Maoui, A.; Boudjelal, H.; Baghiani, A.; Hanachi, N.; Boumerfeg, S.; Khennouf, S.; and Mubarak, M. S., "Effect Of Adsorbed Metal Ion And Buffer Nature On IgG Separation From Human Serum By Column Chromatography Using An Ion Exchange Resin, Amberlite-IRC" *J. Appl. Polym. Sci.*, **2010**, *115*, 324–329.
75. Charef, N.; Arrar, L.; Ourari, A.; Zalloum, R. M.; and Mubarak, M. S., "Synthesis and Chelating Properties of Polystyrene supported Schiff base (N, N'-disalicylidenepropylenetriamine) Resin Toward Some divalent Metal Ions". *J. Macromol. Sci.-Pure and Appl. Chem.*, **2010**, *47*(2), 177–184.
76. Krust, K. N.; Foley, M. P.; Mubarak, M. S.; Skljarevski, S.; Krishnan R.; K.; and Peters, D. G."Electrochemical reduction of 5-chloro-2-(2,4-dichlorophenoxy)phenol (triclosan) in dimethylformamide" *J. Electroanal. Chem.* **2010**, *603*(1), 124–134.
77. Abdel-Jalil, R. J.; El Momany, E.; Hamad, M.; Voelter, W.; Mubarak, M. S.; Smith, B. H.; and Peters, D. G."Synthesis, antitumor activity, and electrochemical behavior of some piperazinyl amidrazones" *Monatshefte fur Chemie*, **2010**, *141*, 251–258.
78. Saadeh, H. A.; Mosleh, I. M.; Al-Bakri, A. G.; and Mubarak, M. S., "Synthesis and antimicrobial activities of new 1,2,4-triazole-3-thiole metronidazole derivatives" *Monatshefte fur Chemie*, **2010**, *141*, 471–478.
79. Al-Kiswani, M. M.; Ayoub, M. T.; and Mubarak, M. S."Synthetic Study Of Ethyl (2E)-4-bromo-3-ethoxybut-2-enoate: Synthesis Of New 1,4-

- Benzoxazines and Pyrrole-2-ones" *J. J. Chem.*, **2010**, 5(1), 13–21.
80. Al-Gharabli, S.; Al-Rifai, N.; Saadeh, H. A.; Mosleh, I. M.; and Mubarak, M. S. "Solid Phase Synthesis and Antiparasitic Activity of a Library of Peptidyl Metronidazoles", *J. J. Chem.*, **2010**, 5(2), 139–147.
 81. Abdel-Kareem, O.; Allawi, M.; and Mubarak, M. S. "Identification of Dyestuffs in a Rare Coptic Garment using High Performance Liquid Chromatography with Photodiode Array Detection (HPLC-DAD)" *J. Textile and Apparel Technology and Management*, 2010, 6(3), 1–7.
 82. Foley, M. P.; Du, P.; Griffith, K. J.; Karty, J. A.; Mubarak, M. S.; Raghavachari, K.; and Peters, D. G. "Electrochemistry of substituted salen complexes of nickel(II): Nickel(I)-catalyzed reduction of alkyl and acetylenic halides" *J. Electroanal. Chem.* **2010**, 647, 194–203.
 83. Abdula, A. M.; Abu Khalaf, R.; Mubarak, M. S.; and Taha, M. O. "Discovery of New β -D-Galactosidase Inhibitors via Pharmacophore Modeling and QSAR Analysis Followed by *In Silico* Screening" *J. Comput. Chem.*, **2011**, 32(3), 463–482.
 84. Valianou, L.; Wei, S.; Mubarak, M. S.; Farmakalidis, H.; Rosenberg, E.; Stassinopoulos, S.; and Karapanagiotis, I. "Identification of Organic Materials in Icons of the Cretan School of Iconography" *J. Archaeol. Sci.*, **2011**, 38, 246–254.
 85. Abu Khalaf, R.; Abdula, A. M.; Mubarak, M. S.; Taha, M., O. "Discovery of New β -D-Glucosidase Inhibitors via Pharmacophore Modeling and QSAR Analysis Followed by *In Silico* Screening" *J. Mol. Model*, **2011**, 17, 443–464.
 86. Abu-Salem, Q.; Sweidan, K.; Mallah, E.; Joshi, R.; Mubarak, M. S.; Voelter, W.; and Steimann, M. "Hydrogen-Bonded Phosphorus Acids. Synthesis and Structure of Imidazolium-Containing Salts of Hydrogenphosphonate and Phenylphosphonate" *J. J. Chem.* **2011**, 6, 113–121.
 87. Rheinhardt, J. H.; Mubarak, M. S.; Foley, M. P.; and Peters, D. G. "Reduction of 4-(bromomethyl)-2-oxo-2H-chromen-7-yl acetate at carbon cathodes in dimethylformamide and acetonitrile Lifetime of the electrogenerated radical-anion" *J. Electroanal. Chem.*, **2011**, 654, 44–51.
 88. Mustafa, M. S.; El-Abadelah, M. M.; Zihlif, M. A.; Naffa, R. G.; and Mubarak, M. S. "Synthesis, and antitumor activity of some N1-(coumarin-7-yl) amidrazones and related congeners" *Molecules*, **2011**, 16, 4305–4317.
 89. Sweidan, K.; Engelmann, J.; Joshi, R.; Mubarak, M. S.; El-Abadelah, M. M. "Synthesis of Some Cyclic Methylene 1,3-Diaza Barbiturates Derivatives" *Lett. Org. Chem.* **2011**, 8(8) 603–605.
 90. Abdel-Kareem, O.; Alawi, M. A.; and Mubarak, M. S. "Identification of Natural Dyes in Selected Museum Textiles Using High Performance Liquid Chromatography with Photodiode Array Detection (HPLC-PDA)" *RJTA*, **2011**, 15(2) 84–94.
 91. Baghiani, A.; Charef, N.; Djarmouni, M.; Saadeh, H. A.; Arrar, L.; Mubarak, M. S. "Free radical scavenging and antioxidant effects of some anthraquinone derivatives" *Med. Chem.* **2011**, 7(6) 639–644.
 92. Yurdun, T.; Karadag, R.; Dolen, E.; and Mubarak, M. S. "Identification of natural yellow, blue, green and black dyes in 15th-17th centuries Ottoman silk and wool textiles by HPLC with diode array detection" *Rev. Anal. Chem.* **2011**, 30, 153–164.

93. Mustafa, M. S.; El-Abadelah, M. M.; Mubarak, M. S.; Chibueze, I.; Shao, D.; and Agu, R. U., "Synthesis and fluorogenic properties of some 1-(coumarin-7-yl)-4,5-dihydro-1,2,4-triazin-6(1*H*)-ones" *Int. J. Chem.* **2011**, 3(4), 89–103.
94. Charef, N.; Benmaamar, Z.; Arrar, L.; Baghiani, A.; Zalloum, R. M.; and Mubarak, M. S. "Preparation of a new polystyrene supported-ethylenediaminedicarboxylic acid resin and its sorption behavior toward divalent metal ions" *Solvent Extraction and Ion Exchange*, **2012**, 30(1) 101–112.
95. Saadeh, H. A.; Abu Shaireh, E. A.; Mosleh, I. M.; Al-Bakri, A. G.; and Mubarak, M. S. "Synthesis, characterization and biological activity of Schiff bases derived from metronidazole" *Med. Chem. Res.* **2012**, 21, 2969–2974.
96. Zalloum, H. M.; Mubarak, M. S. "Chitosan and Chitosan Derivatives as Chelating Agents" In **Advances in Natural Polymers Biopolymers, Biomaterials, and Their Composites, Blends and IPNs.** S. Thomas, N. Ninan, S. Mohan, and E. Francis, eds., Apple Academic Press, Canada, Volume 2, **2012**, Chapter 1, 1–15.
97. Muhanna, F. J.; Abu Dari, K.; and Mubarak, M. S., "Chelation Properties of Chitosan Functionalized with 1-Hydroxy-2-pyridinethione-4-carboxylic acid Toward Some heavy Metal Ions in Aqueous Solutions" *J. Macromol. Sci.-Pure and Appl.* **2012**, 49(1) 15–29.
98. Awad, E. D.; El-Abadelah, M. M.; Mattar, S.; Zihlif, M., A.; Naffa, R. G.; Al-Momani, E. Q.; and Mubarak, M. S. "Synthesis and Biological Activity of Some 3-(4-(Substituted)-piperazin-1-yl)cinnolines" *Molecules*, **2012**, 17, 227–239.
99. Saadeh, H. A.; Abu Shairah, E. A.; Charef, N.; and Mubarak, M. S. "Synthesis and Adsorption Properties, Towards Some Heavy Metal Ions, of a New Polystyrene-Based Terpyridine Polymer" *J. Appl. Polym. Sci.* **2012**, 124(5) 2717–2724.
100. Al-Rifai, A. A.; Ayoub, M. t.; Shakya, A. K.; Abu Safieh, K. A.; and Mubarak, M. S. "Synthesis, characterization, and antimicrobial activity of some new coumarin derivatives" *Med. Chem. Res.* **2012**, 21(4), 468–476.
101. Sweidan, K.; AlDamen, M. A.; Maichle-Mößmer, C.; and Mubarak, M. S. "Synthesis, Crystal Structure and Thermodynamic Calculations of 1,3-Diethyl-5-(diethylaminium)methylene-2-thiobarbituric Acid Adduct" *J. Chem. Cryst.* **2012**, 42(5), 427–431.
102. Al-Masri, A. T.; Saadeh, H. A.; Mosleh, I. M.; and Mubarak, M. S. "Synthesis of new compounds derived from metronidazole and amino acids and their esters as antiparasitic agents" *Med. Chem. Res.* **2012**, 21, 1700–1707.
103. Zalloum, H. M.; El-Eswed, B.; Zalloum, R. M.; and Mubarak, M. S. "The effect of crosslinking on the adsorption behavior of Copper (II) onto poly (2-hydroxy-4-acryloyloxybenzophenone)" *J. Appl. Polym. Sci.* **2012**, 126, 1008–1015.
104. Zalloum, H. M.; and Mubarak, M. S., "Antioxidant Polymers: Metal Chelating Agents" In **Antioxidant Polymers Synthesis, Properties, and Applications.** G. Cirillo and F. Iemma, eds., Scrivener Publishing LLC and John Wiley and Sons Ltd, **2012**, Chap. 4, 87–114.

105. Abu-Aisheh, M. N.; Mustafa, M. S.; El-Abadelah, M. M.; Naffa, R. G.; Ismail, S. I.; Zihlif, M. A.; Taha, M. O.; and Mubarak, M. S., "Synthesis and antitumor activity assays of some new N1-(flavon-7-yl) amidrazone derivatives and related congeners" *Eur. J. Med. Chem.* **2012**, *54*, 65–74.
106. AlDamen, M. A.; and Mubarak, M. S." Theoretical and experimental study of lone pair interactions in THF/chloranilic acid system" *Struct Chem.* **2013**, *24* (1), 215–222.
107. Abu-Aisheh, M. N.; Mustafa, M. S.; Mubarak, M. S.; El-Abadelah, M. M.; and Voelter, W., "Synthesis of Some 1-(Flavon-7-yl)-4,5-dihydro-1,2,4-triazin-6(1*H*)-ones and Related Congeners" *Lett. Org. Chem.* **2012**, *9*(7), 465–473.
108. Tayyem, R. F.; Zalloum, H. M.; Elmaghrabi, M. R.; AL-Motassem Yousef, Al. M.; and Mubarak, M. S." Ligand-based designing, *in silico* screening, and biological evaluation of new potent fructose-1,6-bisphosphatase (FBPase) inhibitors" *Eur. J. Med. Chem.* **2012**, *56*, 70–95.
109. Ioannis Karapanagiotis, I.; Mantzouris, D.; Cooksey, C.; Mubarak, M. S.; and Tsiamyrtzis, P. "An improved HPLC method coupled to PCA for the identification of Tyrian purple in archaeological and historical samples" *Microchem. J.*, **2013**, *110*, 70–80.
110. Strawsine, L. M.; Mubarak, M. S.; and Peters, D. G."Use of Silver Cathodes to Promote the Direct Reduction and Intramolecular Cyclization of ω -Halo-1-phenyl-1-alkynes in Dimethylformamide" *J. Electrochem. Soc.* **2013**, *160* (7) G3030–G3037.
111. Abu Safieh, K. A.; Hasan, A. K.; Ayoub, M. T.; and Mubarak, M. S. "Preparation of Some Alkenoic Acid derivatives as New Plant Growth Regulators" *Res. Chem. Intermed.* **2015**, *41*(4) 1863–1872.
112. Habashneh, A. Y.; El-Abadelah, M. M.; Mubarak, M. S.; and Voelter, W." Heterocycles[f]-Fused onto Quinolones. Synthesis of Novel Dioxo-*N*-ethylpyrano[2,3-*f*]- and [3,2-*f*]quinoline-10-carboxylic Acids" *Z. Naturforsch. B*, **2013**, *68b*, 1049–1055.
113. Pasciak, E. M.; Hochstetler, S. E.; Mubarak, M. S.; Evans, D. H.; Peters, D. G." Electrochemical reduction of phthalide at carbon cathodes In dimethylformamide: Effects of supporting electrolyte and gas-chromatographic injector-port chemistry on the product distribution" *Electrochim. Acta*, **2013**, *113*, 557–563.
114. Mimouni, M.; Khardli, F. Z.; Warad, I.; Ahmad, M.; Mubarak, M. S.; Sultana, S.; and Hadda, T. B. "Antimicrobial Activity of Naturally occurring Antibiotics Monensin, Lasalocid and their Metal Complexes" *J. Mater. Environ. Sci.* **2014**, *5*(1), 207–214.
115. Pasciak, E. M.; Sengupta, A.; Mubarak, M. S.; Raghavachari, K.; and Peters, D. G." Electrochemical Reduction of 2-Chloro-*N* phenylacetamides at Carbon and Silver Cathodes in Dimethylformamide". *Electrochimica Acta*, **2014**, *127*, 159–166.
116. Ourari, A.; Ouennoughi, Y.; Aggoun, D.; Mubarak, M. S.; Pasciak, E. M.; and Peters, D. G." Synthesis, characterization, and electrochemical study of a new tetradentate nickel(II)-Schiff base complex derived from ethylenediamine and 5'-(*N*-methyl-*N*-phenylaminomethyl)-2'-hydroxyacetophenone" *Polyhedron*, **2014**, *67*, 59–64.
117. Darwish, H. W.; Barakat, A.; Nafady, A.; Suleiman, M.; Al-Noaimi, M.;

- Hammouti, B.; Radi, S.; Ben Hadda, T.; Abu-Obaid, A.; Mubarak, M. S.; and Warad, I. "Design, Synthesis, Characterization of Novel Ruthenium(II) Catalysts: Highly Efficient and Selective Hydrogenation of Cinnamaldehyde to (*E*)-3-Phenylprop-2-en-1-ol" *Molecules* **2014**, *19*, 5965–5980.
118. Kassan, N. E.; Saadeh, H. A.; Talib, W. H.; Mahasneh, A. M.; Kaur, H.; Goyal, K.; Sehgal, R.; and Mubarak, M. S. "Synthesis and Biological Activity of Novel Schiff Bases derived from metronidazole" *Med. Chem. Res.* **2014**, *23*, 4872–4882.
 119. Naser, W.; Saadeh, H. A.; Mubarak, M. S.; and Abdel-Hafez, S. K. "In vitro activity of novel metronidazole derivatives on larval stages of *Echinococcus granulosus*" *JJBS*, **2014**, *7*(3), 187–194.
 120. Hadda, T. B.; ElSawy, N. A.; Header, E. A. M.; Mabkhot, Y. N.; and Mubarak, M. S. "Effect of Garlic and Cabbage on Healing of Gastric Ulcer in Experimental Rats" *Med. Chem. Res.* **2014**, *23*(12) 5110–5119.
 121. Al-Sinjilawi, H. T.; El-Abadelah, M. M.; Mubarak, M. S.; Al-Aboudi, A. M.; Abadleh, M. M.; Mahasneh, A. M.; and Ahmad, A. K. M. "Synthesis and Antibacterial Activity of Some Novel 4-Oxopyrido[2,3-*a*]phenothiazines" *Arch Pharm*, **2014**, *347*(11) 861–872.
 122. Mabkhot, Y. N.; Barakat, A.; Sammer Yousuf, S.; Choudhary, M. I.; Frey, W.; Ben Hadda, T.; and Mubarak, M. S. "Substituted thieno[2,3-*b*]thiophenes and related congeners: Synthesis, β -glucuronidase inhibition activity, crystalline structure, and POM analyses" *Bioorg. Med. Chem.* **2014**, *22*, 6715–6725.
 123. Wappes, E. A.; Mubarak, M. S.; and Peters, D. G. "Electrochemical Reduction of 1-Bromomethyl-2-oxocycloalkane-1-carboxylates at Silver Cathodes in Dimethylformamide: One-Carbon Ring-Expansion Reactions" *J. Electrochem. Soc.* **2014**, *161*(14), G122–G127.
 124. Henderson, R. J.; Pasciak, E. M.; Buehler, N. R.; Mubarak, M. S.; and Peters, D. G., "Electrochemical Reduction of a Bromopropargyloxy Ester at Silver Cathodes" *J. Electrochem. Soc.* **2014**, *161*(14), G128–G132.
 125. Charef, N.; Sebt, F.; Arrar, L.; Djarmouni, M.; Boussoualim, N.; Baghiani, A.; Khennouf, S.; Ourari, A.; AlDamen, M. A.; Mubarak, M. S.; and Peters, D. G. "Synthesis, characterization, X-ray structures, and biological activity of some metal complexes of the Schiff base: 2,2'-(((azaediylbis(propane-3,1-diyl))bis(azanylylidene))bis(methanylylidene))diphenol" *Polyhedron*, **2015**, *85*, 450–456.
 126. Saadeh, H. A., Al-Qaoud, K. M., Abu-Qatouseh, L. F., Shihab, P. A., Kaur, H., Goyal, K., Sehgal, R., and Mubarak, M. S. "Synthesis and biological activity of novel amidrazones incorporating 5-nitroimidazole, ciprofloxacin, and 7-chloro-4-piperazinylquinoline" *Med. Chem. Res.* **2015**, *24*, 2247–2256.
 127. Al-Qtaitat, M. A., Saadeh, H. A., Al-Bakri, A. G., Kaur, H., Goyal, K., Sehgal, R., and Mubarak, M. S. "Synthesis, characterization, and biological activity of novel metronidazole-piperazine amides" *Monatshefte fur Chemie*, **2015**, *146*, 705–712.
 128. Pasciak, E. M.; Rittichier, J. T.; Chen, C. H.; Mubarak, M. S.;

- VanNieuwenhze, M. S.; and Peters, D. G." Electroreductive Dimerization of Coumarin and Coumarin Analogues at Carbon Cathodes" *J. Org. Chem.* **2015**, *80*(1), 274–280.
129. El-Boshy, M. E.; Risha, E. F.; Abdel Hamid, F. M.; Mubarak, M. S.; and Ben Hadda, T." Protective Effects of Selenium on Some Selective Immunological, Antioxidant and Biochemical Parameters in Cadmium Intoxicated Rat" *J. Trace Elem. Med. Biol.* **2015**, *29*, 104–110.
 130. Alawadi, D. Y.; Saadeh, H. A.; Kaur, H.; Goyal, K.; Sehgal, R.; Ben Hadda, T.; ElSawy, N. A.; and Mubarak, M. S." Metronidazole derivatives as a new class of antiparasitic agents: Synthesis, biological activity, and molecular properties prediction" *Med. Chem. Res.* **2015**, *24*, 1196–1209.
 131. Abdelhady, M. I. S.; Kamal, A. M.; Othman, S. M.; Mubarak, M. S., and Ben Hadda, T. "Total polyphenolic contents, antioxidant, cytotoxic, antidiabetic activities and investigation of polyphenolic compounds of the bio-guided fractions of *Sophora japonica* growing in Egypt" *Med. Chem. Res.* **2015**, *24*, 482–495.
 132. Abu Khalaf, R.; Abdula, A. M.; Mubarak, M. S.; Taha, M., O. "Discovery of New β -D-Glucosidase Inhibitors via Pharmacophore Modeling and QSAR Analysis Followed by In Silico Screening" Tryptophan and thiosemicarbazide derivatives: design, synthesis, and biological evaluation as potential β -D-galactosidase and β -D-glucosidase inhibitors" *Med. Chem. Res.* **2015**, *24*, 2529–2550.
 133. Mabkhot, Y. N.; Aldawsari, F. D.; Al-Showiman, S.; Barakat, A.; Ben Hadda, T.; Mubarak, M. S.; Naz, S; Ul-Haq, Z, and Rauf, A." Synthesis, characterization, and bioactivity of novel substituted thieno[2,3-b]thiophenes and related congeners" *Molecules*, **2015**, *20*, 1824–1841.
 134. Zerargui, F.; Boumerfeg, S.; Charef, N.; Baghiani, A.; Djarmouni, M.; Khennouf, S.; Arrar, L.; Abu Zarga, M. H.; and Mubarak, M. S."Antioxidant Potentials and Xanthine Oxidase Inhibitory Effect of Two Furanocoumarins Isolated from *Tamus communis* L" *Med. Chem.* **2015**, *11*(5), 506–513.
 135. Ali, M.; Khan, S. A.; Rauf, A.; Khan, H.; Shah, M. R.; Ahmad, M.; Mubarak, M. S.; and Ben Hadda, T." Characterization and Antinociceptive Activity (*In vivo*) of Kaempferol-3,4'-di-O- α -L-rhamnopyranoside Isolated from *Dryopteris cycadina*" *Med. Chem. Res.* **2015**, *24*, 3218–3229.
 136. Mabkhot, Y. N.; Aldawsari, F. D.; Al-Showiman, S. S.; Barakat, A.; Soliman, S. M; Choudhary, M. I.; Yousuf, S.; Mubarak, M. S.; and Ben Hadda, T."Novel Enaminone Derived From Thieno[2,3-b]thiene: Synthesis, X-Ray Crystal Structure, HOMO, LUMO, NBO Analyses and Biological Activity" *Chem. Cent. J.* **2015**, *9*, 24.
 137. Ullah, B.; Ibrar, M.; Rauf, A.; Ben Hadda, T.; Mubarak, M. S.; Patel, S. "Quantitative ethnobotanical survey of medicinal flora thriving in Malkand Pass Hills, Khyber Pukhtoonkhwa, Pakistan" *J. Ethnopharmacol.* **2015**, *169*, 335–346.
 138. Header, E.; ElSawy, N.; El-Boshy, M.; Basalamah, M.; Mubarak, M. S.; Ben Hadda, T. "POM Analyses of Constituents of *Rosmarinus officinalis* and Their Synergistic Effect in Experimental Diabetic Rats" *J. Bioanal. Biomed.* **2015**, *7*(2), 018-023. doi:[10.4172/1948-593X.1000118](https://doi.org/10.4172/1948-593X.1000118).
 139. Ourari, A.; Messali, S.; Bouzerafa, B.; Ouennoughi, Y.; Aggoun, D.;

- Mubarak, M. S.; Strawsine, L. M.; Peters, D. G." Synthesis, characterization, and electrochemical behavior of a cobalt(II) salen-like complex" *Polyhedron*, **2015**, 97, 197–201.
140. Saleh, Y. R. H.; Saadeh, H. A.; Kaur, H., Goyal, K.; Sehgal, R.; and Mubarak, M. S. "The synthesis of novel hybrid compounds containing 5-nitrothiazole moiety as potential antiparasitic agent" *Monatshefte fur Chemie*, **2015**, 146(12), 2087–2095.
 141. El-Boshy, M.; Taha, R. M.; Abdelhamide, F.; Rish, E.; Mubarak, M. S.; Ben Hadda, T." Immunomodulatory and Antioxidant Protective Effect of *Zingiber officinale*, in Lead Intoxicated Rat" *Prensa Med. Argent.* **2015**, 101, 3-8.
 142. Zalloum, H.; Tayyem, R.; Abu- Irmaileh, B.; Bustanji, Y.; Zihlif, M.; Mohammad, M.; Abu Rjai, T.; Mubarak M. S." Discovery of New Human Epidermal Growth Factor Receptor-2 (HER2) Inhibitors for Potential Use as Anticancer Agents via Ligand-Based Pharmacophore Modeling" *J. Mol. Graph. Model.* **2015**, 61, 61-84.
 143. Matar, S. A.; Talib, W. H.; Mustafa, M. S.; Mubarak, M. S.; AlDamen, M. A."Synthesis, Characterization, and Antimicrobial Activity of Schiff Bases Derived from Benzaldehydes and 3,3'-Diaminodipropylamine" *Arab. J. Chem.*, **2015**, 8, 850–857.
 144. Martin, E. T.; Strawsine, L. M.; Mubarak, M. S.; Peters, D. G. "Direct Reductions of 1,2- and 1,6-Dibromohexane at Silver Cathodes in Dimethylformamide" *Electrochimica Acta*, **2015**, 186, 369–376.
 145. Al-zagameem, A. S.; El-Abadelah, M. M.; Zihlif, M. A.; Naffa, R. G.; Al-Smadi, M. L.; Mubarak, M. S." Synthesis and Bioassay of Novel Substituted Pyrano[2,3-*f*]cinnolin" *J. Heterocyclic Chem.* **2016**, 53, 1771-1777.
 146. Adjadj, M.; Boumerfeg, S.; Charef, N.; Baghiani, A.; Khennouf, S.; Arrar, L.; Mubarak, M. S." Protective Effect of *Paronychia argentea* L. on Acetic Acid Induced Ulcerative Colitis in Mice by Regulating Antioxidant Parameters and inflammatory Markers" *Der Pharma Chem.*, **2016**, 8(4), 207–218.
 147. Abdelhady, M. I. S.; Kamal, A. M.; Rauf, A.; Mubarak, M. S.; Ben Hadda, T." Bioassay-guided isolation and POM analyses of a new immunomodulatory polyphenolic constituent from *Callistemon Viridiflorus*" *Nat. Prod. Res.* **2016**, 30(10), 1131–1135.
 148. Rauf, A.; Ali, J.; Khan H.; Mubarak, M. S.; Patel, S." *Emerging CAM Ziziphus nummularia* with *in vivo* sedative-hypnotic, antipyretic and analgesic attributes", *3Biotech*, **2016**, 6, 11.
 149. Mabkhot, Y. N.; Aldawsari, F. D.; Al-Showiman, S. S.; Barakat, A.; Soliman, S. M.; Choudhary, M. I.; Yousuf, S.; Ben Hadda, T.; Mubarak, M. S. "Synthesis, Molecular Structure Optimization, and Cytotoxicity Assay of a Novel 2-Acetyl-3-amino-5-[(2-oxopropyl)sulfanyl]-4-cyanothiophene" *Molecules*, **2016**, 21(2), doi:10.3390/molecules21020214 .
 150. Sweidan, K.; Sabbah, D. A.; Bardaweel, S.; Abu Dush, K.; Abu Sheikha, G.; Mubarak, M. S." Computer-Aided Design, Synthesis, and Biological Evaluation of New Indole-2-Carboxamide Derivatives as PI3K α /EGFR Inhibitors" *Bioorg. Med. Chem. Lett.* **2016**, 26, 2685–2690.

151. Khan, H.; Ul Ain, Q.; Mubarak, M. S.; Pervaiz, A." Plant Alkaloids as Antiplatelet Agent: Drugs of Future in the light of recent developments". *Front. Pharmacol.* **2016**, 7, 292. doi: 10.3389/fphar.2016.00292.
152. Rose, J. A.; McGuire, C. M.; Hansen, A. M.; Karty, J. A.; Mubarak, M. S.; Peters, D. G." Direct Reduction of 1-Bromo-6-chlorohexane and 1-Chloro- 6-iodohexane at Silver Cathodes in Dimethylformamide" *Electrochim. Acta.* **2016**, 218, 311–317.
153. AlDamen, M. A.; Charef, N.; Juwhari, H. K.; Sweidan, K.; Mubarak, M. S.; Dennis G. Peters, D. G." Crystal structures, optical properties, and TD-DFT study of a zinc(II) Schiff base derived from salicylaldehyde and N¹-(3-aminopropyl)propane-1,3-diamine" *J. Chem. Crystallogr.* **2016**, 46, 411–420.
154. Martin, E. T.; McGuire, C. M.; Mubarak, M. S.; Peters, D. G." Electroreductive Remediation of Halogenated Environmental Pollutants" *Chem. Rev.* **2016**, 116, 15198–15234.
155. Rauf, A.; Raza, M.; Patel S.; Bawazeer, S.; Ben Hadda, T.; Jehan, N.; Mabkhot, Y. N.; Khan, A.; Mubarak, M. S. "Urease inhibition potential of di-nathodiospyrol from *Diospyros lotus* roots" *Nat. Prod. Res.* **2017**, 31(10) 1214–1218.
156. Khan, H.; Mubarak, M. S.; Amin, S. "Antifungal Potential of Alkaloids as an Emerging Therapeutic Target" *Curr. Drug Targets*, **2017**, 18, 1825–1835.
157. Saadeh, H. A.; and Mubarak, M. S." Hybrid Drugs as Potential Combatants Against Drug-Resistant Microbes: A Review" *Curr. Top. Med. Chem.* **2017**, 17(8) 895–906.
158. Maalik, A.; Rauf, A.; Jehan, N.; Ben Hadda, T.; Ali, S.; Khan, H.; Ramadan, M. F.; Khan, I.; Mubarak, M. S.; Bawazeer, S." Gastrointestinal Motility and Acute Toxicity of Pistagremic acid Isolated from the Galls of *Pistacia integerrima*" *Med. Chem.* **2017**, 13(3) 292–294.
159. Rauf, A.; Uysal, S.; Ben Hadda, T.; Siddiqui, B. S.; Khan, H.; Khan, M. A.; Ijazljaz, M.; Mubarak, M. S.; Bawazeer, S.; Abu-Izneid, T.; Khan, A.; Farooq, U. "Antibacterial, cytotoxic and phytotoxic profile of three medicinal plants collected from the Pakistan" *Marmara Pharmaceutical Journal* **2017**, 21(2) 261–268.
160. Rauf, A.; Imran, M.; Butt, M. S.; Nadeem, M.; Peters, D. G.; Mubarak, M. S." Resveratrol as an Anticancer Agent: A Review". *Crit. Rev. Food Sci. Nutr.* **2018**, 58(9) 1428–1447.
161. Sweidan, K.; Al-Damen, M. A.; Sinnokrot, M. O.; Al-Sheikh, A.; Mubarak, M. S."Stabilization of meldrum's acid dimer and 1,3-dimethylbarbituric acid trimer– A theoretical study" *J. J. Chem.* **2017**, 12(1) 1–10.
162. Rauf, A.; Ben Hadda, T.; Cerón-Carrasco, J. P.; Jorge Peña-García, J.; Pérez-Sánchez, H.; Khan, H.; Bawazeer, S.; Patel, S.; Mubarak, M. S.; Abu-Izneid, T.; Mabkhot, Y. N.; Uddin, G. "Sedative-hypnotic-like effect and molecular docking of di-naphthodiospyrol from *Diospyros lotus* in an animal model" *Biomed. Pharmacother.* **2017**, 88, 109–113.
163. Mubarak, M. S.; Peters, D. G." Using silver cathodes for organic electrosynthesis and mechanistic studies" *Current Opinion in Electrochemistry*, **2017**, 2(1), 60–66.
164. Brahim Bouzerafa, B.; Aggoun, D.; Yasmina Ouennoughi, Y.; Ourari, A.; Ruiz-Rosas, R.; Morallon, E.; Mubarak, M. S." Synthesis, spectral

- characterization and study of thermal behavior kinetics by thermogravimetric analysis of metal complexes derived from salicylaldehyde and alkylamine" *J. Mol. Struct.* **2017**, *1142*, 48–57.
165. Ward, I.; Al-Demeri, Y.; Al-Nuri, M.; Shahwan, S.; Abdoh, M.; Naveen, S.; Lokanath, N. K.; Mubarak, M. S.; Ben Hadda, T., Mabkhot Y. N." Crystal structure, Hirshfeld surface, thermal, physicochemical, thermal and DFT studies of (N¹E, N²E)-N¹,N²-bis((5-bromothiophen-2-yl)methylene)ethane-1,2-diamine N₂S₂ ligand and its [CuBr(N₂S₂)]Br complex" *J. Mol. Struct.* **2017**, *1142*, 217–225.
 166. Rauf, A.; Ghias Uddin, G.; Patel, S.; Khan, A.; Halim, S. A.; Bawazeer, S.; Ahmad, K.; Naveed Muhammad, N.; and Mubarak, M. S." Diospyros, an under-utilized, multi-purpose plant genus: A review" *Biomed. Pharmacother.* **2017**, *91*, 714–730.
 167. Akhtar, S.; Rauf, A.; Imran, M.; Saleem, Q.; Riaz, M.; and Mubarak, M. S." Black Carrot (*Daucus carota* L.), Dietary and Health Promoting Perspectives of its Polyphenols: A Review" *Trends Food Sci. Technol.* **2017**, *66*, 36–47.
 168. Rauf, A.; Jehan, N.; Ahmad, Z.; Mubarak, M. S." Analgesic Potential of Extracts and Derived Natural Products from Medicinal Plants" Book Chapter in: Pain Relief - From Analgesics to Alternative Therapies, Tech Open Science, **2017**.
 169. Sweidan, K.; Sabbah, D. A.; Bardaweel, S.; Sheikha, G.; Al-Qirim, T.; Salih, H.; El-Abadelah, M. M.; Mubarak, M. S.; and Voelter, W," Facile synthesis, characterization and cytotoxicity study of new 3-(indol-2-yl) bicyclotetrazatridecahexaens" *Can. J. Chem.* **2017**, *95*, 858–862.
 170. Mabkhot, Y. N.; Al-Showiman, S. S.; Soliman, S. M.; Ghabbour, H. A.; AlDamen, M. A.; Mubarak, M. S." Synthesis, Characterization, X-ray Structure, Computational Studies and Bioassay of Novel Thiophene-containing Compounds" *Chem. Cent. J.* **2017**, *11*, 51.
 171. Ahmad, B.; Muhammad, M.; Rauf, A.; Raza, M.; Azam, S.; Bashir, S.; Molnár, J.; Csonka, A.; Szabó, D.; Mubarak, M. S.; Mah Noor, M.; Siddiqui, B. S." Isolation of Chlorogenic Acid from Soil Borne Fungi *Scirelotium rolfsii* and their Reversal of Multidrug Resistance in Mouse Lymphoma cells" *Med. Chem.* **2017**, *13*, 721–726.
 172. Khan, Z.; Khan, H.; Amin, S.; Mabkhot, Y. N.; Mubarak, M. S.; Ben Hadda, T.; Maione, F." Natural bioactive molecules bearing glycosides as lead compounds for the treatment of fungal infection: A review" *Biomed. Pharmacother.* **2017**, *93*, 498–509.
 173. Ben Hadda, T.; Talhi, O.; Silva, A. S. M.; Senol, F. S.; Orhan, I. E.; Rauf, A.; Mabkhot, Y. N.; Bachari, K.; Warad, I.; Farghaly, T. A.; Ismail I. Althagafi, I. I.; and Mubarak, M. S."Cholinesterase Inhibitory Activity of Some semi-Rigid Spiro Heterocycles: POM analyses and Crystalline Structure of Pharmacophore Site" *Mini Rev. Med. Chem.*, **2018**, *18*(8), 711–716.
 174. Saadeh, H. A.; Dr. Khasawneh, M. A.; Abu-Zeid, Y. A.; El-Haty, I. A.; Mubarak, M. S.; Nsangou, S. P.; Goyal, K.; Sehgal, R.; Marco-Contelles, J.; and Samadi, A." Novel 5-Nitroimidazole and 5-Nitrothiazole Piperazine Derivatives and Their Antiparasitic Activity" *ChemistrySelect*, **2017**, *2*, 5684–5687.

175. AlDamen, M. A.; Al-hunaiti, A.; Eronen, A.; Mubarak, M. S.; Gerroll, B. H. R.; Peters, D. G. "H₄Na₁₄[(P₄W₆O₃₄)₂Co₂Na₂(H₂O)₂].26H₂O: A new, carbon-free, polyoxometalate catalyst for oxidation of water". *J. Clust. Sci.*, **2017**, 28, 3087–3101.
176. Khan, H.; Khattak, S.; Mubarak, M. S.; Bawazeer, S. S.; Abu-Izneid, T.; Kamal, M. A. "Antidepressant potential of peptides: New insights as future therapeutic". *CNS & Neurol Disord Drug Targets*. **2018**, 17, 9–13.
177. Al Khabbas, M. H.; Ata, S. A.; Abu-Dari, K. I.; Tutunji, M. F.; Mubarak, M. S. "Synthesis and characterization of new 1-hydroxy-2-pyridinethione derivatives: Their lead complexes and efficacy in the treatment of acute lead poisoning in rats" *J. Trace Elem. Med. Biol.*, **2017**, 44, 209–217.
178. Mabkhot, Y. N.; Kaal, N. A.; Alterary, S.; Al-Showiman, S. S.; Farghaly, T. A.; Mubarak, M. S. "Antimicrobial activity of thiophene derivatives derived from ethyl (E)-5-(3-(dimethylamino)acryloyl)-4-methyl-2-(phenylamino)thiophene-3-carboxylate". *Chem. Cent. J.* **2017**, 11, 75.
179. Khan, S.; Muhammad; Rauf, A.; Khan, A.; Rizwan, M.; Patel, S.; Khan, H.; Mahasneh, A. M.; Mubarak, M. S. "Comprehensive review on Ebola (EBOV) Virus: future prospects" *Infect. Disord. Drug Targets*, **2018**, 18(2), 96–104.
180. Raza, S.; Iqbal, Y.; Ullah, I.; Mubarak, M. S.; Hameed, M. U.; Raza, M. "Effects of gamma irradiation on the physico-chemical and biological properties of levofloxacin, *Pak. J. Pharm. Sci.*, **2018**, 31(1), 181–186.
181. Sabbah, D. A.; Hishmah, B.; Sweidan, K.; Bardaweel, S.; AlDamen, M.; Zhong, H. A.; Abu Khalaf, R.; Ibrahim, A. H.; Al-Qirim, T.; Abu Sheikha, G.; Mubarak, M. S. "Structure-based design: synthesis, X-ray crystallography, and biological evaluation of N-substituted-4-hydroxy-2-quinolone-3-carboxamides as potential cytotoxic agents". *Anticancer Agents Med. Chem.*, **2018**, 18(2), 263–276. doi:10.2174/1871520617666170911171152.
182. Aman Ullah, M.; Adeel, M.; Tahir, M. N.; Rauf, A.; Akram, M.; Ben Hadda, T.; Mabkhot, Y. N.; Muhammad, N.; Ullah, I.; Mubarak, M. S. "Synthesis, Structural Characterization and Antinociceptive Activities of New Arylated Quinolines via Suzuki-Miyaura Cross Coupling Reaction" *Med. Chem.*, **2017**, 13, 780–786.
183. Rauf, A.; Imran, M.; Suleria, H. A.; Ahmad, B.; Peters, D. G.; Mubarak, M. S. "A comprehensive review of health perspectives of resveratrol" *Food Funct.* **2017**, 8, 4284–4305.
184. Patel, S.; Rauf, A.; Khan, H.; Shah Khalid, S.; Mubarak, M. S. "Potential Health Benefits of Natural Products Derived from Truffles: A Review" *Trends Food Sci. Technol.* **2017**, 70, 1–8.
185. Walker, B. A.; Martin, E. T.; Mubarak, M. S.; Peters, D. G. "Electrochemical Reduction of Dihalothiophenes at Silver Cathodes in Dimethylformamide: Evidence for a Halogen Dance" *J. Electroanal. Chem.* **2018**, 88, 335–339.
186. Gerroll, B. H. R.; Bird, S. P.; Martin, E. T.; Mubarak, M. S.; Peters, D. G. "Cyclohexyl Bromide and Iodide: Direct Reduction at Vitreous Carbon Cathodes together with Nickel(I) Salen- and Cobalt(I) Salen-Catalyzed Reductions in Dimethylformamide" *ChemElectrochem.*, **2018**, 5, 902–910.

187. Abu-Yamin, A.; Juwahri, H. K.; Salman, M.; Sarairah, I.; Alhawarin, J.; **Mubarak, M. S.**; AlDamen, M. A. "Synthesis, Characterization, Crystal Structure and Fluorescence of Nanosized Samarium Schiff-base Complex" *J. Struct. Chem.* **2018**, 59(8) 1935-1943.
188. Islam, M. T.; Ali, E. S.; [.....]; **Mubarak, M. S.**; Yarla, N. S.; Shilpi, J. A.; Mishra, S. K.; Atanasov, A. G.; Kamal, M. A." Andrographolide, a diterpene lactone from *Andrographis paniculata* and its therapeutic promises in cancer" *Cancer Lett.*, **2018**, 420, 129–145.
189. Martin, E. T.; Goodson, A. I.; McGuire, C. M.; Rose, J. A.; Ourari, A.; **Mubarak, M. S.**; Peters, D. G." Catalytic reduction of 1-bromodecane and 1-iododecane by electrogenerated, structurally modified nickel(I) salen" *J. Electroanal. Chem.* **2018**, 815, 225–230.
190. Khan, F. A.; Mushtaq, S.; Naz, S.; Farooq, U.; Zaidi, A.; Bukhari, S. M.; Rauf, A.; **Mubarak, M. S.**" Sulfonamides as potential bioactive scaffold" *Curr. Org. Chem.* **2018**, 22(8), 818–830.
191. Al-Qtaitat, M. A.; El-Abadelah, M. M.; Sabbah, D. A.; Bardaweel, S.; Sweidan, K.; Sabri, S. S.; **Mubarak, M. S.**" Synthesis, characterization, and bioactivity of new bisamidrazone derivatives as possible anticancer agents" *Med. Chem. Res.* **2018**, 27, 1419–1431.
192. Antonio L Braga, A. L.; de 193. Meneses, A.A.; Santos, V. O.; [...]
Mubarak, M. S.; Mishra, S. K.; eSousa, J. M. C.; Melo-Cavalcante, A. A." Toxicogenetic study of omeprazole and the modulatory effects of retinol palmitate and ascorbic acid on *Allium cepa*" *Chemoshphere*, **2018**, 204, 220–226.
193. Khan, H.; Saeedi, M.; Nabavi, S. M.; **Mubarak, M. S.**; Bishayee, A. "Glycosides from Medicinal Plants as Potential Anticancer Agents: Emerging Trends towards Future Drugs" *Curr. Med. Chem.* **2019**, 26, 2389– 2406.
194. Warad, I.; Awwadi, F. F.; Abd Al-Ghani, B.; Sawafta, A.; Shivalingegowda, N.; Lokanath, N. K.; **Mubarak, M. S.**; Ben Hadda, T.; Zarrouk, A."Ultrasound-assisted synthesis of two novel [CuBr(diamine)₂·H₂O]Br complexes: Solvatochromism, crystal structure, physicochemical, Hirshfeld surface thermal, DNA/binding, antitumor and antibacterial activities" *Ultrason. Sonochem.* **2018**, 48, 1–10.
195. Sabbah, D. A.; Al-Tarawneh, F.; Talib, W. H.; Sweidan, K.; Bardaweel, S.; Al-Shalabi, E.; Zhong, H. A.; Abu Sheikha, G.; Abu Khalaf, R.; **Mubarak, M. S.**" Benzoin Schiff Bases: Design, Synthesis, and Biological Evaluation as Potential Antitumor Agents" *Med. Chem.* **2018**, 14, 695–708.
196. Saleem, M. Q.; Akhtar, S.; Imran, M.; Riaz, M.; Rauf, A.; **Mubarak, M. S.**; Bawazeer, S.; Bawazeer, S. S.; Hassanien, M. F. R." Antibacterial and anticancer characteristics of black carrot (*Daucus Carota*) extracts" *Z. Arznei- Gewurzpla*, **2018**, 22(1): 40–44.
197. Huma, Z. E.; Rauf, A.; Natasha, K.; Shah, N.; Ibrar, M.; Barkatullah, Khan, H.; **Mubarak, M. S.**; Maalik, A." Evaluation of antinociceptive potential of methanolic extract of different parts of *Ehretia serrata* Roxb and *Ehretia obtusifolia* in vivo" *Biomed. Res.* **2018**, 29(9), 1792–1796.
198. de Lima, R. M. T.; dos Reis, A. C.; [.....]; **Mubarak, M. S.**; Melo-Cavalcante, A. A."Protective and therapeutic potential of ginger (*Zingiber officinale*) extract and [6]-gingerol in cancer: A comprehensive review" *Phytother. Res.* **2018**, 32, 1885–1907.

199. Ata, S. A.; Abu-Dari, K. I.; Tutunji, M. F.; Mubarak, M. S." Reversing the adverse biochemical effects in lead-intoxicated rats by N,N`- bis[(1,2-didehydro-1-hydroxy-2-thioxopyrid-4-yl)-carbonyl]- L-lysine" *J. Trace Elem. Med. Biol.*, **2018**, 50, 93– 99.
200. Rauf, A.; Imran, M.; Khan, I. A.; Rehman, M.; Gilani, S. A.; Zaffar, M.; Mubarak, M. S." Anticancer Potential of Quercetin: A Comprehensive Review" *Phytother. Res.* **2018**, 32, 2109–2130.
201. Júnior, A. L. G.; Tchekalarova, J. D.; [.....]; Mubarak, M. S.; Lopese, L. S.; Melo-Cavalcante, A. A." Antiepileptic effects of anacardic acid in a murine model: GABAergic and antioxidant mechanisms" *Biomed. Pharmacother.* **2018**, 106, 1686–1695.
202. Khan, H.; Dima A. Sabbah, D. A.; Zafar, M.; Mubarak, M. S." Molecular Modeling Studies of Coruscanone (A) Core Nucleus as Potential Antifungal Agents" *Life Sciences*, **2018**, 209, 332–340.
203. Islam, M.; Mishra, S. K.; Tripathi, S.; de Castro, J. M.; C.; Rolim, H. M. L.; de Medeiros, M. G. F.; Ferreira, P. M. P.; ... Mubarak, M. S.; Melo-Cavalcante, A. A. C. "Mycotoxin-assisted mitochondrial dysfunction and cytotoxicity: unexploited tools against proliferative disorders" *IUBMB Life*, **2018**, 70(11) 1084–1092.
204. Islam, M. T.; Ali, E. S.; Uddin, S. J.; [....]; Kamal, M. A.; Mubarak, M. S.; Mishra, S. K.; Shilpi, J. A.; Atanasov, A. G." Phytol: a review of biomedical activities" *Food Chem. Toxicol.* **2018**, 121, 82–94.
205. Sweidan, K.; Zalloum, H.; Sabbah, D. A.; Idrees, G.; Abudosh, K.; Mubarak, M. S. "Synthesis, Characterization, and Anticancer Evaluation of Some New N1-(Anthraquinon-2-yl) Amidrazone Derivatives" *Can. J. Chem.* **2018**, 96(12), 1123-1128.
206. Machado, K. da C.; Islam, M. T.; Ali, E. S.;Mubarak, M. S.; Mishra, S. K.; Melo-Cavalcante, A. A. de C." A systematic review on the neuroprotective perspectives of beta-caryophyllene" *Phytother. Res.* **2018**, 32(12) 2376–2388.
207. de Alencar, M. V.; Oliveira, B.; Islam, M.; de Lima, R. M. T.; [.....]; Mubarak, M. S.; Melo-Cavalcante, A. A. C."Phytol as an anticarcinogenic and antitumoral agent: An in vivo study in Swiss mice with DMBA-induced breast cancer" *IUBM Life* **2019**, 71(2) 200–212.
208. Sabbah, D. A.; Ibrahim, A. H.; Talib, W. H.; Alqaisi, K.M.; Sweidan, K.; Bardaweel, S.; Abu Sheikha, G.; Zhong, H. A.; Al-Shalabi, E.; Abu Khalaf, R.; Mubarak, M. S. "Ligand-Based Drug Design: Synthesis and Biological Evaluation of Substituted Benzoin Derivatives as Potential Antitumor Agents" *Med. Chem.* **2019**, 15(4), 417–429.
209. Al-Qtaitat, M. A.; El-Abadelah, M. M.; Sabri, S. S.; Matar, S. A.; Hammad, H. M.; and Mubarak, M. S." Synthesis, Characterization, and Bioactivity of Novel Bi-Cinnolines Having 1-Piperazinyl moieties" *J. Heterocycl. Chem.* **2019**, 56, 158–164.
210. Imran, M.; Rauf, A.; Shah, Z. A.; Arshad, M. U.; Gilani, S. A.; Imran, A.; Ahmad, B.; Bawazeer, S.; Mubarak, M. S." Chemo-preventive and therapeutic effect of the dietary flavonoid kaempferol: A comprehensive review" *Phytother. Res.* **2019**, 33, 263–275.
211. Hosseini, S.; Bawel, S. A.; Mubarak, M. S.; and Peters, D. G." Rapid and High-Yield Electrosynthesis of Benzisoxazole and Some Derivatives" *ChemElectrochem.* **2019**, 6, 4318–4324.

212. Andrade, A. W. L.; Figueiredo, D. D. R.; Muhammad Torequl Islam, M. T.....; Mubarak, M. S.; Jéssica Pereira Costa, J. P. "Toxicological evaluation of the biflavonoid, agathisflavone in albino Swiss mice" *Biomed. Pharmacother.* **2019**, *110*, 68–73.
213. Mokhnache, K.; Karbab, A.; Charef, N.; Arrar, L.; Mubarak, M. S." Synthesis, characterization, superoxide anion scavenging evaluation, skin sensitization predictions, and DFT calculations for a new isonicotinylhydrazide analog" *J. Mol. Struct.* **2019**, *1180*, 139–150.
214. Imran, M. Rauf, A.; Abu-Izneid, T.; Nadeem, M.; Shariati, M. A.; Khan, I. A.; Imran, A.; Orhan, I. E.; Rizwan, M.; Atif, M.; Gondal, T. A.; Mubarak, M. S. "Luteolin as an anticancer agent: a review" *Biomed. Pharmacother.* **2019**, *112*, 108612.
215. Imran, A.; Butt, M. S.; Xiao, H.; Imran, M.; Rauf, A.; Mubarak, M. S.; Ramadan, M. F. "Inhibitory effect of black tea (*Camellia sinensis*) theaflavins and thearubigins against HCT 116 colon cancer cells and HT 460 lung cancer cells" *J. Food Biochem.* **2019**, *43*(5), e12822.
216. Islam, M. T.; Biswas, S.; Bagchi, R.; Khan, R.; Khalipha, A. B. R.; Rouf, R.; Uddin, S. J.; Shilpi, J. A.; Bardaweel, S. K.; Sabbah, D. A.; Mubarak, M. S. "Ponicidin as a promising anticancer agent: its biological and biopharmaceutical profile along with a molecular docking study" *Biotechnol. Appl. Biochem.* **2019**, *66*, 434–444.
217. Petro, A. G. C.; Mubarak, M. S.; Peters, D. G." Electrochemical reduction of 2-halo-*N*-phenylacetamides at glassy carbon cathodes in dimethylformamide" *J. Electroanal. Chem.*, **2019**, *840*, 456–461.
218. Abu-Aisheh, M. N.; Al-Aboudi, A.; Mustafa, M. S.; El-Abadelah, M. M.; Ali, S. Y.; Ul-Haq, Z.; Mubarak, M. S. "Coumarin derivatives as acetyl- and butyrylcholinesterase inhibitors: an in vitro, molecular docking, and molecular dynamics simulations study" *Heliyon*, **2019**, *5*, e01552.
219. Wahed, T. B.; Mondal, M.; Rahman, M. A.; Hossen, S.; Bhounmik, N. C.; Saha, S.; Tanvir, E. M.; Khalil, I.; Kundu, S. K.; Islam, M. T.; Mubarak, M. S. "Protective Role of *Syzygium Cymosum* Leaf Extract Against Carbofuran-Induced Hematological and Hepatic Toxicities" *Chem. Res. Toxicol.*, **2019**, *32*, 1619–1629.
220. Júnior, A. L. G.; Tchekalarova, J. D.; Machado, K. C.;Mubarak, M. S.; Melo-Cavalcante, A. M. C. "Antidepressant-like effect of anacardic acid in mice via the L-arginine–nitric oxide–serotonergic system" *Phytother. Res.* **2019**, *33*, 2126–2138.
221. Paz, M. F. C. J.; Braga, A. L.; de Meneses, A.-A. P. M.;...Mubarak, M. S.; Melo-Cavalcante, A. A. de C." Ascorbic acid and retinol palmitate modulatory effect on omeprazole-induced oxidative damage, and the cytogenetic changes in *S. cerevisiae* and S180 cells, *Chem. Biol. Interact.*, **2019**, *311*, 108776.
222. Mabkhot, Y. N.; Kaal, N. A.; Alterary, S.; Mubarak, M. S.; Asayari, A.; Bin Muhsinah, A. "New Thiophene Derivatives as Antimicrobial Agents" *J. Heterocycl. Chem.*, **2019**, *56*(10) 2854–2953.
223. Mondal, M.; Hossain, M.; Rahman, M. A.;.....; Mubarak, M. S. "Hepatoprotective and antioxidant activities of *Justicia gendarussa* leaf extract in carbofuran-induced hepatic damage in rats" *Chem. Res. Toxicol.* **2019**, *32*(12), 2499–2508.doi:10.1021/acs.chemrestox.9b00345.

224. Madani, S.; Charef, N.; Hellal, A.; Garci, D. L.; Marta Garcia, F.; Arrar, L.; **Mubarak, M. S.** "Synthesis, density functional theory studies, and sorption properties toward some divalent heavy metal ions of a new polystyrene-supported 4-(5-mercapto-1,3,4-thiadiazol-2-ylimino) pentan-2-one polymer" *J. Apl. Polym. Sci.* **2020**, 137(3), 48289.
225. Zalloum, H.; AbuThiab, T.; Hameduh, T.; AlBayyari, S.; Zalloum, W.; Basha'er Abu- Irmaileh, B.; **Mubarak, M. S.**; Zihlif, M." Comparative anti-proliferative effects of potential HER2 inhibitors on a panel of breast cancer cell lines" *Breast Cancer*, **2020**, 27(2), 213–224.
226. Islam, M. T.; **Mubarak, M. S.** "Diterpenes and Their Derivatives as Promising Agents Against Dengue Virus and Dengue Vectors: A Literature-Based Review" *Phytother. Res.* **2020**, 34(4), 674–684.
227. Islam, M. T.; Eunus S. Ali, E. S.; **Mubarak, M. S.** "Anti-obesity effect of plant diterpenes and their derivatives: A review. *Phytother. Res.* **2020**, 34(6), 1216–1225.
228. Islam, M. T.; **Mubarak, M. S.** "Pyrrolidine alkaloids and their promises in pharmacotherapy" *Adv. Tradit. Med.* **2020**, 20, 13–22.
<https://doi.org/10.1007/s13596-019-00419-4>
229. Islam, M. T.; Ali, E. S.; Uddin, S. J.; Khan, I. N.;; **Mubarak, M. S.**" Anti-Cancer Effects of Asiatic Acid, A Triterpene From *Centilla Asiatica* L: A Literature Review. *Anti- Cancer Agents Med. Chem.* **2020**, 20(5), 536–547. DOI : 10.2174/1871520619666191211103006.
230. Ali, E. A.; Sharker, S. M.; Islam, M. T.;.....; Mishra, S. K.; **Mubarak, M. S.** "Targeting cancer cells with nanotherapeutics and nanodiagnostics: Current status and future perspectives" *Sem. Cancer Biol.*, **2021**, 69, (2021) 52–68.
231. Hussain, A.; Rauf, A.; Abu-Izneid, T.;.....; **Mubarak, M. S.**; Shariati, M. A.; Mabkhot, Y. N.; Marie-Lise Bourguet-Kondrack, M.-L. "Sedative, Muscle Relaxant-Like Effects, and Molecular Docking Study of Compounds Isolated from *Salvia leriifolia*" *Revista Brasileira de Farmacognosia*, **2020**, 30, 257–260.
232. Mondal, M.; Hossain, M. M.; Hasan, M. R.; Md. Towhidul Islam Tarun, M. T. I.; Islam, M. A.; Choudhuri, M. S. K.; Islam, M. T.; **Mubarak, M. S.**" Hepatoprotective and antioxidant capacity of *Mallotus repandus* ethyl acetate stem extract against D-Galactosamine-induced hepatotoxicity in rats" *ACS Omega*, **2020**, 5(12), 6523–6531.
233. Pirzadeh, M.; Caporaso, N.; Rauf, A.; Mohammad Ali Shariati, M. A.; Yessimbekov, Z.; Khan, M. U.; Imran, M.; **Mubarak, M. S.** "Pomegranate as a source of bioactive constituents: a review on their characterization, properties and applications. *Crit. Rev. Food Sci. Nutr.* **2021**, 61(6) 982–999, DOI: 10.1080/10408398.2020.1749825.
234. Gul, S.; Khalil, R.; Ul-Haq, Z.; **Mubarak, M. S.** "Computational Overview of Mycobacterial Thymidine Monophosphate Kinase" *Curr. Pharm. Des.* **2020**, 26, 1676–1681.
235. Islam, M. T.; Ali, E. S.; Khan, I. N.;..... **Mubarak, M. S.**" Anticancer Perspectives of the Fungal-Derived Polyphenolic Hispolon" *Anticancer Agents Med. Chem.* **2020**, 20, 1636–1647.
236. Islam, M. T.; Sarkar, C.; El-Kersh, D. M.; Jamaddar, S.; Uddin, S. J.; Shilpi, J. A.; **Mubarak, M. S.**" Natural products and their derivatives against coronavirus: A review of the non-clinical and pre-clinical data"

- Phytother. Res.* **2020**, *34*, 2471–2492.
237. Islam, M. T.; Hasan, J.; Snigdha, S. H.; Ali, E. A.; Sharifi-Rad, J.; Martorell, M.; Mubarak, M. S. "Chemical profile, traditional uses, and biological activities of *Piper chaba* Hunter: A review" *J. Ethnopharmacol.* **2020**, *257*, 112853.
 238. Barkat Ullah, Rauf, A.; Ibrar, M.; Nafees, M.; Khan, H.; Patel, S.; Mubarak, M. S.; Naz, S.; Shaheen, U.; Ramadan, M. F. "In vivo antidiarrheal potency of *Callicarpa macrophylla* (Beautyberry) leaves and bark extracts" *Journal of Medicinal and Spice Plants*, **2020**, *24*(1), 44–48.
 239. Islam, M. S.; Sharifi-Rad, J.; Martorell, M.; Ali, E. S.; Asghar, M. N.; Deeba, F.; Firoz, C. K.; Mubarak, M. S. "Chemical profile and therapeutic potentials of *Xylocarpus moluccensis* (Lam.) M. Roem.: A literature-based review" *J. Ethnopharmacol.* **2020**, *259*, 112958.
 240. Karbab, A.; Mokhnache, K.; Ouhida, S.; Charef, N.; Djabi, F.; Arrar, L.; Mubarak, M. S. "Anti-inflammatory, analgesic activity, and toxicity of *Pituranthos scoparius* stem extract: an ethnopharmacological study in rat and mouse models" *J. Ethnopharmacol.* **2020**, *258*, 112936.
 241. Eldeeb, N. M.; Abo-Eleneen, M.; Al-Madboly, L.; Sharaf, M.; Othman S. S.; Ibrahim, O.; Mubarak, M. S. "Biogenically Synthesized Polysaccharides-capped Silver Nanoparticles: Immunomodulatory and Antibacterial Potentialities Against Resistant *Pseudomonas Aeruginosa*" *Front. Bioeng. Biotechnol.* **2020**, *8*, 643. doi: 10.3389/fbioe.2020.00643.
 242. Islam, M. T.; Nasiruddin, N.; Khan, I. N.; Mishra, S. K.; Zahan, M. K. E.; Riaz, T. A.; Ali, E. S.; Rahman, M. S.; Mubarak, M. S.; Martorell, M.; Cho, W.; Calina, D.; Docea, A. O.; Sharifi-Rad, J. "A Perspective on emerging therapeutic interventions for COVID-19" *Front. Public Health*, **2020**, *8*, article 281.DOI: 10.3389/fpubh.2020.00281.
 243. Islam, M. T.; Ayatollahi, S. A.; Zihad, S. M. N. K.; Sifat, N.; Khan, Md. R.; Paul, A.; Salehi, B.; Islam, T.; Mubarak, M. S.; Martins, M.; Sharifi-Rad, J. "Phytol anti-inflammatory activity: Pre-clinical assessment and possible mechanism of action elucidation" *Cell. Mol. Biol.* **2020**, *66*(4), 264–269.
 244. Islam, M. T.; Rahman, M. A.; Saeed, M.; Ul-Haq, Z.; Alam, Md. J.; Mondal, M.; Hossain, R.; Mubarak, M. S.; Salehi, B.; Setzer, W. N.; Abdull Razis, A. F.; Sharifi-Rad, J. "Anti-diarrheal Anti-diarrheal activities of phytol along with its possible mechanism of action through in-vivo and in-silico models" *Cell. Mol. Biol.* **2020**, *66*(4), 243–249.
 245. Islam, M. T.; Molla, S.; Zihad, S. M. N. K.; Umer, M.; Rahman, Md. S.; Zaman, F.; Das, A. K.; Afzal, M. I.; Salehi, B.; Akter, Mst. S.; Mubarak, M. S.; Martins, N.; Imran, M.; Chaudhary, N.; Iqbal, Z.; Sharifi-Rad, J. "Ascorbic acid antagonizes the sedative effect of diazepam possibly through inhibition of GABA(A_ρ₁) and GABA(B1) receptors" *Cell. Mol. Biol.* **2020**, *66*(4), 15–19.
 246. Mokhnache, K.; Karbab, A.; Soltani, E.; Bououden, W.; Ouhida, S.; Arrar, L.; Esteban, M. A.; Charef, N.; Mubarak, M. S. "Synthesis, characterization, toxic substructure prediction, hepatotoxicity evaluation, marine pathogenic bacteria inhibition, and DFT calculations of a new hydrazone derived from isoniazid" *J. Mol. Struct.* **2020**, *1221*, 128817.
 247. Júnior, A. L. G.; Islam, M. T.; [...]; Mubarak, M. S.; Melo Cavalcante, A. A. de C. "Anti-inflammatory, Anti-nociceptive, and Antioxidant Properties

- of Anacardic Acid in Experimental Models" *ACS Omega*, **2020**, 5(31) 19506–19515.
248. Rauf, A.; Abu-Izneid, T.; Alhumaydhi, F. A.; Muhammad, N.; Aljohani, A. S. M.; Naz, S.; Bawazeer, S.; Wadood, A.; Mubarak, M. S. "In vivo analgesic, anti-inflammatory, and sedative activity and a molecular docking study of dinaphthodiospyrol G isolated from *Diospyros lotus*" *BMC Complement Altern. Med.*, **2020**, 20, 237.
 249. Hosseini, S.; Thapa, B.; Medeiros, M. J.; Pasciak, E. M.; Pence, M. A.; Twum, E. B.; Karty, J. A.; Gao, X.; Raghavachari, K.; Peters, D. G.; Mubarak, M. S. "Electrosynthesis of a Baurone by Controlled Dimerization of Flavone: Mechanistic Insight and Large-Scale Application" *J. Org. Chem.* **2020**, 85(16), 10658–10669.
 250. Islam, M. T.; Bardaweel, S. K.; Mubarak, M. S.; Koch, W.; Gawel-Bęben, K.; Antosiewicz, B.; Sharifi-Rad, J. "Immunomodulatory effects of diterpene through NOD-like receptor pyrin domain containing-3 inflammasome pathway: A review" *Front. Immunol.* **2020**, 11, 572136.
 251. Saadeh, H. A.; Sweidan, K. A.; Mubarak, M. S. "Recent Advances in the Synthesis and Biological Activity of 8-Hydroxyquinolines" *Molecules*, **2020**, 25, 4321.
 252. Bawazeer, S.; Rauf, A.; Rahman, K. U.; Ali, J.; Uddin, G.; Fatima Begum, F.; Mubarak, M. S.; Ramadan, M. F. "Green Synthesis and Antimicrobial Potential of Silver/Gold Nanoparticles Functionalized with *Debregeasia salicifolia* D. Don" *J. Pure Appl. Microbiol.* **2020**, 14(4), 2513–2523.
 253. Sifat, N.; Lovely, F.; Zihad, N. K.; Hossain, Md. G.; Shilpi, J. A.; Grice, I. D.; Mubarak, M. S.; Uddin, S. J. "Investigation of the nutritional value and antioxidant activities of common Bangladeshi edible mushrooms" *Clin. Phytosci.*, **2020**, 6, 88.
 254. Sarkar, C.; Jamaddar, S.; Mondal, M.; Khalipha, A. B. R.; Muhammad Torequl Islam, M. T.; Mubarak, M. S. "Natural Products as Anti-COVID-19 Agents: An *In Silico* Study" *Coronaviruses*, **2020**, 2(5), Article ID: e300421188012.
 255. Bashir, A.; Shireen, F.; [...]; Mubarak, M. S.; Zhang, H. "Phyto-fabrication, purification, characterization, optimization and biological competence of nano-silver" *IET Nanobiotechnology*, **2021**, 15(1):1–18.
 256. Milon Mondal, M.; Sarkar, C.; Jamaddar, S.; Khalipha, A. R.; Islam, M. T.; Mahafzah, A.; Mubarak, M. S. "Evaluation of the Binding Affinity of Anti-Viral Drugs against Main Protease of SARS-CoV-2 through a Molecular Docking Study" *Infect Disord Drug Targets*. **2021**, 21(7) e16092118877.
 257. Rauf, A.; Bawazeer, S.; Rashid, U.; El-Esawi, M. A.; Khan, M. H.; Shah, S. U. A.; Mubarak, M. S.; Rengasamy, K. R. R. "Antiglycation and enzyme inhibitory potential of salicylalazine isolated from *Micromeria biflora* (Buch.-Ham.ex D.Don) Benth" *S. Afr. J. Bot.*, **2021**, 143, 344–349.
 258. Ahmad, B.; Hafeez, N.; Rauf, A.; Bashir, S.; Linfang, H.; Rehman, M.; Mubarak, M. S.; [...]; Rengasamy, K. R. R. "Phyllanthus emblica: A comprehensive review of its therapeutic benefits" *S. Af. J. Bot.*, **2021**, 138, 278–310.
 259. Ul-Haq, I.; Imran, M.; Nadeem, M.; Tufail, T.; Gondal, T. A.; Mubarak, M. S. "Piperine: A review of its biological effects" *Phytother. Res.*, **2021**, 35(2), 680–700.

260. Uddin, S. J.; Hasan, M. F.; Afroz, M.; Sarker, D. K.; Rouf, R.; Islam, M. T.; Shilpi, J. A.; Mubarak, M. S. "Curcumin and its multi-target function against pain and inflammation: An update of pre-clinical data" *Curr. Drug Targets*, **2021**, 22(6), 656–671.
261. Abu-Izneid, T.; Shah, Z. A.; Rauf, A.; Wadood, A.; Bawazeer, S.; Muhammad, N.; Naz, S.; Alhumaydhi, F. A.; Aljohani, A. S. M.; El-Sharkawy, E.; Mubarak, M. S.; Isayeva, K.; Shariati, M. A. "Anti-inflammatory and in silico docking studies of *Heterophragma adenophyllum* stem constituents" *Inflammation*, **2021**, 44, 297–306.
262. Karbab, A.; Charef, N.; Abu Zarga, M. H.; Qadri, M. I.; Mubarak, M. S. "Ethnomedicinal documentation and anti-inflammatory effects of *n*-butanol extract and of four compounds isolated from the stems of *Pituranthos scoparius*: An *in vitro* and *in vivo* investigation" *J. Etnopharmacol.* **2021**, 67, 113488.
263. Rauf, A.; Bawazeer, S.; Raza, M.; [.....]; Mubarak, M. S.; Ben Hadda, T.; Kamaruddin, M.; Patel, S. "Reversal of multidrug resistance and antitumor promoting activity of 3-oxo-6 β -hydroxy- β -amyirin isolated from *Pistacia integerrima*" *Biocell*, **2021**, 45(1), 139–147 Doi: 10.32604/biocell.2021.013277
264. Filho, J. W. G. de O.; Andrade, T. de J. A. Dos S. [.....]; Mubarak, M. S.; e Sousa, J. M. De C.; Melo Cavalcante, A. A. de C. "Citric acid against breast cancer: A cytogenotoxicological study" *Phytother. Res.* **2021**, 35, 504–516.
265. Maghraoui, N.; Aggoun, D.; Bouzerafa, B.; Bezzi, H.; Ouennoughi, Y.; López, D.; Fernández García, M.; Ourari, A.; Mubarak, M. S. "Synthesis, characterization, thermal stability, electrochemical behavior, and antioxidant activity of new oxovanadium(IV) and iron(II) tetradentate Schiff base complexes" *Arab. J. Chem.*, **2021**, 14, 103025.
266. Qaiser, S.; Mubarak, M. S.; Sajda Ashraf, S.; Saleem, M.; Zaheer Ul-Haq, Z.; Safdar, M.; Rauf, A.; Abu-Izneid T.; Qadri, M. I.; Maalik, A. "Benzylidene and thiourea derivatives as new classes of carbonic anhydrase inhibitors: An *in vitro* and molecular docking study" *Med Chem. Res.* **2021**, 30, 552–563.
267. Muhammad, N.; Ullah, S.; Rauf, A.; Atif, M.; Patel, S.; [....]; Mubarak, M. S. "Evaluation of the anti-diarrheal effects of the whole plant extracts of *Cuscuta reflexa* Roxb in pigeons" *Toxicol. Rep.* **2021**, 8, 395–404.
268. Sweidan, K.; Idrees, G.; Abu-Qatouseh, L.; Tahir, M. N.; Khanfar, M.; Joshi, R.; Mallah, E.; Mubarak, M. S. "Synthesis, Characterization, and Antimicrobial Evaluation of New Furan-2-Carboxamide Derivatives" *Lett. Org. Chem.* **2022**, 19(4), 314–325.
269. Rauf, A.; Bawazeer, S.; Muhammad, N.; Shah, M. M.; Mitra, S.; Bin Emran, T.; Mubarak, M. S. "Pharmacological investigation of Genus *Pistacia*" Book Chapter in Book: Pharmacognosy-Medicinal Plants. IntechOpen, **2021**.
270. Rauf, A.; Khan, I. A.; Muhammad, N.; Al-Awthan, Y. S.; Bahattab, O. S.; Israr, M.; Mubarak, M. S. "Phytochemical composition, *in vitro* urease, α -glucosidase and phosphodiesterase inhibitory potency *Syzygium cumini* (Jamun) Fruits" *S. Afr. J. Bot.* **2021**, 143, 418–421.
271. Sarkar, C.; Jamaddar, S.; Islam, T.; Mondal, M.; Muhammad Torekul

- Islam, M. T.; Mubarak, M. S. "Therapeutic perspectives of the black cumin component thymoquinone: A comprehensive review" *Food Funct.* **2021**, 12, 6167–6213.
272. Khater, D.; Nsairat, H.; Odeh, F.; Saleh, M.; Jaber, A.; Alshaer, W.; Al-Bawab, A.; Mubarak, M. S. "Design, preparation, and characterization of effective dermal and transdermal lipid nanoparticles: A review" *Cosmetics*, **2021**, 8, 39.
273. Alhumaydhi, F.; Rauf, A.; Rashid, U.; Bawazeer, S.; Khan, K.; Mubarak, M. S.; Aljohani, A.; Khan, H.; Batiha, G.; El-Esawi, M. A.; P. Mishra, A. "In vivo and in silico studies of flavonoids isolated from *Pistacia integerrima* as potential anti-diarrheal agents" *ACS Omega*, **2021**, 6, 15617–15624.
274. Mansour Quradha, M.; M. Q.; Khan, R.; Adhikari, A.; Rauf, A.; Rashid, U.; Bawazeer, S.; Al-Awthan, Y.; Salem Bahattab, O.; Mubarak, M. S. "Isolation, biological evaluation and molecular docking studies of compounds from *Sophora mollis* (Royle) Graham ex Baker" *ACS Omega*, **2021**, 6, 15911–15919.
275. Islam, M. T.; Quispe, C.; Mubarak, M. S.; Salehi, B.; Reiner, Z.; Martorell, M.; Sharifi-Rad, J.; Setzer, W. Z. "Protective Effects of Natural Products and Their Derivatives on Genetic Material: A Critical Review" *Rec. Nat. Prod.* **2021**, 15(6) 433–462.
276. Das, R.; Abdur Rauf, A.; Saima Akhter, S.; Islam, M. N.; Bin Emran, T.; Mitra, S.; Ishaq, Khan, I. N.; Mubarak, M. S. "Role of Withaferin A and Its Derivatives in the Management of Alzheimer's Disease: Recent Trends and Future Perspectives" *Molecules*, **2021**, 26, 3696. <https://doi.org/10.3390/molecules26123696>.
277. Mondal, M.; Saha, S.; Sarkar, C.; Hossen, Md. S.; Hossain, Md. S.; Khalipha, A.-B. R.; Islam, Md. F.; Wahed, T. B.; Islam, M. T.; Rauf, A.; Mubarak, M. S.; Kundu, S. K. "Role of *Citrus medica* L. fruits extract in combatting the hematological and hepatic toxic effects of Carbofuran" *Chem. Res. Toxicol.* **2021**, 34(8), 1890–1902.
278. Sharifi-Rad, J.; Quispe, C.; [....]; Mubarak, M. S.; [.....]; Calina, D. "Genistein: An Integrative Overview of Its Mode of Action, Pharmacological Properties, and Health Benefits" *Oxid. Med. Cell. Longev.*, **2021**, 21, Article ID 3268136, 36 pages. <https://doi.org/10.1155/2021/3268136>.
279. Bawazeer, S.; Rauf, A.; Mabkhot, Y.; [.....]; Mubarak, M. S.; Zengin, G.; Mohamed Fawzy Ramadan Hassanien, M. F. R. "Isolation of Bioactive Compounds from *Pistacia integerrima* with Promising Effects on Reverse Cancer Multidrug Resistance" *Russ. J. Bioorg. Chem.*, **2021**, 47(5), 997–1003.
280. Ali E.S.; Barua D.; Saha S.K.; Ahmed M.U.; Mishra S.K.; Mubarak, M. S. "Targeting Redox Signaling and ROS Metabolism in Cancer Treatment". In: Chakraborti S., Ray B.K., Roychowdhury S. (eds) *Handbook of Oxidative Stress in Cancer: Mechanistic Aspects*, **2021**, Springer, Singapore.
281. Jahan, S.; Mahmud, Md., H.; Khan, Z.; Alam, A.; Khalil, A. A.; Rauf, A.; Tareq, A. M.; Nainu, F.; Tareq, S. M.; Bin Emran, T.; Khan, M.; Khan, I. N.; Wilairatana, P.; Mubarak, M. S. "Health promoting benefits of pongamol: An overview". *Biomed. Pharmacother.* **2021**, 142, 112109.

282. Saikat, Abu S. M.; Hossain, R.; Mina, F. B.; Das, S.; Khan, I. N; **Mubarak, M. S.**; Islam, M. T. "Antidiabetic Effect of Garlic". *Rev. Bras. Farmacogn.*, **2022**, 32, 1–11.
283. Zou, X.; BK, A.; Abu-Izneid, T.; Aziz, A.; Devnath, P.; Rauf, A.; Mitra, S.; Bin Emran, T.; **Mubarak, M. S.**; Wilairatana, P.; Suleria, H. A. R. "Current advances of functional phytochemicals in Nicotiana plant and related potential value of tobacco processing waste: A review. *Biomed. Pharmacother.*, **2021**, 143, 112191.
284. Nsairat, H.; Khater, D.; Odeh, F.; Al-Adaileh, F.; Al-Taher, S.; Jaber, A. M.; Alshaer, W.; Al Bawab, A.; **Mubarak, M. S.** "Lipid nanostructures for targeting brain cancer". *Heliyon*, **2021**, 7, e07994.
285. Alhumaydhi, F. A.; Abu-Izneid, T.; Shah, Z. A.; Rauf, A.; Ayub, K.; Muhammad, N.; Asghar, M.; **Mubarak, M. S.**; Shariati, M. A. "Density Functional Theory, in vivo muscle relaxant, sedative, and analgesic studies of indanone derivatives isolated from *Heterophragma adenophyllum*" *J. Biomol. Struct. Dyn.* **2021**, 39(17) 6488–6499.
286. Islam, M. T.; Chowdhury, M. M.; **Mubarak, M. S.** "Anxiolytic-like Effects of *Xylocarpus moluccensis* Methanolic Bark Extract in Swiss mice" *Int. J. Curr. Res. Acad. Rev.*, **2021**, 9(9) 19–25.
287. Olatunde, A.; Bahattab, O.; Rauf, A.; Muhammad, N.; Al-Awthan, Y. S.; Tufail, T.; Imran, M.; **Mubarak, M. S.** "The Importance of Biological Macromolecules in Biomedicine" in Amit Kumar Nayak, A. K., Dhara, A. K., and Dr. Dilipkumar Pal, D. (eds), Chapter 3, Handbook of Biological Macromolecules: Bioactivity and Biomedical Applications, **2021**, Elsevier Ltd., USA.
288. Al-Rifai, N.; **Mubarak, M. S.** "α-Substituted Chalcones: A Key Review" *ChemSelect*, **2021**, 6(46) 13224–13252.
289. Sarkar, C.; Chaudhary, P.; Jamaddar, S.; Janmeda, P.; Milon Mondal, M.; **Mubarak, M. S.**; Islam, M. T. "Redox activity of flavonoids: Impact on human health, therapeutics, and chemical safety" *Chem. Res. Toxicol.* **2022**, 35, 140–162.
290. McKenzie, E. C. R.; Hosseini, S.; Petro, A. G. C.; Rudman, K. K.; Gerroll, B. H. R.; **Mubarak, M. S.**; Baker, L. A.; Little, R. D. "Versatile Tools for Understanding Electrosynthetic Mechanisms" *Chem. Rev.*, **2022**, 122, 3292–3335.
291. Ahmad, B.; Farah Shireen, F.; Rauf, A.; Shariati, M. A.; Bashir, S.; Patel, S.; Khan, A.; Rebezov, M.; Khan, M. U.; **Mubarak, M. S.**; Zhang, H. "Phyto-fabrication, purification, characterisation, optimisation, and biological competence of nano-silver" *IET Nanobiotechnol.*, **2021**, 15(1) 1–18.
292. Shah, Z. A.; Mujawah, A.; Ullah, T.; [...]; **Mubarak, M. S.** "Antioxidant and cytotoxic activity of a new Ferruginan A from *Olea ferruginea*: in vitro and in Silico Studies" *Oxid. Med. Cell. Longev.* **2022**, 2022, Article ID 8519250, 7 pages. <https://doi.org/10.1155/2022/8519250>.
293. Mitra, S.; Paul, S.; Sumon Roy, S.; [...]; **Mubarak, M. S.** Exploring the Immune-Boosting Functions of Vitamins and Minerals as Nutritional Food Bioactive Compounds: A Comprehensive Review" *Molecules*, **2022**, 27, 555.
294. Qamar, M.; Akhtar, S.; Ismail, T.; Wahid, M.; Abbas, M. W.; **Mubarak, M.**

- S.; Yuan, Y.; Barnard, R. T.; Ziora, Z. M.; Tuba, E.; "Phytochemical Profile, Biological Properties, and Food Applications of the Medicinal Plant *Syzygium cumini*" *Foods*, **2022**, *11*, 378.
295. Bouyahya, A.; Chamkhi, I.; Balahbib, A.; Rebezov, M.; Shariati, M. A.; Wilairatana, P.; Mubarak, M. S.; Benali, T.; and El Omari, N. "Mechanisms, anti-quorum sensing actions, and clinical trials of medicinal plant bioactive compounds against bacteria: A comprehensive review" *Molecules*, **2022**, *27*, 1484.
 296. Rauf, A.; Raza, M.; [.....]; Mubarak, M. S.; Orhan, I. E. "In vitro and in silico studies on clinically important enzymes inhibitory activities of flavonoids isolated from *Euphorbia pulcherrima*" *ANNALS OF MEDICINE*, **2022**, *54*(1), 495–506.
 297. Hossain, R.; Islam, M. T.; Mubarak, M. S.; Jain, D.; Khan, R. A.; Abu Saim Mohammad Saikat, A. M. "Natural-Derived Molecules as a Potential Adjuvant in Chemotherapy: Normal Cell Protectors and Cancer Cell Sensitizers" *Anti-Cancer Agents Med. Chem.*, **2022**, *22*(5), 836–850.
 298. Mily, S. J.; Akter, K. M.; Jabin, N.; Mitra, S.; Bin Emran, T.; [....]; Mubarak, M. S. "COVID-19 Infection in Pregnancy: A Review" *Infectious Disorders - Drug Targets*, **2022**, *22*(5), 12–21.
 299. Rauf, A.; Shariati, M. A.; Imran, M.; [.....]; Mubarak, M. S. "Comprehensive Review on Naringenin and Naringin Polyphenols as Potent Anticancer agents" *Environ. Sci. Pollut. Res.*, **2022**, *29*, 31025–31041.
 300. Islam, M. N.; Rauf, A.; Fahad, F. I.; Bin Emran, T.; Mitra, S.; Olatunde, A.; Shariati, M. A.; Rebezov, M.; Rengasamy, K. R. R.; Mubarak, M. S. "Superoxide dismutase: an updated review on its health benefits and industrial applications" *Crit. Rev. Food Sci. Nutrit.* **2022**, *62*(26):7282–7300.
 301. Islam, M. T.; Quispe, C.; Herrera-Bravo, J.; [....]; Mubarak, M. S.; Sharifi-Rad, J.; Calina, D. "Activities and Molecular Mechanisms of Diterpenes, Diterpenoids, and Their Derivatives in Rheumatoid Arthritis". *Evid.-based Complement. Altern. Med.*, **2022**, *2022*, ID 4787643. <https://doi.org/10.1155/2022/4787643>.
 302. Islam, F.; Khadija, J. F.; Rashid, M. H.; Rahaman, M. S.; Nafady, M' H.; Islam, M. R.; Akter, A.; Bin Emran, T.; Wilairatana, P.; Mubarak, M. S. "Bioactive Compounds and Their Derivatives: An Insight into Prospective Phytotherapeutics Approach against Alzheimer's Disease". *Oxid. Med. Cell. Longev.*, **2022**, *2022*, ID 5100904, 22 pages.
 303. Mechchate, H.; El Allam, A.; El Omari, N.; El Hachlafi, N.; Shariati, M. A.; Wilairatana, P.; Mubarak, M. S.; Bouyahya, A. "Vegetables and Their Bioactive Compounds as Anti-Aging Drugs". *Molecules*, **2022**, *27*, 2316.
 304. Mondal, M.; Sarkar, C.; Saha, S.; Hossain, Md N.; Norouzi, R.; Mubarak, M. S.; Siyadatpanah, A.; Wilairatana, P.; Hossain, R.; Islam, M. T.; Henrique Douglas Melo Coutinho, H. D. M. "Hepatoprotective activity of andrographolide possibly through antioxidative defense mechanism in *Sprague-Dawley rats*" *Toxicol. Rep.* **2022**, *9*, 1013–1022.
 305. Bouyahya, A.; El Hachlafi, N.; Aanniz, T.; Bourais, I.; Mechchate, H.; Benali, T.; Shariati, M. A.; Burkov, P.; Lorenzo, J. M.; Wilairatana, P.;

- Mubarak, M. S.; and El Omari, N." Natural Bioactive Compounds Targeting Histone Deacetylases in Human Cancers: Recent Updates" *Molecules*, **2022**, 27, 2568.
306. Ahmad, N.; Qamar, M.; Yuan, Y.; Nazir, Y.; Wilairatana, P.; Mubarak, M. S. "Dietary polyphenols: extraction, identification, bioavailability, and role for prevention and treatment of colorectal and prostate cancers" *Molecules*, **2022**, 27, 2831.
 307. El Menyiy, N.; El Allam, A.; Aboulaghras, S.; Jaouadi, I.; Bakrim, S.; El Omari, N.; Shariati, M. A.; Miftakhutdinov, A.; Wilairatana, P.; Mubarak, M. S.; Bouyahya, A.; "Inflammatory Auto-Immune Diseases of the Intestine and their management by natural bioactive compounds" *Biomed. Pharmacother.*, **2022**, 151, 113158.
 308. Rauf, A.; Badoni, H.; Abu-Izneid, T.; Olatunde, A.; Rahman, Md.-M.; Painuli, S.; Semwal, P.; Wilairatana, P.; Mubarak, M. S. "Neuroinflammatory Markers: Key Indicators in the Pathology of Neurodegenerative Diseases" *Molecules*, **2022**, 27, 3194.
 309. Wahid, M.; Saqib, F.; Akhtar, S.; Ali, A.; Wilairatana, P.; Mubarak, M. S. "Possible mechanisms underlying the antispasmodic, bronchodilator, and antidiarrheal activities of polarity-based extracts of *Cucumis sativus* L seeds in *in silico*, *in vitro*, and *in vivo* studies" *Pharmaceuticals*, **2022**, 15, 641.
 310. Siyadatpanah, A.; Mirzaei, F.; Hossain, R.; Islam, M. T.; Fatemi, M.; Norouzi, R.; Koohestan, M. G.; Namdar, F.; Almeida, R. S.; Mubarak, M. S.; Saberi, S.; Coutinho, H. D. M. "Anti-parasitic activity of the *Olea europaea* and *Ficus carica* on *Leishmania major*: new insight into the anti-leishmanial agents" *Biologia*, **2022**, 77, 1795–1803.
 311. Oran, S.; Althaher, A.; Mubarak, M. S. "Cinchona officinalis (Cinchona Tree) and Corylus avellana (Common Hazel)" Husen, A. (Edr). In book: Herbs, Shrubs, and Trees of Potential Medicinal Benefits. 1st edition. CRC Press, Florida, USA, **2022**. Chapt. 17, 377–394.
 312. Roy, A. S.; Sharma, A.; Thapa, B. S.; Pandit, S.; Lahiri, D.; Nag, M.; Sarkar, T.; Pati, S.; Ray, R. R.; Shariati, M. A.; Wilairatana, P.; Mubarak, M. S. "Microbiomics for enhancing electron transfer in an electrochemical System" *Front. Microbiol.*, **2022**, 13, 868220.
 313. Benali, T.; Jaouadi, I.; Ghchime, R.; El Omari, N.; Harboul, K.; Hammani, K.; Rebezov, M.; Shariati, M.A.; Mubarak, M. S.; Simal-Gandara, J.; et al. "The Current State of Knowledge in Biological Properties of Cirsimaritin" *Antioxidants*, **2022**, 11, 1842.
 314. Bouyahya, A.; Omari, N.E.; Bakrim, S.; Hachlafi, N.E.; Balahbib, A.; Wilairatana, P.; Mubarak, M. S. "Advances in Dietary Phenolic Compounds to Improve Chemosensitivity of Anticancer Drugs" *Cancers*, **2022**, 14, 4573.
 315. El Omari, N.; Bakha, M.; Aanniz, T.; El Mneyiy, N.; El Khachlafi, N.; El Baabouaa, A.; El-Shazly, M.; Alshahrani, M.M.; Al Awadh, A.A.;.....; Mubarak, M. S. "Pharmacological properties of trichostatin A, focusing on the anticancer potential: A omprehensive review" *Pharmaceuticals* **2022**, 15, 1235.
 316. Bouyahya, A.; El Allam, A.; Aboulaghras, S.; Bakrim, S.; El Menyiy, N.; Alshahrani, M.M.; Al Awadh, A.A.; Benali, T.; Lee, L.-H.; El Omari, N.;; Mubarak, M. S. "Targeting mTOR as a Cancer Therapy: Recent

- Advances in Natural Bioactive Compounds and Immunotherapy". *Cancers*, **2022**, *14*, 5520.
317. Rudman, K.; Thapa, B.; Tapash, A.; Mubarak, M. S.; Raghavachari, K.; Seyyedamirhossein Hosseini, S.; Minter, S. D. "Mechanistic Studies of the Electrocatalytic Carbon–Bromine Cleavage and the Hydrogen Atom Incorporation from 1, 1, 1, 3, 3, 3-Hexafluoroisopropanol" *J. Electrochem. Soc.* **2022**, *169*, 115502.
 318. dos Santos, J. R.; Soares, L., d-S.; Soares, B. M.; [""]; Mubarak, M. S.; Cavalcante, A. A. C. d.-M.; João Marcelo de Castro e Sousa, J. M. d.-C. "Cytotoxic and mutagenic effects of the food additive tartrazine on eukaryotic cells" *BMC Pharmacol. Toxicol.*, **2022**, *23*, 95.
 319. Wahid, M.; Saqib, F.; Ali, A.; Alshammari, A.; Alharbi, M.; Rauf, A.; Mubarak, M.S."Integrated Mechanisms of Polarity–Based Extracts of *Cucumis melo* L. Seed Kernels for Airway Smooth Muscle Relaxation via Key Signaling Pathways Based on WGCNA, In Vivo, and In Vitro Analyses" *Pharmaceuticals*, **2022**, *15*, 1522.
 320. Jadhav, P.B.; Jadhav, S.B.; Zehravi, M.; Mubarak, M.S.; Islam, F.; Jeandet, P.; Khan, S.L.; Hossain, N.; Rashid, S.; Ming, L.C.; et al. "Virtual Screening, Synthesis, and Biological Evaluation of Some Carbohydrazone Derivatives as Potential DPP-IV Inhibitors" *Molecules* **2023**, *28*, 149.
 321. Ali, H.; Khan, R.; Pan, X.; Shaheen, F.; Jabeen, A.; Rauf, A.; Shah, M.; Rashid, U.; Al-Awthan, Y. S.; Bahattab, O. S.; Al-Duais, M. A.; Mubarak, M. S. "Synthesis, characterization, anticancer, anti-inflammatory activities, and docking studies of 3,5-disubstituted thiadiazine-2-thiones" *Green Processing and Synthesis*, **2023**, *12*, 20228136.
 322. Nsairat, H.; Alshaer, W.; Odeh, F.; Esawi, E.; Khater, D.; Al Bawab, A.; El-Tanani, M.; Awidi, A.; Mubarak, M. S. "Recent advances in using liposomes for delivery of nucleic acid-based therapeutics" *OpenNano*, **2023**, *11*, 100132.
 323. Hashmi, H.B.; Farooq, M.A.; Khan, M.H.; Alshammari, A.; Aljasham, A.T.; Rashid, S.A.; Khan, N.R.; Hashmi, I.B.; Badar, M.; Mubarak, M.S. Collaterally Sensitive β -Lactam Drugs as an Effective Therapy against the Pre-Existing Methicillin Resistant *Staphylococcus aureus* (MRSA) Biofilms. *Pharmaceuticals*, **2023**, *16*, 687. <https://doi.org/10.3390/ph1605068>
 324. Muhammad, N.; Rehman, S.; Rauf, A.; Rashid, U.; Lodhi, A.; Khan, H.; Al-Awthan, Y. S.; Bahattab, O. S.; Saleem, M.; Mubarak, M. S.; Muthu Thiruvengadam, M. "Brazilin: An Updated Literature-Based Review on Its Promising Therapeutic Approaches and Toxicological Studies" *South Afr. J. Bot.*, **2023**, *158*, 118–132.
 325. Rauf, A.; Ahmad, T.; Ahmad, H.; Khan, I. A.; Shah, S. U. A.; Ali, A.; Muhammad, N.; Al-Awthan, Y. S.; Bahattab, O.; Al-Duais, M. A.; Mubarak, M. S." Identification and Pharmacological Evaluation of *Syzygium cumini* Derived Fixed Oils" *J. Chem. Soc. Pak.*, **2023**, *45*(1), 29-35.
 326. Naz, R.; Saqib, F.; Awadallah, S.; Wahid, M.; Latif, M.F.; Iqbal, I.; Mubarak, M.S. "Food Polyphenols and Type II Diabetes Mellitus: Pharmacology and Mechanisms" *Molecules* **2023**, *28*, 3996. <https://doi.org/10.3390/molecules28103996>.

327. Bappi, M.H.; Prottay, A.A.S.; Kamli, H.; Sonia, F.A.; Mia, M.N.; Akbor, M.S.; Hossen, M.M.; Awadallah, S.; **Mubarak, M.S.**; Islam, M.T. Quercetin Antagonizes the Sedative Effects of Linalool, possibly through the GABAergic Interaction Pathway. *Molecules* **2023**, *28*(14) 5616. <https://doi.org/10.3390/molecules28145616>.
328. Bakrim, S.; El Menyiy, N.; Moubachir, R.; Taha, D.; Bouyahya, A.; **Mubarak, M. S.** "Major Bioactive Compounds and Antidiabetic Activity of *Allium sativum*". In book: Antidiabetic Medicinal Plants and Herbal Treatments, Husen, A. (Ed.). (2023). 1st ed. CRC Press, Florida, USA, Chap. 4, 63–75.
329. Abdelaali, B.; Taha, D.; Hannou, Z.; Ayoub, E.; El Menyiy, N.; Bouyahya, A.; **Mubarak, M. S.** "Bioactive Compounds and Antidiabetic and Other Health Benefits of *Eucalyptus globulus*". In book: Antidiabetic Medicinal Plants and Herbal Treatments, Husen, A. (Ed.). (2023). 1st ed. CRC Press, Florida, USA. Chap. 31, 469–481.
330. Qamar, M.; Ahmad, N.; Ismail, T.; Esatbeyoglu, T.; Saeed Akhtar, S.; **Mubarak, M. S.** "Medicinal Uses, Phytochemistry, and Pharmacological Properties of *Acorus calamus*". In book: Aquatic Medicinal Plants, **Bachheti, A.**; **Bachheti, R. K.**; Azamal Husen, A. (Eds). (2023). 1st ed. CRC Press, Florida, USA, Chap. 6, pp
331. Bhuia, M.S.; Wilairatana, P.; Ferdous, J.; Chowdhury, R.; Bappi, M.H.; Rahman, M.A.; **Mubarak, M.S.**; Islam, M.T. Hirsutine, an Emerging Natural Product with Promising Therapeutic Benefits: A Systematic Review. *Molecules* **2023**, *28*(16), 6141. <https://doi.org/10.3390/molecules28166141>.
332. Nsairat, H.; Khater, D.; Odeh, F.; Jaber, A. M.; Sulaibi, M. A. M.; Alshaer, W.; Al Bawab, A.; **Mubarak, M. S.** "Phytosomes: a modernistic approach to the delivery of herbal drugs". In book: Advanced and Modern Approaches for Drug Delivery, Nayak, A. K.; Hasnain, M. S.; Laha, B.; Maitio, S. (Eds.). 2023. 1st ed. Academic Press, Elsevier, Cambridge, MA 02139, United States, Chapter 12, pp. 331–338.
333. Iqbal, I.; Wilairatana, P.; Saqib, F.; Nasir, B.; Wahid, M.; Latif, M.F.; Iqbal, A.; Naz, R.; **Mubarak, M.S.** Plant Polyphenols and Their Potential Benefits on Cardiovascular Health: A Review. *Molecules*, **2023**, *28*(17), 6403. <https://doi.org/10.3390/molecules28176403>.
334. Amari, A.; Karbab, A.; Charef, N.; Arrar, L; **Mubarak, M. S.** Anti-urolithiatic, antibacterial, anti-inflammatory, and analgesic effects of *Erica arborea* flowers and leaves hydromethanolic extracts: An ethnopharmacological study. *Saudi J. Biol. Sci.* **2023**, *30*, 103785.
335. Bhuia, M.S.; Rokonuzzman, M.; Hossain, M.I.; Ansari, S.A.; Ansari, I.A.; Islam, T.; Al Hasan, M.S.; **Mubarak, M.S.**; Islam, M.T. Anxiolytic-like Effects by trans-Ferulic Acid Possibly Occur through GABAergic Interaction Pathways. *Pharmaceuticals* **2023**, *16*(9), 1271. <https://doi.org/10.3390/ph16091271>.
336. Singh, C. K.; Sodhi, K. K.; **Mubarak, M. S.** "Editorial: New drugs, approaches, and strategies to combat antimicrobial resistance" *Front. Pharmacol.* **2023**, *14*, 1295623. doi: 10.3389/fphar.2023.1295623.
337. Prottay, A. A. S.; Bappi, M. H.; Akbor, M. S.; Asha, A. I.; Bhuia, M. S.; Shafin, A. A.; Mia, M. N.; **Mubarak, M. S.**; Lima, Md., A.; Coutinho, H. D. M.; Islam, M. T. "Sclareol exerts an anti-inflammatory effect, possibly

- through COXs inhibition pathway: In vivo and in silico studies" *Pharm. Sci. Adv.*, **2024**, 2, 100029. doi: <https://doi.org/10.1016/j.pscia.2023.100029>.
338. Adetunji, T.L.; Olisah, C.; Olatunde, A.; Tijjani, H.; Mubarak, M. S.; Rauf, A.; Aremu, A. O. "Global research landscape on two coumarin derivatives: A scientometric study of trends and innovations from 1990 to 2022" *Arab. J. Chem.*, **2024**, 17, 105494.
 339. Rzhepakovsky, I.; Piskov, S.; Avanesyan, S.; [.....]; Shariati, M. A.; Mubarak, M. S. "Composite of bacterial cellulose and gelatin: A versatile biocompatible scaffold for tissue engineering" *Int. J. Biol. Macromol.* **2024**, 256, 128369.
 340. Olatunde, A.; Ogunro, O. B.; Tijjani, H.; Shariati, M. A.; Mubarak, M. S.; Rengasamy, K. R. R. "Chemical constituents and antioxidant potential of African Fruits" *South Afr. J. Bot.* **2024**, 166, 126–150.
 341. Wahid, M.; Saqib, F.; Abbas, G.; Shah, S.; Alshammari, A.; Albekairi, T. H.; Ali, A.; Khurm, M.; and Mubarak, M. S. "Cardioprotective and hypotensive mechanistic insights of hydroethanolic extract of Cucumis melo L. kernels in isoprenaline-induced cardiotoxicity based on metabolomics and in silico electrophysiological models" *Front. Pharmacol.* **2024**, 14, 1277594. doi: 10.3389/fphar.2023.1277594.
 342. Rauf, A.; Khalil, A. A.; Awadallah, S.; Khan, S. A.; Abu-Izneid, T.; Kamran, M.; Hemeg, H. A.; Mubarak, M. S.; Khalid, A.; Wilairatana, P. "Reactive oxygen species in biological systems: Pathways, associated diseases, and potential inhibitors—A review". *Food Sci. Nutr.* **2024**, 12(2), 675–693. <https://doi.org/10.1002/fsn3.3784>.
 343. Bappi, M. H.; Mia, Md. N.; Ansari, S. A.; Ansari, I. A.; Prottay, A. A. S.; Akbor, Md. S.; El-Nashar, H. A. S.; El-Shazly, M.; Mubarak, M. S.; Torequl Islam, M. "Quercetin increases the antidepressant-like effects of sclareol and antagonizes diazepam in thiopental sodium-induced sleeping mice: A possible GABAergic transmission intervention". *Phytother. Res.* **224**, 38(5):2198–2214. <https://doi.org/10.1002/ptr.8139>.
 344. Rauf, A.; Wilairatana, P.; Joshi, P. B.; Ahmad, Z.; Olatunde, A.; Hafeez, N.; Hemeg, H. A.; Mubarak, M. S. "Revisiting luteolin: An updated review on its anticancer potential". *Heliyon*, **2024**, 10, e26701. <https://doi.org/10.1016/j.heliyon.2024.e26701>.
 345. Iqbal, I.; Saqib, F.; Wahid, M.; Latif, M. F.; Naz, R.; Mubarak, M. S. "Antioxidants from Spice and Condiment Plant Species and Their Applications", in Book: Medicinal Spice and Condiment Crops, Husen, A. (Ed.), 1st, ed. **2024**, Chapter 7, pp. 98–122, CRC Press, Florida, USA, <https://doi.org/10.1201/9781003387046>.
 346. Raisemche, L.; Kaabi, I.; Douadi, T.; Al-Noaimi, M.; Alrashed, A.; Mubarak, M. S.; Elboughdiri, N.; Zouaoui, A.; Benguerba, Y. "Corrosion inhibition of mild steel in acidic environments: Mechanistic insights and protective effects of azo-cum inhibitor" *J. Environ. Chem. Eng.*, **2024**, 12(2), 112354. <https://doi.org/10.1016/j.jece.2024.112354>.
 347. Guemmaz, N.; Madani, S.; Mokhnache, K.; Karbab, A.; Garcia, D. L.; Garcia, M. F.,, Mubarak, M. S. "Synthesis, characterization, sorption, and antibacterial properties of a new polystyrene-supported o-hydroxyacetophenonedietiethylenediamine polymer" *Int. J. Polym. Mater. Polym. Biomater.*, **2024**, 73(15) 1327–1336.

348. Olatunde, A.; Tijjani, H.; Aremu, A. O.; Rauf, A.; Suleria, H. A. R.; and **Mubarak, M. S.** Editorial: Chemistry, toxicity, synthesis, biological and pharmacological activities of coumarins and their derivatives: recent advances and future perspectives". *Front. Pharmacol.* **2024**, *15*, 1430985. doi: 10.3389/fphar.2024.1430985.
349. Bhuia, M. S.; Chowdhury, R.; Akter, M. A.; Ali, M. A.; Afroz, M.; Akbor, M. S.; Sonia, F. A.; **Mubarak, M. S.**; Islam, M. T. "A mechanistic insight into the anticancer potentials of resveratrol: Current perspectives". *Phytother Res.* **2024**, *38*(8) 3877–3898, May 20. doi: 10.1002/ptr.8239.
350. Chandra, Shill M.; El-Nashar, H. A. S.; Prova, Mollick P.; Nath, Acharyya R.; Afrin, S.; Hossain, H.; Halder, S.; Torequl Islam M.; Bhuia, M. S.; Reza, H. M.; El-Shazly, M.; **Mubarak, M. S.** "Longevity Spinach (*Gynura procumbens*) Ameliorated Oxidative Stress and Inflammatory Mediators in Cisplatin-Induced Organ Dysfunction in Rats: Comprehensive in vivo and in silico Studies. *Chem. Biodivers.* **2024**, *21*(5), e202301719. doi: 10.1002/cbdv.202301719.
351. Islam, M. T.; Mazumder, S.; Anika, F. T.; Uddin, N.; Rahman, M. A.; Sarkar, C.; Mondal, M.; **Mubarak, M. S.**; Kannan R.R. Rengasamy, K. R. R. "Investigating the hepatoprotective properties of thymol against paracetamol-induced hepatotoxicity" *Food Biosci.*, **2024**, *60*, 104498.
352. Iqbal, I.; Saqib, F.; Mubarak, Z.; Latif, M. F.; Wahid, M.; Nasir, B.; Shahzad, H.; Sharif-Rad, J.; **Mubarak, M. S.** "Alzheimer's disease and drug delivery across the blood-brain barrier: approaches and challenges" *Eur. J. Med. Res.*, **2024**, *29*, 313. <https://doi.org/10.1186/s40001-024-01915-3>.
353. Younis, M.; Akhtar, S.; Ismail, T.; Qamar, M.; Sattar, D.-e.-s.; Saeed, W.; **Mubarak, M. S.**; Bartkiene, E.; Rocha, J. M. "Lactic Acid Fermentation Ameliorates Intrinsic Toxicants in *Brassica campestris* L. Leaves Harvested at Different Growth Stages. *Foods* **2024**, *13*, 1826. <https://doi.org/10.3390/foods13121826>.
354. Chowdhury, R.; Bhuia, M. S.; Wilairatana, P.; Afroz, M.; Hasan, R.; Ferdous, J.; Asraful Islam Rakib, A. I.; Sheikh, S.; **Mubarak, M. S.**; Islam, M. T. "An insight into the anticancer potentials of lignan arctiin: A comprehensive review of molecular mechanisms" *Heliyon*, **2024**, *10*(12), E32899.
355. Saeed, W.; Ismail, T.; Qamar, M.; Khan, M. Z.; Ahmad, N.; **Mubarak, M. S.**; Esatbeyoglu, T. "Carissa carandas: A multi-faceted approach to health, wellness, and commerce" *J. Agric. Food Res.*, **2024**, *18*, 101274.
356. Al-Jaber, H. I.; Shakya, A. K.; Al-Qudah, M. A.; Barhoumi, L. M.; Abu-Sal, H. E.; Hasan, H. S.; Al-Bataineh, N.; Abu-Orabi, S.; Muhammad S. **Mubarak, M. S.** "Piceatannol, a comprehensive review of health perspectives and pharmacological aspects" *Arabian J. Chem.*, **2024**, *17*(9), 105939.
357. Mahafzah, A.; Sallam, M.; Bakri, F. G.; **Mubarak, M. S.** (2024). The Worrying Phenomenon of COVID-19 Vaccine Hesitancy and Its Negative Impact on Pandemic Control Efforts: Common Themes that Emerged in the Middle East and North Africa (MENA) Region. In: Rezaei, N. (eds) *The COVID-19 Aftermath. Advances in Experimental Medicine and Biology*, vol 1457. pp 299–322, Springer, Cham. https://doi.org/10.1007/978-3-031-61939-7_17.

358. Aslana, S. K.; Erdogan, G.; Dolen, E.; Yurdun, T.; Mubarak, M. S. "HPLC-DAD Method for the Analysis of Synthetic Dyes in Historical Textile Objects in Istanbul Naval Museum" *Jordan J. Chem.*, **2024**, 19(2), 79–89.
359. Ahmad, A.; Al Senaidi, A. S.; Mubarak, M. S. "Microbial approach towards anode biofilm engineering enhances extracellular electron transfer for bioenergy production" *J. Environ. Manage.*, **2024**, 370, 122696. <https://doi.org/10.1016/j.jenvman.2024.122696>.
360. Aktar, M. A.; Bhuia, M. S.; Chowdhury, R.; Biswas, S.; Sanzida, M. R.; Sonia, F. A.; Ferdous, J.; Rouf, R.; Mubarak, M. S.... & Islam, M. T. (2024). Anticancer activity of *Nigella sativa* and its bioactive compounds: An update. *Pharmacological Research-Natural Products*, **2024**, 5, 100100.
361. Bhuia, M. S.; Chowdhury, R.; Afroz, M.; Akbor, M. S.; AlHasan, M. S.; Ferdous, J.; Hasan, R.; de Alencar, M. V. O. B.; Mubarak, M. S.; Islam, M. T. "Therapeutic Efficacy Studies on the Monoterpenoid Hinokitiol in the Treatment of Different Types of Cancer" *Chem. Biodivers.*, **2025**, 22(5), e202401904.
362. Ishaq, S.; Habib, O.; Aziz, A.; Tahir, R.; Mushtaq, H.; Hassan, S.; Sarwar, S.; Mubarak, M. S.; Ahmad, A.; Ullah, A. "Evaluation of fluorinated phospholipid analogs: A study on ADMET profiles, molecular docking and dynamics simulation in anticancer therapy" *Heliyon*, **2025**, 11(2), e41739.
363. Islam, M. M.; Rouf, R.; Shilpi, J. A.; Sheikh, B. Y.; Mubarak, M. S.; Uddin, S. J. "A comprehensive review on the neuropharmacological effects of *Phoenix dactylifera* and the potential role of its phenolic constituents" *Food Biosci.*, **2025**, 66, 106141.
364. Nagdalian, A.; Blinov, A.; Golik, A.;.....; Mubarak, M. S. "Nano-priming of pea (*Pisum sativum* L.) seeds with CuO nanoparticles: synthesis, stabilization, modeling, characterization, and comprehensive effect on germination and seedling parameters" *Food Chem.*, **2025**, 478, 143569.
365. Bhuia, M. S.; Chowdhury, R.;.....; Mubarak, M. S.; Coutinho, H. D. M.; Domiciano, C. B.; Islam, M. T. "*trans*-Ferulic Acid Antagonizes the Anti-Inflammatory Activity of Etoricoxib: Possible Interaction of COX-1 and NOS" *Biotechnol. Appl. Biochem.*, **2025**, 72, 1284–1301.
366. Xue, X.; Chen, K.; Sun, H.;; Mubarak, M. S.; Al-Harrasi, A.; Hu, H.-Y.; Deng, Y.; Pan, X.; Wang, X. "Bidirectional chemical intelligent net: A unified deep learning-based framework for predicting chemical reaction" *Chin. Chem. Lett.*, **2025**, 36, 110968.
367. Rauf, A.; Olatunde, A.; Islam, M.; Ahmad, Z.; Hafeez, N.; Hemeg, H. A.; Imran, M.; Mubarak, M. S.; Ribaud, G. "Acetylsalicylic acid and cancer: updates on the new potential of a nature-inspired drug" *Naunyn-Schmiedeberg's Arch. Pharmacol.* **2025**, 398, 9387–9403. <https://doi.org/10.1007/s00210-025-03959-6>
368. Khater, D.; Odeh, F.; Alahmad, W.; Alkhabbas, M.; Afaneh, R.; Al Bawwab, A.; Mubarak, M. S. (2024). Nanoparticles and Nanofillers: Types, Methods of Preparation and Characterization, and Safety. In: Mallakpour, S., Hussain, C.M. (eds) *Handbook of Nanofillers*. Springer, Singapore. https://doi.org/10.1007/978-981-99-3516-1_4-1

369. Karbab, A.; Charef, N.; Abu-Zarga, M. H.; Mubarak, M. S. "Antibacterial, anti-hemolytic, and antioxidant activities of the *n*-butanol extract and four isolated compounds of *Pituranthos scoparius* L. collected from Algeria" *Jordan J. Chem.* **2025**, 20(1) 67–79.
370. Iqbal, I.; Ali, M.A.M.; Saqib, F.; Alamgir, K.; Mubarak, M.S.; Chaudhary, A.A.; El-Shazly, M.; El-Nashar, H.A.S. "Comprehensive GC-MS Profiling and Multi-Modal Pharmacological Evaluations of *Haloxylon griffithii*: In Vitro and In Vivo Approaches". *Pharmaceuticals* **2025**, 18, 770. <https://doi.org/10.3390/ph18060770>.
371. Rauf, A.; Ajaj, R.; Akram, Z.;.....; Mubarak, M. S. "Ferulic acid as a promising candidate for developing selective and effective anti-cancer therapies" *Discov. Onc.*, **2025**, 16, 1214. <https://doi.org/10.1007/s12672-025-02294-9>.
372. Paul, P.; Dey, D.; Deb, D. P.;; Mubarak, M. S. "Uncovering the Efficacy of *Cinnamomum tamala* Leaf Extract Against Paracetamol-Induced Hepatotoxicity in Swiss Albino Mice" *Chem. Biodivers.* **2025**, 22, e202500753.
373. Zubairi, M. N.; Afzal, M. K.; Sultan, M. T.; Mubarak, M. S.; Shaikh Jamal Uddin, S. J. "Nutritional and Therapeutic Potential of *Cassia fistula* Pods: A Comprehensive Study on Mineral Composition, Immunomodulation, Antidiabetic Benefits, and Safety of Amaltas Tea in Southeast Punjab, Pakistan" *Food Sci, Nutr.* **2025**, 13: e70752. <https://doi.org/10.1002/fsn3.70752>.
374. Mondal, K. R.; Moumita Saha, M.; Mondal, M. K.; Sarkar, C.; Mondal, M.; Mubarak, M. S. "Exploring the antidiabetic potential of *Bridelia tomentosa* blume against streptozotocin (STZ)-induced diabetic Sprague-Dawley rats" *Phytomedicine Plus*, 2025, 5(3) 10086. <https://doi.org/10.1016/j.phyplu.2025.100862>.
375. Sarkar, P.; Sultana, N.; Debnath, P. K.; Rouf, R.; Uddin, S. J.; Popa, D.; Calina, D.; Mubarak, M. S.; Sharifi-Rad, J. "Isotretinoin as a Multifunctional Anticancer Agent: Molecular Mechanisms, Pharmacological Insights and Therapeutic Potential" *Archiv der Pharmazie*, **2025**, 358, e70084.
376. Ahmad, A.; Almohamadi, H.; Alnasser, A. S.; Nasser, Q.; Al-Sibani, M.; Al-Rahbi, A. S.; Mubarak, M. S. "Microbial synergies in co-digestion of food waste and wastewater sludge: pathways to energy recovery and emission reduction" *Renew. Sustain. Energy Rev.*, **2026**, 226, 116333. <https://doi.org/10.1016/j.rser.2025.116333>.
377. Karbab, A.; Sweidan, N.; Shakya, A. K.; Abu Zarqa, M.; Charef, Nouredine, N.; Hammad, W.; and Mubarak, M. S. "GC-MS analysis, anti-inflammatory, anti-coagulant, and antioxidant activities of *Silybum marianum* extracts" *Zeitschrift für Naturforschung C.* **2025**, <https://doi.org/10.1515/znc-2025-0160>.
378. Rida, T.; Bashir, K.; Basit, A.; Ullah, J.; Mubarak, M. S.; Khan, F. A.; Al, M. A.; Ullah, A. "Application of Fungal Biotechnology in Immunotherapy and Vaccine Development". In Book: *Fungal Biotechnology*, Farid A. and Preet, G. (Eds). **2025**, 1st ed. CRC Press, Taylor and Francis. Chapter 11. <https://doi.org/10.1201/9781003594840>

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