Prof. Seema Zargar (Professor KSU)

Postal Address:

Department of Biochemistry
College of Science, King Saud university
Female Campus, Diriyah
Riyadh; Saudi Arabia-11495

Phone: +966502203532
E-mail: szargar@ksu.edu.sa
seemazargar@yahoo.com

Website: http://fac.ksu.edu.sa/szargar
Scopus ID: 55459461900
Orcid ID: 0000-0002-5622-0841

A globally recognized scholar and leading researcher in Biochemistry, Biotechnology and Bioinformatics, I have dedicated over a decade to advancing scientific knowledge and pushing the boundaries of Molecular Biology at King Saud University. My impactful research, evidenced by over 100 publications in esteemed ISI journals and inclusion in Stanford University's top 2% scientists list (2020-2023), has not only garnered international acclaim but has also significantly contributed to drug discovery, development, understanding disease mechanisms and toxicity.

As a Full Professor at King Saud University, I have cultivated a distinguished career marked by academic leadership, impactful mentorship, and unwavering commitment to excellence. Since 2011, I have guided numerous undergraduate, graduate, and Ph.D. students, fostering their academic growth and research aspirations. My dedication extends beyond the classroom, as evidenced by my active involvement in key university committees, shaping academic programs and contributing to institutional progress.

Driven by a passion for knowledge exchange and global collaboration, I have actively bridged academia and community service throughout my tenure at King Saud University. My research collaborations extend beyond borders, enriching my work and fostering interdisciplinary perspectives. Furthermore, my role as coordinator of the Indian Education Forum has facilitated impactful Indo-Saudi educational initiatives.

PROFESSIONAL QUALIFICATIONS:

Ph.D. Biotechnology: Thesis Title: Molecular Mechanism of the pathogenesis of dengue virus and its interaction with host cell proteins. Jamia Hamdard, New Delhi.

M.Sc. Biochemistry: Jamia Hamdard, New Delhi

WORK EXPERIENCE:

2021- till date: Professor at King Saud University, Riyadh.

2016-2020: Associate Professor at King Saud University. Riyadh.

2011-2016: Assistant Professor at King Saud University. Riyadh.

2009-2011: Associate Scientist at King Faisal Hospital and Research Centre, Riyadh.

2004-2009: PhD Biotechnology, Jamia Hamdard.

TEACHING EXPERIENCE

Topics Taught at PhD level include Genetic manipulations and therapy, Advanced Bioanalytical techniques, Bioinformatics, Advanced topics in biomedical research

Topics Taught at master level include Molecular biology of gene, In borne errors of metabolism, Biochemistry of Blood, Selected Topics in Biochemistry, Molecular Biology Laboratory

Undergraduate level courses include Biomembranes, Biochemistry of specialized tissues, Biotechnology and genetic engineering, Human Genetics, molecular carcinogenesis, Antibiotics, Immunology, Gene expression, Bioinformatics, Molecular Biology, Biochemistry of Blood, Introduction to Scientific Research, Biochemistry of Nutrition, Physical Biochemistry

Ongoing PhD Student Research Projects

Targeting the effect of metformin and dioxin on cancer cells through DNA repair pathways and telomerase extension

Mechanisms underlying the therapeutic effect of atorvastatin on LPS-induced breast cancer cell by regulation NFκB pathway

Therapeutic Potential of a Pre/Probiotic-Rich Diet on CCL4-Induced Liver Toxicity in Rodents through gut: Targeting the Gut-Liver-Brain Axis

Completed Student Research Thesis

1. Molecular basis of regulation of cancer progression by Poziotinib and its combination with olmutinib
2. In vivo study of effects of intervention of olmutinib alone and with wheat germ oil on cell signaling pathways in thioacetamide induced mice.

3. The effect of intervention of olmutinib with and without wheat germ oil on cell signaling pathways in thioacetamide induced mice.
4. Neuroprotective and hepatoprotective role of Quercetin by cell cycle regulators on Carbon tetrachloride induced oxidative stress
5. Unraveling the link between inflammation and obesity associated breast cancer the role of adipocytes AUF1(Finished, waiting for submission)
6. Molecular basis of regulation of cancer progression by Poziotinib and its combination with Olmutinib (Finished, waiting for submission)
7. Study the Role of AUF1 Inhibition in Chemo Sensitization of Osteosarcoma Cells.

Committee memberships in Department activities

Member, Research cooperation Committee 2020-till date
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Study Plans and Resources Committee 2021-till date
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Public Relations &Community Partnership 2021-till date
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, curriculum Committee 2016-2021
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Postgraduate Committee, higher studies 2014-2020
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Accreditation Committee 2016-2017
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Laboratory Committee 2011-2013

Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Examination Committee 2011-2014
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Member, Safety Committee 2011-2013
Department of Biochemistry, College of Science,
King Saud University, Riyadh, Saudi Arabia.

Editor

Heliyon (Elsevier, Cell Press):
I was awarded highly valued assistant editor award certificate for 2023 and I continue my work for the excellence of our Journal.

Biomed Research International.
BioMed Research International is a peer-reviewed journal that publishes original research articles, review articles, and clinical studies covering a wide range of life sciences and medicine subjects. The journal has an impact factor of 2.583 for year 2020-2021.

Molecules
Molecules is a Q2 is a peer-reviewed, journal that publishes original research articles, review articles covering a wide range of subjects in life sciences and medicine. The journal has an impact factor of 4.41for year 2020-2021.

Other Achievements

Scored silver in M. Sc Biochemistry.
Qualified **Junior Research Fellowship** and Eligibility for Lectureship **(NET)** held on 22nd June 2003 conducted by Council of Scientific and Industrial Research, New Delhi (All India Level Exam).
Junior Research Fellowship from Council of Scientific and Industrial Research (All India Level Eligibility Test) 2003-2005.
Senior Research Fellowship from Council of Scientific and Industrial Research (All India Level Eligibility Test) 2005-2009.

US Patents

US 2022/0373437 A1 publication date 24, Nov, 2022
System for evaluating chemopreventive potential of PHC and it's prepared chitosan nanoparticles

Book Chapters:

1. Colchicine induced ion channel formation into membranes as mechanism behind chemotherapy drug cytotoxicity of cancer cells. (2019) A. Alqarni, **Seema Zargar**, M. Ashrafuzamman. Chapter V, 151-189.Lipid bilayers. Nova medicine and health, New York.

2. Transcription and its regulation. (2017) **Seema Zargar** and Tanveer Ahmad Wani. Chapter II, 19-30. Quick Revision of Molecular Biology. Research India Publications. India.

List of Original Research Articles:

1. Ahmed, Mahmood, Muhammad Ahmad, Muhammad Ayyan Khan, Aamir Sohail, Mudassar Sanaullah, Waqar Ahmad, Dure Najaf Iqbal, Khuram Khalid, Tanveer A. Wani, and **Seema Zargar**. "Assessment of carcinogenic and non-carcinogenic risk of exposure to potentially toxic elements in tea infusions: Determination by ICP-OES and multivariate statistical data analysis." Journal of Trace Elements in Medicine and Biology (2024): 127454.
2. Tchebou, Robert Viani Kepdieu, Umar Farooq, Rémy Bertrand Teponno, Tanveer A. Wani, Léon Azefack Tapondjou, Azhar Rasool, Rizwana Sarwar, **Seema Zargar** et al. "Exploring Cassia mimosoïdes as a promising natural source of steroids with potent anti-cancer, urease inhibition, and antimicrobial properties." RSC advances 14, no. 13 (2024): 9159-9168.
3. Attaullah, Hafiz Muhammad, Syeda Abida Ejaz, Pervaiz Ali Channar, Aamer Saeed, Rabail Ujan, **Seema Zargar**, Sajid Ali Channar, Reshma Sahito, Tanveer A. Wani, and Qamar Abbas. "Exploration of newly synthesized azo-thiohydantoins as the potential alkaline phosphatase inhibitors via advanced biochemical characterization and molecular modeling approaches." BMC chemistry 18, no. 1 (2024): 47.
4. Singh, Ravinder, Varinder Singh, Md Altamash Ahmad, Chirag Pasricha, Pratima Kumari, Thakur Gurjeet Singh, Rupinder Kaur, Somdutt Mujwar, Tanveer A. Wani, and **Seema Zargar**. "Unveiling the Role of PAR 1: A Crucial Link with Inflammation in Diabetic Subjects with COVID-19." Pharmaceuticals 17, no. 4 (2024): 454.
5. **Seema Zargar,** Tanveer A. Wani, Salman Alamery, and Fatimah Yaseen. "Olmutinib Reverses Thioacetamide-Induced Cell Cycle Gene Alterations in Mice Liver and Kidney Tissues, While Wheat Germ Treatment Exhibits Limited Efficacy at Gene Level." Medicina 60, no. 4 (2024): 639.
6. Syeda Abida Ejaz , Muhammad Sarfraz , Mubashir Aziz , Tanveer A. Wani , Tahira Ruby **, Seema Zargar** , Mosab Arafat , Chen Li. Evaluation of Cytotoxic Activity and Apoptosis-Inducing Potential of 5,6,7-Trihydroxyflavone against Breast Cancer and Cervical Cancer Cell Lines. Journal of Biological Regulators and Homeostatic Agents. 2024, 38(1): 303-317
7. Ullah S, Sirajuddin M, Ullah Z, Mushtaq A, Naz S, Zubair M, Haider A, Ali S, Kubicki M, Wani TA, **Seema Zargar**. Synthesis, Structural Elucidation and Pharmacological Applications of Cu (II) Heteroleptic Carboxylates. Pharmaceuticals. 2023 May 3;16(5):693.

8. Khan, Hizbullah, Muhammad Sirajuddin, Amin Badshah, Sajjad Ahmad, Muhammad Bilal, Syed Muhammad Salman, Ian S. Butler, Tanveer A. Wani, and **Seema Zargar**. "Synthesis, Physicochemical Characterization, Biological Evaluation, In Silico and Molecular Docking Studies of Pd (II) Complexes with P, S-Donor Ligands." Pharmaceuticals 16, no. 6 (2023): 806.
9. Ahmad, Saghir, Muhammad Abdul Qadir, Mahmood Ahmed, Muhammad Imran, Numan Yousaf, Tanveer A. Wani, **Seema Zargar**, Ijaz Ali, and Muhammad Muddassar. "New acetamide-sulfonamide-containing scaffolds: Antiurease activity screening, structure-activity relationship, kinetics mechanism, molecular docking, and md simulation studies." Molecules 28, no. 14 (2023): 5389.
10. Ejaz, Syeda Abida, Aftab Farid, **Seema Zargar**, Pervaiz Ali Channar, Mubashir Aziz, Tanveer A. Wani, Hafiz Muhammad Attaullah et al. "Computational and theoretical chemistry of newly synthesized and characterized 2, 2'-(5, 5'-(1, 4-phenylene) bis (1 H-tetrazole-5, 1-diyl)) bis-N-acetamides." BMC chemistry 17, no. 1 (2023): 97.
11. Khushal, Aneela, Umar Farooq, Sara Khan, Azhar Rasul, Tanveer A. Wani, **Seema Zargar**, Sohail Anjum Shahzad, Syed Majid Bukhari, and Nazeer Ahmad Khan. "Bioactivity-Guided Synthesis: In Silico and In Vitro Studies of β-Glucosidase Inhibitors to Cope with Hepatic Cytotoxicity." Molecules 28, no. 18 (2023): 6548.
12. Qureshi MI, Jamil QA, Usman F, Wani TA, Farooq M, Shah HS, Ahmad H, Khalil R, Sajjad M, **Zargar** Seema, Kausar S. Tioconazole-Loaded Transethosomal Gel Using Box–Behnken Design for Topical Applications: In Vitro, In Vivo, and Molecular Docking Approaches. Gels. 2023 Sep 21;9(9):767.
13. Usman, Faisal, Mudassir Farooq, Tanveer A. Wani, Hassan Ahmad, Ibrahim Javed, Mazhar Iqbal, Fatima Akbar Sheikh, Farhan Siddique, **Seema Zargar**, and Saleh Sheikh. "Itraconazole Loaded Biosurfactin Micelles with Enhanced Antifungal Activity: Fabrication, Evaluation and Molecular Simulation." Antibiotics 12, no. 10 (2023): 1550.
14. Alamery, Salman, Anfal AlAjmi, Tanveer A. Wani, and **Seema Zargar**. "In Silico and In Vitro Exploration of Poziotinib and Olmutinib Synergy in Lung Cancer: Role of hsa-miR-7-5p in Regulating Apoptotic Pathway Marker Genes." Medicina 59, no. 11 (2023): 1923.
15. Ahmed, Mahmood, Syed Salman Shafqat, Amna Javed, Mudassar Sanaullah, Abdul Shakoor, Muhammad Imtiaz Shafiq, Syeda Kiran Shahzadi, Tanveer A. Wani, and **Seema Zargar**. "Exposure Assessment of Essential and Potentially Toxic Metals in Wheat-Based Sweets for Human Consumption: Multivariate Analysis and Risk Evaluation Studies." Molecules 28, no. 21 (2023): 7365.
16. Ejaz, Syeda Abida, Mubashir Aziz, Ammara Fayyaz, Tanveer A. Wani, and **Seema Zargar**. "Computer-aided approach for the identification of lead molecules as the inhibitors of cholinesterase's and monoamine oxidases: novel target for the treatment of Alzheimer's disease." Journal of the Serbian Chemical Society (2023).
17. Shahzadi, Kiran, Syed Majid Bukhari, Asma Zaidi, Tanveer A. Wani, Muhammad Saeed Jan, **Seema Zargar**, Umer Rashid, Umar Farooq, Aneela Khushal, and Sara Khan. "Novel Coumarin Derivatives as Potential Urease Inhibitors for Kidney Stone Prevention and Antiulcer Therapy: From Synthesis to In Vivo Evaluation." Pharmaceuticals 16, no. 11 (2023): 1552.
18. Samee, Ayesha, Faisal Usman, Tanveer A. Wani, Mudassir Farooq, Hamid Saeed Shah, Ibrahim Javed, Hassan Ahmad, Riffat Khan, **Seema Zargar**, and Safina Kausar.

"Sulconazole-Loaded Solid Lipid Nanoparticles for Enhanced Antifungal Activity: In Vitro and In Vivo Approach." Molecules 28, no. 22 (2023): 7508.

19. Ejaz, Syeda Abida, M. Sajjad Bilal, Mubashir Aziz, Tanveer A. Wani, **Seema Zargar**, Ammara Fayyaz, Sidra Hassan, Aftab Ahmed, Hammad M. Al Kahtani, and Farhan Siddique. "Computational Exploration of Fluorocyclopentenyl-purines and–pyrimidines Derivatives as Potential Inhibitors of Epidermal Growth Factor Receptor (EGFR) for the Treatment of Breast Cancer." Chemistry & Biodiversity (2023): e202301190.
20. Ahmad, Saghir, Muhammad Abdul Qadir, Mahmood Ahmed, Muhammad Imran, Muhammad Ahmad, Numan Yousaf, Tanveer A. Wani, **Seema Zargar**, Ijaz Ali, and Muhammad Muddassar. "Exploring the Potential of New Benzamide-Acetamide Pharmacophore Containing Sulfonamide as Urease Inhibitors: Structure–Activity Relationship, Kinetics Mechanism, and In Silico Studies." ACS Omega (2023).
21. Zargar S, Wani TA. Food Toxicity of Mycotoxin Citrinin and Molecular Mechanisms of Its Potential Toxicity Effects through the Implicated Targets Predicted by Computer-Aided Multidimensional Data Analysis. Life. 2023 Mar 26;13(4):880.
22. Zargar, S.; Altwaijry, N.; Wani, T.A.; Alkahtani, H.M. Evaluation of the Possible Pathways Involved in the Protective Effects of Quercetin, Naringenin, and Rutin at the Gene, Protein and miRNA Levels Using In-Silico Multidimensional Data Analysis. Molecules 2023, 28, 4904.
23. Shariq M, Mahmood T, Kushwaha P, Parveen S, Shamim A, Ahsan F, Wani TA, Zargar S, Wasim R, Wahajuddin M. Fabrication of Nanoformulation Containing Carvedilol and Silk Protein Sericin against Doxorubicin Induced Cardiac Damage in Rats. Pharmaceuticals. 2023 Apr 7;16(4):561.
24. Wani TA, Zargar S. Molecular Spectroscopy Evidence of 1, 3, 5-Tris (4-carboxyphenyl) benzene Binding to DNA: Anticancer Potential along with the Comparative Binding Profile of Intercalation via Modeling Studies. Cells. 2023 Apr 10;12(8):1120.
25. Zargar S, Wani TA, Rizwan Ahamad S. An insight into wheat germ oil nutrition, identification of its bioactive constituents and computer-aided multidimensional data analysis of its potential anti-inflammatory effect via molecular connections. Life. 2023 Feb 14;13(2):526.
26. Wani, TA; Bakheit, AH; Zargar, S, Altwaijry, N, ; Bhat, MA, Alkahtani, HM; Al-Rasheed, LS. Toxicity Study and Binding Analysis of Newly Synthesized Antifungal N-(4-aryl/cyclohexyl)-2-(pyridine-4-yl carbonyl) hydrazinecarbothioamide Derivative with Bovine Serum Albumin. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. March 2023
27. Rehman MU, Ali A, Ansar R, Arafah A, Imtiyaz Z, Wani TA, **Zargar S**, Ganie SA. In Silico molecular docking and dynamic analysis of natural compounds against major non-structural proteins of SARS-COV-2. J Biomol Struct Dyn. 2022 Nov 3:1-17. doi: 10.1080/07391102.2022.2139766. Epub ahead of print. PMID: 36326281.
28. Bilal, M.S.; Ejaz, S.A.; Zargar, S.; Akhtar, N.;Wani, T.A.; Riaz, N.; Aborode, A.T.; Siddique, F.; Altwaijry, N.; Al-Kahtani, H.M.; et al. Computational Investigation of 1, 3, 4 Oxadiazole Derivatives as Lead Inhibitors of VEGFR 2 in Comparison with EGFR: Density Functional Theory, Molecular Docking and Molecular Dynamics Simulation Studies. Biomolecules 2022, 12, 1612.
29. S Rasheed, M Aziz, A Saeed, S Ejaz, P AChannar, **S Zargar**, Q Abbas, H Alanazi, M Hussain, M G. Alharbi, S J Kim, T A. Wani, H Raza. Analysis of 1-aroyl-3-(3-chloro-

2-methylphenyl) thiourea hybrids as potent urease inhibitors: Synthesis, biochemical evaluation and computational approach. International Journal of molecular sciences, October 2022.

30. Saeed A, Ejaz SA, Khalid A, Channar PA, Aziz M, Wani TA, Zargar S, Hassan S, Ismail H, Khalid D, Hashmi MZ, Hökelek T and Aborode AT (Sep 2022), Facile synthesis, crystal structure, biological evaluation, and molecular modeling studies of N-((4-acetyl phenyl) carbamothioyl) pivalamide as the multitarget-directed ligand. Front. Chem. 10:992701. doi: 10.3389/fchem.2022.992701.
31. Ahsan F, Mahmood T, Wani TA, **Zargar S**, Siddiqui MH, Usmani S, Shamim A, Wahajuddin M. Effectual Endeavors of Silk Protein Sericin against Isoproterenol Induced Cardiac Toxicity and Hypertrophy in Wistar Rats. Life. 2022 Jul 15;12(7):1063.
32. Aziz M, Ejaz SA, **Zargar S**, Akhtar N, Aborode AT, A Wani T, Batiha GE, Siddique F, Alqarni M, Akintola AA. Deep Learning and Structure-Based Virtual Screening for Drug Discovery against NEK7: A Novel Target for the Treatment of Cancer. Molecules. 2022 Jan;27(13):4098.
33. Salman Alamery, **Seema Zargar**, Fatimah Yaseen, Tanveer A. Wani and Abdulaziz Siyal. Evaluation of the Effect of Wheat Germ Oil and Olmutinib on the Thioacetamide-Induced Liver and Kidney Toxicity in Mice. Life 2022, 12, 900. https://doi.org/10.3390/ life12060900.
34. Arwa I A. Khayyat, **Seema Zargar**, Tanveer A. Wani, Muneeb U. Rehman, Azmat Ali Khan. Association Mechanism and Conformational Changes in Trypsin on Its Interaction with Atrazine: A Multi-Spectroscopic and Biochemical Study with Computational Approach. Int. J. Mol. Sci. 2022, 23, 5636. https://doi.org/10.3390/ijms23105636
35. **Seema Zargar**, Tanveer A.Wani, Nawaf A. Alsaif and Arwa Ishaq A. Khayyat. A Comprehensive Investigation of Interactions between Antipsychotic Drug Quetiapine and Human Serum Albumin Using Multi-Spectroscopic, Biochemical, and Molecular Modeling Approaches. Molecules. 2022, 27, 2589. https://doi.org/10.3390/ molecules27082589
36. Farooq U, Khan S, Naz S, Wani TA, Bukhari SM, Aborode AT, Shahzad SA, **Zargar S**. Three New Acrylic Acid Derivatives from Achillea mellifolium as Potential Inhibitors of Urease from Jack Bean and α-Glucosidase from Saccharomyces cerevisiae. Molecules. 2022 Jan;27(15):5004.
37. Wani, T.A, Bakheit, A.H, **Zargar, S**, Khayyat, A.I.A, Al-Majed, A.A. Influence of Rutin, Sinapic Acid, and Naringenin on Binding of Tyrosine Kinase Inhibitor Erlotinib to Bovine Serum Albumin Using Analytical Techniques Along with Computational Approach. Appl. Sci. 2022, 12, 3575. https://doi.org/10.3390/app12073575.
38. Wani TA, Alanazi MM, Alsaif NA, Bakheit AH, **Zargar S**, Alsalami OM, Khan AA. Interaction Characterization of a Tyrosine Kinase Inhibitor Erlotinib with a Model Transport Protein in the Presence of Quercetin: A Drug-Protein and Drug-Drug Interaction Investigation Using Multi-Spectroscopic and Computational Approaches. Molecules. 2022 Feb 14;27(4):1265. doi: 10.3390/molecules27041265. PMID: 35209054; PMCID: PMC8874853.
39. A.H. Alqhtani, A.S. Alharthi, N.J. Siddiqi, **S. Zargar** and A.M. Abudabos. Effect of Dietary Natural Growth Promoters on the Liver Function Enzymes of Chicken Challenged with Clostridium perfringens. Pakistan J. Zool., pp 1-5, 2022. **Q3**

40. Ramakrishna PJ, Wali AF, Menezes GA, Rehman MU, Wani TA, Arafah A, **Zargar S**, Mir TM. Chemical Composition Analysis, Cytotoxic, Antimicrobial and Antioxidant Activities of Physalis angulate L: A Comparative Study of Leaves and Fruit. Molecules. 2022; 27(5):1480. https://doi.org/10.3390/molecules27051480 **Q2**
41. T A. Wani, Ahmed H.Bakheit, **Seema Zargar**, and Salman Alamery: Mechanistic competitive binding interaction study between Olmutinib and Colchicine with model transport protein using spectroscopic and computer simulation approaches. Journal of Photochemistry & Photobiology, A: Chemistry. Volume 426, 1 April 2022, 113794. **Q2**

42. **Seema Zargar**, Tanveer A Wani. Protective Role of Quercetin in Carbon Tetrachloride Induced Toxicity in Rat Brain: Biochemical, Spectrophotometric Assays and Computational Approach. Molecules. 2021, 26, 7526. https://doi.org/10.3390/molecules26247526 Q2
43. **Seema Zargar**, Tanveer A Wani. Exploring the binding mechanism and adverse toxic effects of persistent organic pollutant (dicofol) to human serum albumin: A biophysical, biochemical and computational approach (2021). Chemico-Biological Interactions. Q1
44. Tanveer Wani, Nawaf.Alsaif, Mohammed Alanazi, Ahmed .Bakheit, Azmat Ali Khan, **Seema Zargar** (2021). Binding of colchicine and ascorbic acid (vitamin C) to bovine serum albumin: An in-vitro interaction study using multispectroscopic, molecular docking and molecular dynamics simulation study. Journal of Molecular Liquids. **Q1**
45. Ajaz Ahmad, Atif Zafar, **Seema Zargar**, Arwa Bazgaifan, Tanveer A Wani, Masood Ahmad (2021). Protective effects of apigenin against edifenphos-induced genotoxicity and cytotoxicity in rat hepatocytes. Journal of Biomolecular Structure and Dynamics. **IF 3.31**
46. Tanveer A. Wani, Ahmed H. Bakheit Abdulrahman, A. Al-Majed Nojood Altwaijry Anwar Baquaysh, Ashwaq Aljuraisy, **Seema Zargar** (2021). Binding and drug displacement study of colchicine and bovine serum albumin in presence of azithromycin using multispectroscopic techniques and molecular dynamic simulation. Journal of Molecular Liquids. **IF 6.16 Q1**
47. Tanveer A. Wani, Nawaf Alsaif, Mohammed M. Alanazi, Ahmed H. Bakheit, **Seema Zarga**r, Mashooq A. Bhat (2020). A potential anticancer dihydropyrimidine derivative and its protein binding mechanism by multispectroscopic, molecular docking and molecular dynamic simulation along with its in-silico toxicity and metabolic profile. European Journal of Pharmaceutical Sciences **IF 4.384 Q2**
48. TA.Wani, AH.Bakheit, **Seema Zargar**, Z Alanazi, A.Al-Majed (2020). Influence of antioxidant flavonoids quercetin and rutin on the in-vitro binding of neratinib to human serum albumin. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 246:118977. Q1 **IF 4.098.**
49. Nawaf A. Alsaif, Tanveer A. Wani, Ahmed H. Bakheit, **Seema Zargar** (2020) Multi-spectroscopic investigation, molecular docking and molecular dynamic simulation of competitive interactions between flavonoids (quercetin and rutin) and sorafenib for binding to human serum albumin. International Journal of Biological Macromolecules. Published Online 26 October 2020. **IF 6.953 Q1**

50. S Alkhezayem, T.A.Wani , Salma Wakil , A Aljuraysi , Seema Zargar (2020). Transcriptome analysis of neratinib treated HER2 positive cancer model vs untreated

cancer unravels the molecular mechanism of action of neratinib. Saudi Pharmaceutical Journal 28 (2020) 963–970. Q1 **IF 2.879**

51. Tanveer A. Wania, Nawaf Alsaif, Ahmed H. Bakheita, Seema Zargar, Abdurrahman A. Al-Mehiziaa, Azmat Ali Khan (2020). Interaction of an abiraterone with calf thymus DNA: Investigation with spectroscopic technique and modelling studies. Bioorganic chemistry 100:2020,103957. Q1 **IF 3.940**

52. **Seema Zargar**, S Alamery, AH Bakheit, TA Wani. (2020) Poziotinib and bovine serum albumin binding characterization and influence of quercetin, rutin, naringenin and sinapic acid on their binding interaction. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 235; 118335 **Q1** IF 3.232
53. TA Wani, AH Bakheit, **Seema Zargar**, H. Rizwana, A Al-Majed (2020). Evaluation of competitive binding interaction of neratinib and tamoxifen to serum albumin in multidrug therapy.227: 117691 Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. **Q1 IF 3.232**

54. TA Wani, A Almehizia, AH Bakheit, **Seema Zargar**, T A wani (2020). Study of binding mechanism of dapoxetine with Calf Thymus DNA by spectroscopic, thermodynamic techniques and molecular docking. South African Journal of Chemistry:73,44-50. **IF 1.490 Q4**
55. A Alenad, MM Alenezi, MS Alokail, K Wani, AK Mohammed, AM Alnaami, Maha Sulimani, **Seema Zargar**, Mario Clerici, Nasser M Al-Daghri (2020). Association of ANGPTL8 (Betatrophin) Gene Variants with components of Metabolic Syndrome in Arab Adults. Scientific reports 10 (1), 1-10. **IF 3.998** Q1

56. **Seema Zargar**, Mona Alonazi, Humaira Rizwana, Tanveer A. Wani **(2019)** Resveratrol reverses thioacetamide-induced renal assault with respect to oxidative stress, renal function, DNA damage and cytokine release in Wistar rats. Oxidative Medicine and Cellular Longevity. **Q2** IF 5.076
57. TA Wani, AH Bakheit, **Seema Zargar**, MA Bhat, AA Al-Majed. (2019) Molecular docking and experimental investigation of new indole derivative cyclooxygenase inhibitor to probe its binding mechanism with bovine serum albumin. Bioorganic chemistry 89, 103010. Q1.
58. AA Al-Mehizia, AH Bakheit, **Seema Zargar**, MA Bhat, MM Asmari, TA Wani (2019) Evaluation of Biophysical Interaction between Newly Synthesized Article ID 1702959Pyrazoline Pyridazine Derivative and Bovine Serum Albumin by Spectroscopic and Molecular Docking Studies. Journal of Spectroscopy; Article ID 3848670. Q3

59. Nouf Alsalman, Abdulaziz Aljafari, Tanveer A. Wani, **Seema Zargar** (**2019**). High-dose aspirin reverses tartrazine-induced cell growth dysregulation independent of p53 signaling and antioxidant mechanisms in rat brain. Biomed Research International; Article ID 9096404. **Q2**
60. Tanveer A Wani, Ahmed H Bakheit, Mohammed Nazam Ansari, Abdul-Rahman A Al-Majed, Bakr M Al-Qahtani, **Seema Zargar** (2018). Spectroscopic and molecular

modeling studies of binding interaction between bovine serum albumin and roflumilast. Drug Design Development and Therapy 12; 2627—2634. **Q2**

61. **Seema Zargar,** AA TA Aljafari, Wani (2018). Variants in MEF2A gene in relation with coronary artery disease in Saudi population. 3 Biotech. Jul;8(7):289. doi: 10.1007/s13205-018-1312-1. Q3
62. **Seema Zargar,** A A. Al-Majed and Tanveer A. Wani (2018). Potentiating and synergistic effect of grapefruit juice on the antioxidant and anti-inflammatory activity of aripiprazole against hydrogen peroxide induced oxidative stress in mice. BMC Complement Altern Med. 2018 Mar 23; 18(1). 106. **Q1**

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CONFERENCES AND WORKSHOPS:

1. Attended webinar series for the month of July and August on Covid awareness 2021.
2. Speaker in Genomics and Precision medicine. 2017. British Council.
3. Abstract published in Americal Chemical Society, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA
4. Seema and S.K. Jain. Proteomic approach for characterization of cell surface receptors for dengue virus: protein profile of permissive and non-permissive cells. Biotechnology and Human welfare magazine. 2006. Hamdard University. New Delhi.

5. Seema and Jain S. K. proteome profile of permissive and non-permissive cells for different serotypes of dengue virus. 33rd immunological society proceedings. 2004, 341-342.

6. Attended Interdisciplinary Science Conference on Recent Trends in Research in Biological Sciences.

7. Attended National Conference on Electron Microscopy and Allied Fields and XXIX Annual Meeting of EMSI.

REVIEWER

Reviewer to Journal of Infectious disease and immunity, Intervirology, Indian journal of Biological Sciences, Hindawi publishing systems, Science international, Indian Journal of Biophysics and Biochemistry Saudi Journal of Biological Sciences, BMC complementary and alternative medicine, Journal of molecular Lipids, Gene etc.

MEMBERSHIPS:

Member of European Federation of Biotechnology.

Member of Indian Immunological society.

Society of cancer research

EXPERTISE DEVELOPED DURING Post doctorate

FACS analysis of CD3, CD4 and CD8, CD25, CD44 and Ki67 antibodies, MACS separation of different cell types (Magnetic cell sorting), Adipose tissue separation and culturing from lipoaspirate of abdominal fat or gluteal fat tissue, Elisa for IL-6, adiponectin, Insulin, leptin,TNF-a and other adipokines, Isolation of thymocytes and splenocytes from mice and their culture, Extraction of DNA from mouse tail and their genotyping, Extraction of protein and Western blotting of cell lysates, Culturing of different types of primary and secondary cultures including established cell lines, Gene expression by Reverse transcription PCR, Cloning, cDNA library preparation and yeast two hybrid selection, Real time PCR, tunnel assay and double immunofluorescence,

PERSONAL DETAILS:

Attended a computer literacy programme conducted by the Department of Electronics and Communication Engineering of REC, Srinagar during May- July, 2000. Ample knowledge of computers with command on Windows, MS Office and internet world

Gender	**:**	Female
Marital Status	**:**	Married
Nationality	**:**	Indian
Permanent Address	**:**	House No. 13, 90 feet-AhmedNagar, Srinagar, Kashmir, India