

1. Personal Data

- **Present position:** Lecturer, Department of Chemistry, GC Women University Sialkot, Pakistan
- Personal webpage: https://www.gcwus.edu.pk/staff-member/dr-iram-saba/
- Google scholar: https://scholar.google.gr/citations?hl=en&user=rbDlskUAAAAJ
- Research Gate: https://www.researchgate.net/profile/Dr-Saba
- **ORCHID ID:** https://orcid.org/0000-0002-1474-3089
 - 2. Academic
- Ph.D. (2019). Biochemical attributes of essential oils from selected medicinal herbs grown in different agroclimatic regions of Pakistan, University of Sargodha, Pakistan.
- M.Phil in Chemistry (2011). Department of Chemistry, GC University Faisalabad, Pakistan.
- M.Sc in Industrial Chemistry (2008). Department of Chemistry, GC University Faisalabad, Pakistan.
- Bachelor in Chemistry (2005). University of Sargodha, Punjab, Pakistan.
 - 3. Awards/Distinction
- **Gold Medal** for getting 1st position in whole session in M.Sc (2008).
- British Council Expert Trainer Certificate in PEELI project.
- QAED Expert Trainer Certificate in PEELI as well as induction trainings.
- Best Administrative and Management Skills Certificate from Education Department.
 - 4. Professional Teaching Experience
- Lecturer at Department of Chemistry, GC Women University Sialkot, Pakistan.
- Tutorship at Allama Iqbal Open University Islamabad of M.Sc and BA classes.
- Lecturer at Aspire Group of Colleges to teach M.Sc and BS Chemistry.
- Assistant Education Officer at Dy. DEO office, Bhalwal.
- Headmistress at G.G.E/S Thatti Noor, Bhalwal, Sargodha.
- HOD and Lecturer at Punjab Group of College Bhalwal to teach BSc Chemistry.
- Vice Principal and HOD at Superior Group of College Rawalpindi.
- Lecturer at Punjab Group of College Sargodha to teach F.Sc and BSc Chemistry.
- Master Trainer (MT) in PEELI project through **British Council** for 3 years.
- Master Trainer (MT) in QAED Sargodha in multiple training sessions.

5. International Publication

- 1. Saba, I., Lalas, S., Iftikhar, G., Munazir, M., Hyder, S., Eha., 2025. In Vitro Anti-Cancer Potential of Basil Essential Oils Extracted via Supercritical Fluid and Hydrodistillation: Comparative Agroclimatic Studies. Scientific Reports.
- 2. Sun, S., Batool, S., Saba, I., Ahmed, I., Ahmad, S., Tariq, T., Khan, I., Mustafa, G. and Hasan, M., 2025. Biological entities of green factories for nano-grafting zinc oxide: a comparative antibacterial mechanism. New Journal of Chemistry.
- Batool,N., Munazir,M., Qureshi,R., AnwarT., Qureshi4,H., Saba,I., Ikram,S., Ullah,N., Soufan,W., and Zaman,W.2024. Morphological and physiological responses of Momordica charantia to heavy metals and nutrient toxicity in contaminated water. Scientific Reports. 14,30200.
- Afzal, W., Saba, I., Azam, B. Ismail, H., Kausar, F., Kanwal, A., Naz, I., Munazir, M., Nisa, I. and Farhan, M. 2024. Application of CRISPR CAS system in the treatment of enetic diseases and Covid-19. Journal of Population Therapeutics & Clinical Pharmacology. 31 (08), 1081-1093.
- Siddique, U., Nassar, N.T., Kousar, A., Farooq, S., Bashir, R., Saba, I., Khan, S., Farhan, M., Kanwal, A., Nisar, I. 2024. <u>Evaluating</u> the antimicrobial efficacy of various solvent extracts from pomegranates peel against pathogenic microorganisms. Journal of Population Therapeutics & Clinical Pharmacology. 3 (08), 643-665.
- Nawaz, R., Baber, Z., Saba, I., Shah, A. A., Abbas, T., Elansary, H., Sridhara, S. and Shakeel, I. 2024. Morpho-physiological and biochemical characterization of Kinnow (*Citrus reticulate*) in response to canker pathogens (*Xanthomonas axonopodis pv.citri*). Scientific Reports. 14(17315).
- Waheed, M., Sharif, M.K., Ghazanfar, M., Ahmed, H., Hameed, A., Nudrat, N., Amjad, F., Iftikhar, M., Ahmed, A., Saba, I., Sabir, A. and Abdullah, M.Z. 2024. Exploring the therapeutic potential of Garlic through the formation of functional spread. J. Popul. Therapeu. Clinic. Pharmcol. 31 (6): 625-637. DOI: 10.53555/jptcp.v31i6.6546
- Joseph, S.B. and Saba, I. 2024. Environmental and economic impacts of using waste animal fats for biodiesel. Easy Chair Preprint. 13612. https://easychair.org/publications/preprint/Q5pV
- Rehman, R., Amjad, S., Shah,S.A.R., Ashfaq,N., Saba, I., Riaz, N., Ali, K., Ishtiaq, M., 2024. Computational Chemistry in Plant Biology: Unraveling the Molecular Basis of Plant-Drug Interactions and Biochemical Pathways. J. Popul. Therapeu. Clinic. Pharmcol. 31(5):257-270. <u>https://doi.org/10.53555/jptcp.v31i5.6269</u>.
- Saba, I. Mobeen, H., kanwal, S., Hassan, A., Ashraf, M., Kanwal, A., Ishtiaq, M., Waqar, M., 2024. Exploring the Physicochemical Properties of Plant-derived Drugs through Multiscale Simulations and Data-driven Approaches. J. Popul. Therapeu. Clinic. Pharmcol. 31(02):921-934. DOI https://doi.org/10.53555/jptcp.v31i2.4948
- Shahid, M.S., Akram, A., Imtiaz, U., Saba, I., Kabir, R., Hayat, U., Haraira, A.A., Ibrahim, M. 2024. Review of recent advances in chemical fertilizers and their impact on crop productivity and sustainability. European Chemical Bulletin, 13(01), 62 71. DOI: 10.53555/ecb/2024.13.01.10.
- Gillani, S.N., Ahmad, T., Rehman, A., Saba, I., Irshad, S.B.E., Abbas, M., Zahid, I., Ali, K. 2024 The application of chemical analysis techniques in microbiology research: a review of methods, advancements, and implications for food and nutrition. Eur. Chem. Bull. 13 (01), 72 81. DOI: 10.53555/ecb/2024.13.01.11.
- Saba, I., Anwar, F., Ahmad, N., Iqbal, M., Abbas, A., Iqbal, S., Nazir, A. and Al-Mijalli, S.H., 2024. Spearmint (*Mentha spicata* L.) leaves essential oil: Comparative compositional and biological attributes as a function of different agroclimatic regions. Biocatalysis and Agricultural Biotechnology, p.102984. https://doi.org/10.1016/j.bcab.2023.102984
- 14. Nisar, W., Ali, S., Anwar, A., Saba, I., Fahim, M., Farooq, T., Shabbir, H. 2023. Analyzing the role of chemical reactions and transformation in food processing and their effect on nutrition value. Eur. Chem. Bull. 2023, 12 (Special Issue 13), 1732 1742.
- Saba, I., Khel, B.K.A., Hussain, A., Hussain, W., Nawaz, M.Y., Rahman, K., Fareed, S.Z., Abbas, M. 2023. Exploring the role of chemistry in food preservation techniques and their effects on food quality and safety. Eur.Chem.Bull.12 (Special Issue 13), 1743 –1751. doi: 10.53555/ecb/2023.12.Si13.280.
- Saleem, M., Shaheen, M.A., Qadir, R., Saba, I, Rehman, M.M., Paracha, R.N., Ahmad, N., Riaz, M., Anwar, F. 2023. Variations in the composition and biochemical attributes of *Eucalyptus camaldulensis* L. leaves essential oil as function of drying method. Journal of Essential Oil Bearing Plants. 26(4):1266-1277. DOI: <u>10.1080/0972060X.2023.2284344</u>

CURRICULUM VITAE (April 2025)

- 17. Amin, R., Ayoub, A., Shahid, M., Saba, I., Shahid, H., Amin, H.A.B. and Rahman, S. 2023. Development of Coal Fly Ash Based Zeolite-Alginate Composite and Removal of Heavy Metals from Synthetic Solution. Euo. Chem. Bull. 12(09): 954-969.
- Nasimi, R.A., Saba, I., Zafar, K., Kausar, M., Munazir, M., Ahmad, M.J. 2023. Identification and Characterization of badh2 gene in Basmati Rice. Tob. Regul. Sci. 9(1):3360-3367.
- Khan Z.I., Ahmad K., Akhtar S., Batool M., Ejaz A., Ashfaq A., Nadeem M., Shad H.A., Noorka I.R., Hussain A., Awan M.U.F, Batool A.I., Memona H., Hamza M.A, Akhtar M., Saba I. and Javid S. 2023. Health risk assessment of Chromium and Lead in a soil plant-ruminant food chain against terrestrial soil pollution gradient. J. Plantarum., 5(1): 25-39.
- Imran, M., Samad, A., Najeeb, M., Saddique, K. and Saba, I., Ahmad, T., Akram, S. and Murad, M., 2023. Development & Analysis of Hypoglycemic Effects of Wheat Flour, Chickpea & Coriander Bread. NeuroQuantology. 21(5)1961-1972. DOI: <u>10.48047/nq.2023.21.5.NQ222188</u>
- Ahmad, A., Saba, I., Hussain, A., Khan, B.S., Munazir, M., Nawaz, M.Y., Iqbal, Y. and Ahmad, A., 2023. The applications of medicinal plants and their components in wound healing. A comprehensive review. NeuroQuantology. 21 (6):552-567. DOI: <u>10.48047/ng.2023.21.6.NQ23057</u>
- 22. Ahmad, K., Rani, S., Khan, Z.I., Akhtar, S., Ashfaq, A., Aslam, S., Anwar, I., Fatima, M., Memona, H., Batool, A.I., Nadeem, M., shaukat J., Noorka, I.R, Shehzadi M., Akhtar, M., Hamza M.A., Awan, M.U.F., Ugulu, I., Raza, H., Saba I, Hussain, A and Bashir, Anum. 2023. Effects of Fertilizers on Copper and Nickel Accumulation and Human Health Risk Assessment of Vegetables and Food Crops. J biores manag., 10(1):84-96.
- 23. Akba, M., Abdullah, M.A., Nasimi, R.A., Saba, I., Haq,I., Errum, A. and Ahmed,M.J., 2023. Genetic evaluation of exotic wheat material for yield and yield related components. Tob. Regul. Sci. 9(1):1219-1224. https://tobreg.org/index.php/journal/article/view/1151
- 24. Ortiz, G.R., Cespedes-Panduro, B., Saba, I., Cotrina-Aliaga, J.C., Mohany, M., Al-Rejaie, S.S., Arias-Gonzales, J.L., Ramiz-Cornell, A.A., Kadham, M.J. and Akhavan-Sigari, R., 2023. Adsorption of thiotepa anticancer by the assistance of aluminum nitride nanocage scaffolds: A computational perspective on drug delivery applications. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 666, p.131276.
- 25. Shahid, M., Amin, M.H.A.B., Mumtaz, N., Errum, A., Shahzad, M.N., Saba,I., Ahmed, M.J. and khan, B.S., 2023. Comparison of Locally Available Walnuts Based on Proximate Analysis and Selected Mineral Content. Tobacco Regulatory Science. 9(1):642-658. <u>http://doi.org/10.18001/TRS/.9.1.48</u>. <u>https://tobreg.org/index.php/journal/article/view/1113</u>.
- 26. Sattar, R., Rasool, M.A., Qadir, R., Siddique, A.B., Irfan, M.I., Saba I., Akhtar, M.T., Rehman, M.M. and Mustaqeem, M., 2023. Biogenic synthesis of zinc oxide nanoparticles using leaves extract of Camellia sinensis for photocatalytic and biological applications. Journal of Optoelectronic and Biomedical Materials. 15(1):1-9.
- Shahzad A., Luqman, Zafar I.K., Saba I., Umer, Kafeel, Muneeb A., Nadeem A., Iram A., Shhehzadi M. 2022. Health risk implications of iron in wastewater soil food crops grown in the vicinity of peri urban areas of the District Sargodha. Plos One. 17 (11):1-20. e0275497. https://doi.org/10.1371/journal.pone.0275497.
- Zaman, Y., Ishaque, M.Z., Sattar, R., Rehman, M.M., Saba, I., Kanwal, S., Akram, M., Shahzad, M., Kanwal, H., Qadir, R. and Siddique, A.B., 2022. Antibacterial potential of silver nanoparticles synthesized using tri-sodium citrate via controlled exploitation of temperature. Dig. J. Nanomater. Biostructures, 17(3), pp.979-987.
- Shaukat, U.A., Anwar, F., Akhtar, M.T., Qadir, R., Zahoor, S., Saba, I., Shabir, G., Siddique, F. and Moongngarm, A., 2022. Variations in physico-chemical and antioxidant attributes of Grape seed oil as function of extraction techniques. Sains Malays, *51*(07). 2087-2096.
- Kamran, M., Hussain, S., Abid, M.A., Syed, S.K., Suleman, M., Riaz, M., Iqbal, M., Mahmood, S., Saba, I. and Qadir, R., 2020. Phytochemical composition of *moringa oleifera* its nutritional and pharmacological importance. Postepy Biologii Komorki, 47(3), pp.321-334.
- Saba, I. and Anwar, F., 2018. Effect of harvesting regions on physico-chemical and biological attributes of supercritical fluid-extracted spearmint (Mentha spicata L.) leaves essential oil. Journal of Essential Oil Bearing Plants, 21(2), pp.400-419.

CURRICULUM VITAE (April 2025)

- 32. Ghaffar, A., Yameen, M., Kiran, S., Kamal, S., Jalal, F., Munir, B., Saleem, S., Rafiq, N., Ahmad, A., Saba, I. and Jabbar, A., 2015. Chemical composition and in-vitro evaluation of the antimicrobial and antioxidant activities of essential oils extracted from seven Eucalyptus species. Molecules, 20(11), pp.20487-20498.
- 33. Saba, I., Iqbal, M.J. and Iqbal, M., 2013. Bioactivity of Eucalyptus citriodora leaves essential oil. Agrochimica, 57(2), pp.127-136.

6. International Book Chapter

- Arshad, M., Syed-Hassan, S.S.A., Masood, R., Ansari, A.R., Mumtaz, A., Rahman, A., Batool, S., Atif, F.A., Muhammad, A., Rehman, A.U., Tahir, A., Saba, I. 2023. Utilization of Waste Animal Fat for Sustainable Biodiesel Production. In Climate Changes Mitigation and Sustainable Bioenergy Harvest Through Animal Waste: Sustainable Environmental Implications of Animal Waste (pp. 149-169). Cham: Springer Nature Switzerland. <u>https://doi.org/10.1007/978-3-031-26224-1</u>. ISBN: 978-33-19-664-071
- Sadia Batool, Waqas Haider, Mazhar Abbas, Iram Liaqat, Aqsa Mumtaz, Iram Saba, Muhammad Farooq, Sher Zaman Safi, Syed Shatir A. Syed-Hassan, and Muhammad Arshad. Role of Laccases to Achieve Net Zero Carbon Emissions. Springer Nature Singapore Pte Ltd. 2024 M. Arshad (ed.), Enzymes in Textile Processing: A Climate Changes Mitigation Approach, SDGs and Textiles, SpringerNature pp: 191-222. Online: 02 February 2025.S https://doi.org/10.1007/978-981-97-8058-7_8.

7. Research and Work Activities

- Member of QEC (GC Women University Sialkot).
- Member as a Scientific officer in 'NOON Botanicals' Bhalwal, Sargodha since 2019.
- Member of QEC (GC Women University Sialkot).
- Coordinator of SSDP (Self-support development programe) at GC Women University Sialkot.
- Coordinator of Intermediate Section
- Coordinator of Istakhshaf commetti (GC Women University Sialkot).
- Coordinator of B.S Admissions (GC Women University Sialkot).
- Best Reviewer of PLOS ONE and Natural Product Research (journal of Taylor and Francis).
- More than <u>35+</u> Publications. Impact factor in publications is <u>75+</u>
- More than <u>257</u>+ citations, h index 9 and i10 index 8
- Editor of Nutrition and Food Processing(IF.2.98), <u>https://auctoresonline.org/journals/nutrition-and-food-processing/editorial-board</u> and IJAIR, <u>https://ijair.in/index.php/files/about/editorialTeam</u>
- Reviewer in more than **10** international scientific journals
- Member of cometti of MPhil Thesis in 02 Universities (University of Gujrat).

8. PARTICIPATION IN INTERNATIONAL CONFERENCES / SEMINARS

- I, as an "Invited Speaker" attended Two Days 2nd International Conference on Food and Applied Sciences (ICFAS-2025)on 7th -8th April 2025 organized by University of Okara and Evolution (Pakistan) at University of Okara, Okara
- 2. Two Days 2nd International Food and Nutrition Research Conference entitled as "Challenges & Opportunities in Food, Nutrition and Allied Sciences" on 6th -7th March 2024 organized by institute of Food Science and Nutrition, University of Sargodha, Sargodha.
- 3. Two Days International Conference entitled as "Chemistry, Materials and Technology (CMT-2023) " on 15th-16th March 2023 in Iqbal Auditorium at University of Agriculture, Faisalabad.
- Two Days International Conference entitled as "Health Security 2023" organized by UVAS Lahore on 14th-15th March 2023 at Flatties Hotel Lahore.
- One Day Workshop on "How to Write Patent" organized by ORIC Riphah University Islamabad on January 26, 2023 from 10:00 am to 01:00 pm on Zoom Meeting link as https://us06web.zoom.us/j/5608689256.

- One Days training on "Atomic Absorption Spectrophotometer (AAS)" at CRL (Central research laboratory) at GC Women University Sialkot held on 23rd November 2022
- One day International Seminar entitled as "Green Extraction of Plant Bioactives" on 2nd Nov. 2022 at University of Sargodha, Sargodha.
- One day Workshop on "Technical Writing and Research Management Workshop" on 1st Nov. 2022 at University of Sargodha, Sargodha.
- **9.** International Conference entitled as "**Recent Advances in Food Chemistry and Natural Products Research**" on 27-28th Oct. 2022 at University of Sargodha, Sargodha.
- 10 days training sessions on "Faculty Professional Development training" at GC Women University Sialkot held on 21st-30th june 2022.
- 11. One day Informal session entitled on "What is research (problems and solutions" by Prof. Dr. Hadariah Bahron on 13-05-2022 at GC Women University Sialkot.
- One day Seminar entitled as "Synthesis of Metal Nanoparticles for Heterogeneous Catalysis" by Mr. Awais Ahmad on 12-05-2022 at GC Women University Sialkot
- One Day Seminar on 'Scientific Writing : A Guide' attended as presenter organized by UVAS Lahore on 06th April 2021 at CVAS Jhang-Pakistan.
- Oral presentation in Seminar entitled as "Functional uses of Essential oils" at UOS on 12th Dec. 2018 at University of Sargodha, Sargodha.
- **15.** 03 days Internatioal Conference of Biochemical and Chemical Sciences (ICBCS) on "**Go green for Sustainable Economy**" held at Department of Chemistry and Biochemistry on February 24-26, 2014, University of Agriculture Faisalabad, Pakistan
- One day seminar on "Functional Foods and Nutraceuticals" held at Department of Chemistry on March 20, 2013 at University of Sargodha, Sargodha.

9. Research Work (Internship)

The Eight Week Internship Report As An Internee And Quality Control Chemist At Distillery Plant Of NOON SUGAR MILLS LTD BHALWAL-SARGODHA on 01.03.2018 to 01.05.2018.

10. INTERNATIONAL UNIVERSITY COURSES

- An online course authorized by University of Toronto through Coursera on the topic of Bioinformatic Methods-I on 26th August 2023.
- 2. An online course of 17 credit hrs. authorized by **University of Michigan** and offered through **Coursera** on '**Environmental Hazards** and **Global Public Health**' with a complete certificate received on 27th July 2023.
- 3. An online course of 200 credit hrs. authorized by Johns Hopkins University and offered through Coursera on "Introduction to Systematic Review and Meta-Analysis" with a complete certificate received on14th July.
- 4. An Online Course of 24 credit hrs. by University of Toronto on 'Global Child Health' with a complete certificate received on 19th June 2023.
- An online course of 24 credit hrs. authorized by Johns Hopkins University and offered through Coursera on 'Good Clinical Practice' with a complete certificate received on 25th June 2023.
- 6. An Online Course of 50 credit hrs. by IGHD, **Agha Khan University Karachi** on **'Sustainable Development- Interdisciplinary Approaches'** with a complete certificate received on 2nd June 2023.
- 7. An Online Courses of 200 credit hrs in "Women supportive in Science" Programme by BMJ and UCSF on 'Research to Publication' with a complete certificate received on 19th May 2023.

11. INSTRUCTOR/COURSE DEVELOPER OF RESPECTIVE COURSES

Course Names	Sourse Code	Class	Institutuion	Year
Advanced Electroanalytical Techniques	711	MS	GC Women University	2024
(Designed by me)			Sialkot	
Characterization of Antioxidants and	713	MS	GC Women University	2024
Essential Oils			Sialkot	
(Designed by me)				
Soil Chemistry		BS	GC Women University	2025
(Designed by me)			Sialkot	
Agricultural Chemistry		BS	GC Women University	2025
(Designed by me)			Sialkot	
Forensic Chemistry		BS	GC Women University	2025
(Designed by me)			Sialkot	
Applied Chemisry-I	CHEM-312	SDP BS-VI	GC Women University Sialkot	2023
Enviromental Chemistry-II	CHEM -214	BS-IV	GC Women University	2023
		app pa tu	Sialkot	
Biochemistry- I	CHEM -213	SDP BS-VI	GC Women University Sialkot	2023
oraganic Chemistry II	CHEM -318	M.Sc-I	GC Women University	2022
			Sialkot	
Analytical Chemistry II	CHEM -303	M.Sc-I	GC Women University Sialkot	2022
Organic Chemistry II	CHEM -329	M.Sc-I	GC Women University	2022
			Sialkot	
Inorganic Chemistry I	CHEM -117	BS-I	GC Women University	2022-
			Sialkot	2023
Electroanalytical Techniques	CHEM -405	BS-VII	GC Women University	2022,
			Sialkot	2023
Applied Chemistry-II	CHEM -312	BS-VII	GC Women University Sialkot	2023
Food and Drug Analysis	CHEM -409		GC Women University	2023
			Sialkot	
Atomic Spectroscopy	CHEM -404	BS-VII	GC Women University Sialkot	2023
Food and Nutrition	0484	BA	AIOU Islamabad	2019-
	0.01	2.1		2017
Inorganic Chemistry	_	BSc, MSc	ASPIRE Gujranwala	2017-
				2022
Chemistry	-	F.Sc, BSc	PGC Bhalwal	2012-
		,		2014
Inorganic Chemistry	-	F.Sc, BSc	Superior College Rawalpindi	2012
Analytical Chemistry	-	BSc	PGC Sargodha	2009-
			_	2011
Inorganic Chemistry	-	BSc	PGC Sargodha	2009-
				2011

12. RESEARCH AND WORK ACTIVITIES

- Member as a Scientific officer in 'NOON Botanicals' Bhalwal, Sargodha since 2019.
- Supervised more than 07 MS students and Co-supervised 02 MS students
- Member of QEC (2022-2024) (GC Women University Sialkot).
- Coordinator of SSDP (Self-support development programe) (2022-Continue.....) at GC Women University Sialkot.
- Three (03) new courses for BS program and Two (02) new courses for MS program designed at Department of Chemistry, GC Women University Sialkot.
- Coordinator of Intermediate Section (2023-Continue.....)

- Coordinator of Istakhshaf commetti (2023-Continue.....) (GC Women University Sialkot).
- Coordinator of B.S Admissions (2022) (GC Women University Sialkot).
- Coordinator of BS SSSDP Admissions (2022-Continue.....) (GC Women University Sialkot).
- Best Reviewer of PLOS ONE and Natural Product Research (journal of Taylor and Francis).
- More than <u>33+</u> Publications. Impact factor in publications is <u>75+</u>
- More than <u>270</u>+ citations, h index 9 and i10 index 9
- Editor of Nutrition and Food Processing(IF.2.98), <u>https://auctoresonline.org/journals/nutrition-and-food-processing/editorial-board</u> and IJAIR, <u>https://ijair.in/index.php/files/about/editorialTeam</u>
- Reviewer in more than **10** international scientific journals