
Dr. Sumaira Miskeen



Objective

To seek a challenging job in the growth oriented organization, where I can utilize my expertise for the betterment of the organization. Eager to apply proficiencies in researching current consumer trends and latest technologies to develop new products, and work on improving existing ones.

Permanent address

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Khyber Pakhtunkhwa, Pakistan (23240)
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Current address

Department of Food Science and Technology,
The University
of Haripur, Khyber Pakhtunkhwa, Pakistan

Nationality

Pakistani

Date of birth

1992.04.20

Contact

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Passport

AD0868053

CNIC

16101-3017805-0

Education

- Sep 01, 2016 – Feb 22, 2021 Doctor of Philosophy
Kangwon National University, Chuncheon, Gangwon-do, South Korea (Public)
Dissertation: "Starch Nanoparticles: Preparation, Modification and Application as a Wall Material for Encapsulation"
Supervisor: Prof. Dr. Kim Jong-Yea
Professor, Department of Food Biotechnology and Environmental Sciences, Kangwon National University, Republic of Korea
- Sep 21, 2012 – Sep 11, 2014 Master of Science (16 years)
Department of Chemistry, University of Malakand (Public) Chakdara, 23800 Batkhela (Pakistan)e

Supervisor: Dr. Muhammad Naveed Umar
Focus on Biochemistry, Organic Chemistry
- Jun 1, 2010 – Sep 20, 2012 Bachelor of Science (14 years)
Govt. Frontier College for Women, Peshawar, Shaheed Benzeer Bhutto Women University, Peshawar.
Focus on Botany, Zoology, Chemistry
- Jul 17, 2008 – May 29, 2010 Intermediate in Pre-Medical Group (12 years)
Govt. Frontier College for Women, Peshawar

April 1, 2006 – July 16, 2008 Matriculation in Science Group (10 years)
Mardan Institute of Learning Systems School and College Sheikh
Maltoon Town Mardan
B.I.S.E Mardan, Pakistan
Focus on Biology, Physics, Mathematics, and Chemistry

Practical Experience/Training

Aug 27, 2025 → Present ✓ **Assistant Professor at Department of Food Science and Nutrition**

Employer: Women University Swabi, KP, Pakistan
Responsibilities: Head of Department, Teaching, research and contribution to the host University,

Feb 20, 2023 → Apr 30, 2025 ✓ **Lecturer**

Employer: Batkhela College of Nursing and Health Sciences, Batkhela, Malakand, KP, Pakistan
Responsibilities: Teaching, research and contribution to the host college.

Jan 12, 2022 → Jan 11, 2023 ✓ **IPFP Research Fellow (Post-Doc)**

Employer: Department of Food Science and Technology, The University of Haripur, KP-22620, Pakistan
Responsibilities:
Teaching: Delivered courses to undergraduate students, including Food Chemistry and Food Safety, imparting essential knowledge in these areas.
Research: Demonstrated proactive involvement in various Research Projects, showcasing a commitment to advancing scientific knowledge. Published a significant research article in the esteemed Food Science and Biotechnology journal, contributing to the dissemination of valuable insights.
Contribution to Host Institution: Played an active role in departmental meetings, contributing insights that fostered a collaborative academic environment. Served as a dedicated student advisor and proctor, guiding and supporting students in their academic journeys. I have worked as Departmental Focal Person for ORIC and Organized conferences, workshops and seminars along with industrial-academia collaboration facilitation.

Sep 15, 2021 → Oct 16, 2021 ✓ **National Faculty Development Program (NFDP) 2021**

Completed one-month training program on National Faculty Development Program (NFDP) 2021 from September 15, 2021 to October 16, 2021. Organized by National Academy of Higher Education (NAHE) Higher Education Commission

Personal Skills and Achievements

Languages: Pashto: Mother tongue

Urdu: National Language (fluent)

English: Fluent

Korean: Basic

Social skills and competences

Leading, responsible and possess co-ordination skills they were acquired at university where I was member of Muslim Community Chuncheon, Kangwon National University Chuncheon, South Korea.

Organizational skills and competences

- ✓ Professionally committed, good communication skills, ability to meet deadlines, enjoy working in a group. Active cooperative and social, responsible and possess co-ordination skills
- ✓ Hands-on experience in food product research
- ✓ Good knowledge of food science concepts and food handling, storage and production

Awards

- ✓ **BEST-KNU** (Bring Excellent Student To-Kangwon National University) award for PhD Program by Kangwon National University, South Korea.
- ✓ **HEC Approved Supervisor:** It refers to a designation granted by the Higher Education Commission (HEC) of Pakistan. This designation allows to supervise postgraduate students, including Master's and Ph.D. students, in their research projects and theses

Research Interests

Research interest

Food Processing and preservation
Functional foods
Natural antimicrobial agents
Nanoparticles fabrication

Student Supervised

M.Phil/MS

1. Muhammad Shahbaz. Title. Phytochemical composition, antioxidant and fatty acid profile of rose seed. Session 2020-2022. **Co-supervised**

Research Contribution

Research publications

1. **Miskeen S**, Shin HY, An YS, Lee JH, Kim JY. Citric acid-modified starch nanoparticles for saturated fatty acid encapsulation: role of hydrophobicity: S. Miskeen et al. Food Science and Biotechnology. 2025 Aug 30:1-2.
2. Khan R, Afza R, Ahmad B, **Miskeen S**, Ahmad K, Abdel-Maksoud MA, Alrokayan S, Y. Zaky M. Phytochemical composition and bioactivity of Debregeasia saeneb leaves: Insights into anti-diabetic and antioxidant properties. PloS one. 2025 Jul 2;20(7):e0326991.
3. Khalil T, Haroon M, **Miskeen S**, Sammi S, Jahangir M, Najeeb S, Nisar K, Khan A, Liaquat M, Khan I, Ha JW. Potato Chip Varietal Analysis: a

4. Khalid N, Sammi S, **Miskeen S**, Khan I, Liaquat M, Anwar K, Khan A, Shah AM, Shah AS, Al-Judaibi AA, Ha JW. Impact of salicylic acid and calcium chloride on quality attributes of peach stored at refrigeration temperature. Food Science and Biotechnology. 2023 Feb 13:1-6.
 5. **Miskeen S**, An YS, Kim JY. Application of starch nanoparticles as host materials for encapsulation of curcumin: Effect of citric acid modification. International Journal of Biological Macromolecules. 2021, 183:1-11.
 6. **Miskeen S**, Hong JS, Choi HD, Kim JY. Fabrication of citric acid-modified starch nanoparticles to improve their thermal stability and hydrophobicity. Carbohydrate Polymers. 2021, 253:117242.
 7. **Miskeen S**, Park EY, Kim JY. Controlled fragmentation of starch into nanoparticles using a dry heating treatment under mildly acidic conditions. International journal of biological macromolecules. 2019, 123:810-816.
 8. Khan I, Tango CN, **Miskeen S**, Oh D-H. Evaluation of nisin-loaded chitosan-monomethyl fumaric acid nanoparticles as a direct food additive. Carbohydrate Polymers. 2018, 184:100-107.
 9. Khan I, Tango CN, **Miskeen S**, Lee BH, Oh D-H. Hurdle technology: A novel approach for enhanced food quality and safety—A review. Food Control. 2017, 73:1426-1444.
 10. Khan I, Khan J, **Miskeen S**, Nkufi Tango C, Park Y-S, Oh D-h. Prevalence and Control of *Listeria monocytogenes* in the Food Industry—a Review. Czech Journal of Food Science. 2016, 34(6):469-487.
 11. Umar MN, Shoaib M, Sadiq M, Ayaz M, **Miskeen S**, Shah I, Khan I, et al. Synthesis and Pharmacological Properties of 1, 3-Bis [(S) Phenylethyl] Imidazolidine-2-Thione. Pharmaceutical Chemistry Journal. 2016, 50(6): 382-7.
 12. Khan I, **Miskeen S**, Khalil AT, Phull A-R, Kim SJ, Oh D-H. Foodborne pathogens: *Staphylococcus aureus* and *Listeria monocytogenes* an unsolved problem of the food industry. Pakistan Journal of Nutrition. 2016, 15(6):505.
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Books/chapters

1. Khan, I., Sammi, S., Ahmad, B., Ullah, I., **Miskeen, S.**, Liaquat, M., & Jahangir, M. (2022). Sublethal Injury Adaptation in Foodborne Pathogens Stress Responses of Foodborne Pathogens (pp. 517-536): Springer.
2. Chelliah R, Daliri EB, Elahi F, Khan I, Wei S, Yeon SJ, Saravanakumar K, Madar IH, **Miskeen S**, Sultan G, Arockianathan M. Application of Next-Generation Sequencing Techniques in Food-Related Microbiome Studies. Sequencing Technologies in Microbial Food Safety and Quality. 2021 Apr 15: (pp. 441-460). CRC Press.
3. Chelliah R, Daliri EB, Elahi F, Khan I, Wei S, Yeon SJ, Saravanakumar K, Madar IH, **Miskeen S**, Sultan G, Arockianathan M. Impact of Sequencing and Bioinformatics Tools in Food Microbiology. Sequencing Technologies in Microbial Food Safety and Quality. 2021 Apr 15: (pp. 217-274). CRC Press.

Conferences/Seminar attended

1. **Speaker** at International Conference on Emerging Technologies: Innovations for Sustainable Development Goals, Held on Sep 09-11, 2024. Presentation title: Starch Nanoparticles: A Sustainable Approach for Food Delivery Systems and Achieving SDGs. Organized by The University of Haripur, Pakistan at Bahrain Swat.
2. **Organizer** at International Conference on Emerging Technologies: Innovations for Sustainable Development Goals, Held on Sep 09-11, 2024. Organized by The University of Haripur, Pakistan at Bahrain Swat. Sponsored b
3. **Organizer** of "Halal Stakeholder's Conference: Opportunities and Challenges in Halal Sector". Organized by: Food Science and Technology, The University of Haripur. Location: The University of Haripur. Attended on: October 16-17, 2023. Sponsored by: HEC, PSF, UOH.
4. **Organized** Seminar on "Food Expo on World Food Day" on 16th October 2022 held on 19th October 2022. Venue: Iqbal Hall, The University of Haripur, KP, Pakistan.
5. **Attended** "International Food and Nutrition Conference" from 18th August to 20 August 2022. Venue: University of Swat. Organized by Gomal University Dera Ismail Khan with Evolution Pakistan.
6. **Attended** "Food Safety and Nutrition Expo 2022" held on October 26-27 2022. Venue: PCSIR Laboratories Complex, Peshawar. Organized by KP Food Safety and Halal Food Authority in collaboration with University of Haripur.
7. **Organized** Seminar on "World Food Safety Day" on 6th June 2022. Venue: Iqbal Hall, The University of Haripur, KP, Pakistan.
8. **Organized** one-day Seminar on "Food Safety Concerns and Role of KP-Food Safety and Halal Food Authority on 1st April 2022. Venue:

9. **Attended** two days 31st All Pakistan Food Science Conference & Food and Nutrition Expo-2022 on topic “Transformation of Food System for Sustainable Food Future” Hosted by Institute of Food and Nutritional Sciences PMAS-Arid Agriculture University Rawalpindi on 18-19 March 2022.
 10. **Poster presentation** at three days KFN (Korean Society of Food And Nutrition Science) International Symposium and annual meeting. South Korea, Jeju on 21-23 october 2020. Topic: Crosslinking modification of normal corn starch nanoparticles to enhance their thermal stability and hydrophobicity.
 11. **Poster presentation** at three days KFN (Korean Society of Food And Nutrition Science) International Symposium and annual meeting. South Korea, Jeju on 25-27 october 2017. Topic: Preparation of starch nanoparticles using dry heating under optimized acid-ethanol condition.
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