

## Faculty Portfolio

### Dr. Jalal Uddin Amin Uddin

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### Education:

Year of Graduation	Qualifications (Specializations if any)	University/College, Country
2016	PhD (Analytical Chemistry)	Faculty of Science, Department of Chemical Sciences, University of Padova, Italy.
2007	M.Sc. (Organic Chemistry)	Faculty of Science, Department of Chemistry, University of Karachi, Pakistan
2004	B.Sc. (Chemistry)	Faculty of Science, University of Karachi, Pakistan

### Professional experience:

Year	Positions	University/College, Country
June 2018-present	Assistant Professor	College of Pharmacy, King Khalid University, Abha, KSA
April 2017-March 2018	Postdoctoral Research Associate	Chemistry and Biochemistry Department Montana State University (MSU), United States
May 2016 – October, 2016	Senior Research Fellow	H.E.J Research Institute of Chemistry, University of Karachi, Pakistan.
July 2009 – July 2012	Junior Research Fellow	H.E.J Research Institute of Chemistry, University of Karachi, Pakistan

### Community service activities **(Delete the excessive column/this section if necessary)**

Year	Positions & Name of the Project	University/Company, Country
29 <sup>th</sup> Jan 2023	<b>Organizer</b> Annual Periodic Program Review at College of Pharmacy, KKU	King Khalid University

**Academic/research awards: (Delete the excessive column/ this section if necessary)**

Year/Duration of Award	Name of the Award	University/Company, Country
2023 (Semester 442)	3 <sup>rd</sup> Poster Award- Master Research student	King Khalid University, KSA
2022	University President Award “Distinguished Researcher”	Deanship of Scientific Research, King Khalid University.
2019 (Semester 411)	3 <sup>rd</sup> Prize – Student research group	King Khalid University, KSA
2017- 2	W.M. Keck Foundation research fellowship	Montana State University, United States
2012 - 2016	Erasmus Mundus Scholarship	Faculty of Science, Department of Chemical Sciences, University of Padova, Italy.
2009 – 2012	Sir Prof. Hamid Ali khan scholarship for young scientist	H.E.J Research Institute of Chemistry, University of Karachi, Pakistan

**Workshops/ Trainings: (Delete the excessive column/ this section if necessary)**

Year	Title	University/Company, Country
July 1-4, 2014	Summer School on Magnetic Resonance in Food Science	Porto Conte Research Centre, Alghero, Sardinia (Italy).
February 16–20, 2015	EMBO Practical Course ‘Metabolomics Bioinformatics for Life Scientists’	University of Cambridge, Hinxton, United Kingdom
May 15, 2009	One-day workshop “Natural Product-Based Drugs and Other Botanicals-Present Status and Future Prospects”	HEJ, ICCBS, University Karachi, Pakistan
Nov 26-27, 2010	Training Courses cum Workshop on Application of Modern Mass Spectrometry for Natural Products-based Drug Development.	HEJ, ICCBS, University Karachi, Pakistan

**Research interests:**

- HPLC and spectroscopic method development of Pharmaceutical and cosmetics products
- Food safety, authenticity, and quality evaluation

- NMR and Mass-based Metabolomic/Metabonomic approach in nutritional and epidemiological studies
- Metabonomic analysis of biological fluid to assess the biomarker for diseases or dietary intervention studies
- Geographical and Botanical origin of food matrixes by NMR and Mass Metabolomics.
- Gas phase fragmentation pattern study of natural products and elucidation of fragmentation pathway with ESI-QqTOF-MS/MS
- Metabolomics and Proteomics study of extremophiles
- Metal bioaccumulation and health risk assessment

#### Teaching experience:

- Teaching Pharmaceutical Analytical Chemistry 1 & 2 courses at King Khalid University, 2018-2020.
- Teaching Pharmaceutical Organic Chemistry courses at King Khalid University, 2018-2019.

#### Professional membership: (limit to 5)

Year	Name of the professional Body	Role
Lifetime membership	Pakistan Chemical Society	Member
2012-2013	IUPAC affiliated membership	Member

#### Research grants: (limit to recent 3-5 grants)

Year/Duration of Grant	Title of the Project	Awarding Body
October 2020-Present	Ionic Liquid Moderated Metal Nanostructures as Improved Sensing Materials for Detection of Uric Acid. <b>Grant number: GRP/92/41</b>	Deanship of Scientific Research, King Khalid University
2021-2022	Fabrication of Dopamine and Nitrite Biosensors Based on Ionic Liquids and Carboxylic Acids Functionalized Metal Nanostructures <b>Grant number: RGP.1/259/42</b>	Deanship of Scientific Research, King Khalid University
2021-2022	Evaluation of biological activities, physiochemical, mineral content, and quality parameters of some important food commodities in the Saudi market; a special focus on sesame seeds and date palm <b>Grant number: RGP.2/117/42</b>	Deanship of Scientific Research, King Khalid University
2022-2023	Synthesis, characterization, and pharmacological investigation of biologically active compounds	Deanship of Scientific

	against life-threatening diseases; <i>In silico</i> , <i>in-vitro</i> , <i>in-vivo</i> , and molecular docking approach <b>Grant number: RGP.2/64/43</b>	Research, King Khalid University
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**Publications: (Include recent 5-10 publications)**

Uddin, J., Ullah, S., Halim, S. A., Waqas, M., Ibrar, A., Khan, I., ... & Al-Harrasi, A. (2023). Triazolothiadiazoles and Triazolothiadiazines as New and Potent Urease Inhibitors: Insights from In Vitro Assay, Kinetics Data, and In Silico Assessment. *ACS omega*, 8(35), 31890-31898.

Murtaza, M., Hussain, A. I., Kamal, G. M., Nazir, S., Chatha, S. A. S., Asmari, M., ... & Murtaza, S. (2023). Potential Applications of Microencapsulated Essential Oil Components in Mosquito Repellent Textile Finishes. *Coatings*, 13(8), 1467.

Shah, S. M. Z., Ramzan, M., Khan, M. N., Shadab, H., Usman, M., Rahman, S., ... & Musharraf, S. G. (2023). Untargeted screening of plant metabolites based on data-independent and data-dependent acquisition modes using LC-ESI-QTOF-MS: *Tribulus terrestris* L. as a case study. *Arabian Journal of Chemistry*, 16(8), 104978.

Kamal, G. M., Nazi, N., Sabir, A., Saqib, M., Zhang, X., Jiang, B., ... & Murtaza, S. (2023). Yield and Chemical Composition of Ginger Essential Oils as Affected by Inter-Varietal Variation and Drying Treatments of Rhizome. *Separations*, 10(3), 186.

Kamal, G. M., Rehmani, M. N., Iqbal, S. Z., Uddin, J., Nazir, S., Rehman, J. U., ... & Khaneghah, A. M. (2022). The determination of potentially toxic elements (PTEs) in milk from the Southern Cities of Punjab, Pakistan: A health risk assessment study. *Journal of Food Composition and Analysis*, 108, 104446.

Uddin, J., Muhsinah, A. B., Imran, M., Khan, M. N., & Musharraf, S. G. (2022). Structure-fragmentation study of pentacyclic triterpenoids using electrospray ionization quadrupole time-of-flight tandem mass spectrometry (ESI-QTOFMS/MS). *Rapid Communications in Mass Spectrometry*, 36(4), e9243.

Kamal, G. M., Uddin, J., Muhsinah, A. B., Wang, X., Noreen, A., Sabir, A., & Musharraf, S. G. (2022). <sup>1</sup>H NMR-Based metabolomics and <sup>13</sup>C isotopic ratio evaluation to differentiate conventional and organic soy sauce. *Arabian Journal of Chemistry*, 15(1), 103516.

Ali, A., **Uddin, J.**, Ansari, HN, Firdous, S., Musharraf, SG. (2015). Electrospray Tandem Mass Spectrometric Study of a Furo-Furan Lactone in *Heliotropium eichwaldi*. *J Chromatogr Sep Tech* 6: 307.

Musharraf, S. G., **Uddin, J.**, Siddiqui, A. J., & Akram, M. I. (2016). Quantification of aroma constituents of mango sap from different Pakistan mango cultivars using gas chromatography triple quadrupole mass spectrometry. *Food Chemistry*, 196, 1355-1360.

Dall'Acqua, S., Stocchero, M., Boschiero, I., Schiavon, M., Golob, S., **Uddin, J.** ... & Schievano, E. (2016). New findings on the in vivo antioxidant activity of Curcuma longa extract by an integrated <sup>1</sup>H NMR and HPLC–MS metabolomic approach. *Fitoterapia*, 109, 125-131.

Schievano, E., Finotello, C., Uddin, J., Mammi, S., & Piana, L. (2016). Objective Definition of Monofloral and Polyfloral Honeys Based on NMR Metabolomic Profiling *J. Agric. Food Chem.* 2016, 64, 3645–3652.

### Book Chapter

Kamal, G. M., Uddin, J., Tahir, M. S., Khalid, M., Ahmad, S., & Hussain, A. I. (2021). Nuclear Magnetic Resonance Spectroscopy in Food Analysis. *Techniques to Measure Food Safety and Quality: Microbial, Chemical, and Sensory*, 137-168.

Kamal, G. M., Noreen, A., Tahir, M. S., Zahra, S. M., Uddin, J., Liaquat, A., ... & Nayik, G. A. (2023). Isolation of gluten from wheat flour and its structural analysis. In *Handbook of Natural Polymers, Volume 1* (pp. 275-292). Elsevier.

Uddin, J., Ahmed, H., Asiri, Y. I., Kamal, G. M., & Musharraf, S. G. (2023). Ginger essential oil: Chemical composition, extraction, characterization, pharmacological activities, and applications. In *Essential Oils* (pp. 345-376). Academic Press.

Kamal, G. M., Zubairi, W., Uddin, J., Hashmi, M. I. U., Khalid, M., & Shabir, A. (2022). Biogenic Amines. In *Handbook of Plant and Animal Toxins in Food* (pp. 411-432). CRC Press.

### Book Edit

Advanced Techniques of Honey Analysis: Characterization, Authentication and Adulteration. Elsevier publisher (Expected in March 2024)

### Conference attendance/presentations: (Include recent 3 presentations)

J. Uddin, E. Schievano, L. Piana & S. Mammi. An NMR-based metabolomic approach to seek reliable markers for different botanical origins of mono-floral Italian honey. *J Analytical & Bioanalytical Techniques* 2015, 6:4.

Uddin J. Bother B. and Copie V. LC-MS and NMR Analysis of Microbial Components from Sediments of Thermoalkaline Hot Springs of Yellowstone National Park. **Metabolic Pathway Analysis Conference** July 24-28, 2017, Bozeman, Montana, U.S.

Uddin J. Mass and NMR Spectrometry in Food Metabolomics. **International conference of chemistry and its role in science (ICCRS-2)**, August 2-4, 2019, Department of Chemistry, University of Karachi, Pakistan.