

# Prof. DR. MUHAMMAD RIAZ

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## CONTACTS

### CURRENT ADDRESS

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### PERMANENT ADDRESS

M. Riaz s/o M. Bashir,  
Mohalla Qasaiyan, Village &  
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Gujranwala, Pakistan.

## ACADEMIC RECORD

### Ph. D. (2005-2010)

Subject: Food Biotechnology  
Thesis Title: Engineering of Microbial Glucoamylases by Chemical Modification Techniques for Industrial Application  
Place: National Institute for Biotechnology and Genetic Engineering (NIBGE) Faisalabad, PAKISTAN.

### IRSIP Training (Feb, 2008-Jul, 2008)

Project Title: Purification, peptide mass finger printing and crystallization of glucoamylases from *Aspergillus niger* parent and its deoxy-D-Glucose resistant mutant  
Place: Institute of Structural Molecular Biology, School of Biological Sciences, University of Edinburgh, UK

### M. Sc. (Hons.) (2000-2002)

Subject: Food Technology  
Thesis Title: Comparative Studies on the Quality of Commercially Available Sweetened Condensed Milk  
Major Courses: Industrial Food Microbiology and Biotechnology, Food Toxicology, Analytical Techniques in Nutrition, Introduction to Biochemistry, Physiology and Biochemistry of Nutrition, Commercial Manufacturing of Cereal Products, Quality Control in Food Industries  
Place: National Institute of Food Science and Technology, University of Agriculture Faisalabad, PAKISTA.

### B. Sc. (Hons.) Agri (1996-2000)

Subject: Food Technology  
Major Courses: General Microbiology, Chemistry and Fundamental Biochemistry, Principles of Food Preservation, Introduction to Foods and Nutrition, Fundamentals of Milk Processing, Introduction to Cereal Technology, Introduction to Processing of Fats and Oils, Food Microbiology, Chemistry and Biochemistry of Foods, Food Analysis and Evaluation, Post Harvest Physiology of Fruits and Vegetables, Process Engineering, National and International Food Laws  
Place: National Institute of Food Science and Technology, University of Agriculture Faisalabad, PAKISTA.

## INTERNATIONAL PUBLICATIONS (Impact Factor 170.018)

1. Khurram Muaz, **Muhammad Riaz**, Carlos Augusto Fernandes Oliveira Amir Ismail, Saeed Akhtar, Habibullah Nadeem, Shinawar Waseem Ali. 2023. Aflatoxin M1 removal from milk using activated carbon and bentonite combined with lactic acid bacteria cells Journal: International Journal of Dairy Technology. Accepted.
2. Hassan Anwar, Talha Anwar, Khurram Muaz, **Muhammad Riaz** and Rabia Anwar. 2023. Comparative studies of chapaties made with different flour combinations using organoleptic properties and image analysis. Pakistan Journal of Agricultural Research. 36(4):311-317.
3. Muzzammal Ahmed Muzzafar, Shinawar Waseem Ali, Munawar Iqbal, Maryam Saeed, Mateen Ahmad, Muhammad Rizwan Tariq, Abdikhaliq Mursal Yusuf, Ayesha Murtaza, Aftab Ahmad, Shazia Yaqub, **Muhammad Riaz**. 2023. Comparative evaluation of ethylene oxide, electron beam and gamma irradiation treatments on commonly cultivated red chilli cultivars (Kunri and Hybrid) of Sindh, Pakistan. Heliyon, 10 (1)xxxx. 1-s2.0-S2405844023106840-main.
4. Khurram Muaz, **Muhammad Riaz\***, Carlos Augusto Fernandes de Oliveira, Saeed Akhtar, Shinawar Waseem Ali, Habibullah Nadeem, Sungkwon Park and Balamuralikrishnan Balasubramanian. 2022. Aflatoxin M1 in milk and dairy products: global occurrence and potential decontamination strategies. Toxin Reviews. [41\(2\):588-605](#). (4.266)
5. Mamoon Amir, **Muhammad Riaz\***, Yung Fu Chang, Amir Ismail, Aneela Hameed and Muhammad Ahsan. 2021. Antibiotic Resistance in Diarrheagenic Escherichia coli Isolated from Broiler Chickens. Journal of Food Quality and Hazards Control. 8(2):78-86.
6. Khurram Muaz, **Muhammad Riaz\***, Roice Eliana Rosim, Saeed Akhtar, Carlos Humberto Corassin, Bruna Leonel Gonçalves, Carlos Augusto Fernandes Oliveira. 2021. In vitro ability of nonviable cells of lactic acid bacteria strains in combination with sorbitan monostearate to bind to aflatoxin M1 in skimmed milk. LWT-Food Science and Technology. <https://doi.org/10.1016/j.lwt.2021.111666> (IF 4.952).
7. Mamoon Amir, Salman Asghar, Muhammad Ahsin, Shahid Hussain, Amir Ismail, **Muhammad Riaz** and Safina Naz. 2021. Arsenic exposure through drinking ground water and consuming wastewater-irrigated vegetables in Multan, Pakistan. Environmental Geochemistry and Health. DOI: [10.1007/s10653-021-00940-z](https://doi.org/10.1007/s10653-021-00940-z) (IF 4.609)
8. Amir Ismail, Yun Yun Gong, Michael Routledge, Saeed Akhtar, **Muhammad Riaz**, Iqra Naeem, and Carlos Augusto Fernandes de Oliveira. 2021. Early life exposure to dietary aflatoxins, health impact and control perspectives: A review. Trends in Food Science & Technology. 112(6):212-224. (IF 12.563).
9. Aqib Javed, Iqra Naeem, Noreddine Benkerroum, Muhammad Riaz, Saeed Akhtar, Amir Ismail, Muhammad Sajid, Muhammad Tayyab Khan and Zubair Ismail. 2021. Occurrence and health risk assessment of aflatoxins through intake of eastern herbal medicines collected from four districts of Southern Punjab-Pakistan. International Journal of Environmental Research and Public Health. 18(18)-9531. (IF 4.614)
10. Khurram Muaz and **Muhammad Riaz\***. 2021. Decontamination of aflatoxin M1 in milk through integration of microbial cells with sorbitan monostearate, activated carbon and bentonite. Journal of Animal and Plant Sciences. 31(1):235-245. (IF 0.49)
11. Amir Ismail, Saeed Akhtar, **Muhammad Riaz**, Yun Yun Gong, Michael N. Routledge and Iqra Naeem. 2020. Prevalence and exposure assessment of aflatoxins through black tea consumption in the Multan city of Pakistan and the impact of tea making process on aflatoxins. Frontiers in Microbiology. 11(). Doi:10.3389/fmicb.2020.00446. (IF 5.640).
12. Saeed Akhtar, **Muhammad Riaz**, Iqra Naeem, Yun Yun Gong, Amir Ismail, Majid Hussain and Kashif Akram. 2020. Risk Assessment of aflatoxins and heavy metals through intake of

- branded and non-branded spices collected from the markets of Multan city of Pakistan. Food Control. 112 (): 107132. (IF 5.548)
13. Subhan Danish, Muhammad Zafar-ul-Hae, Shahid Hussain, **Muhammad Riaz** and Muhammad Farooq Qayyum. 2020. Mitigation of drought stress in maize through inoculation with drought tolerant ACC deaminase containing PGPR under exenic conditions. Pakistan Journal of Botany. 52(1):49-60. (IF 0.972)
  14. Mamoona Amir, **Muhammad Riaz\***, Yung Fu Chang, Saeed Akhtar, Habibullah Nadeem, Zulfiqar Ahmad and Muhammad Nadeem. 2019. Spread of antibiotic resistant *Escherichia coli* from broiler to human populations. Pakistan Journal of Agricultural Sciences. 56(4): 997-983. (IF 0.748).
  15. Maryam Sindu, Umar Farooq, Afshan Shafi, Kashif Akram, Zafar Hayat, **Muhammad Riaz** and Muhammad Shahbaz. 2019. A comparative, in-vivo anti-diabetic study of persimmon peel powder in alloxan induced rabbits. Asian Journal of Agriculture and Biology, 7(2):176-182.
  16. Mateen Ahmad, Muhammad Awais, Shinawar Waseem Ali, Hafiz Azhar Ali Khan, **Muhammad Riaz**, Asif Sultan, Muhammad Shakeel Bashir and Adnan Ishtiaq Chaudhry. 2019. Occurrence of Aflatoxin M1 in raw and processed milk and assessment of daily intake in Lahore, Multan cities of Pakistan. Food Additives and Contaminants: Part B, 12(1): 18-23). (IF 3.407).
  17. Zulfiqar Ahmad , Riaz Hussain , Muhammad Riaz , Muhammad Ammar Khan , Muhammad Nadeem, Kashif Akram, Muhammad Rafay, Muhammad Farhan Rashid , Akhtar Rasool Asif and Abdul Ghaffar. 2019. Mitigation of toxic effects caused by tartrazine in Wistar rats through oral administration of melon seed oil. Pakistan Journal of Agricultural Sciences, 56(2):435-442. (IF 0.748)
  18. Amir Ismail, **Muhammad Riaz\***, Saeed Akhtar, Joseph E. Goodwill and Jin Sun. 2019. Heavy Metals in Milk: Global Prevalence and Health Risk Assessment. Toxin Reviews. 38(1):1-12. (IF 4.266).
  19. Khurram Muaz, **Muhammad Riaz\***, Saeed Akhtar, Sungkwon Park and Amir Ismail. 2018. Antibiotic residues in chicken meat: global prevalence, threats and decontamination strategies. Journal of Food Protection. 81(4):619-627. (IF 2.077)
  20. Adnan Amjad, Muhammad Atif Randhawa, Saeed Akhtar, Muhammad Binyameen, **Muhammad Riaz** and Muhammad Zafarullah. 2018. Assessment of Imidacloprid and Acetamiprid Residues in Okra and Eggplant Grown in Peri-Urban Areas and their Dietary Intake in Humans. Journal of the Chemical Society of Pakistan. 40(1):225-232. (IF 0.536)
  21. Saira Javed, Farrukh Azeem, Sabir Hussain, Ijaz Rasul, Muhammad Hussain Siddique, **Muhammad Riaz**, Muhammad Afzal, Ambreen Kouser, Habibullah Nadeem. 2018. Bacterial Invertases: A review on purification and characterization. Progress in Biophysics & Molecular Biology. 132(2018): 23-34. (3.667)
  22. Muhammad Qamar Saleem, Saeed Akhtar, Muhammad Imran, Muhammad Riaz, Abdur Rauf, Mohammad S Mubarak, Sami Bawazeer, Saud S Bawazeer, MF Hassanien. 2018. Antibacterial and anticancer characteristics of black carrot (*Daucus Carota*) extracts. Journal of Medicinal and Spice Plants 22 (1):40-44. (IF 0.91)
  23. Muhammad Rizwan Javed, Muhammad Hamid Rashid, **Muhammad Riaz**, Habibullah Nadeem, Muhammad Qasim and Nourin Ashiq. 2018. Physicochemical and Thermodynamic Characterization of Highly Active Mutated *Aspergillus niger*  $\beta$ -glucosidase for Lignocellulose Hydrolysis. Protein and Peptide Letters. 25(2):208-219. (IF 1.890)
  24. Mamoona Amir, **Muhammad Riaz\***, Yung-Fu Chang, Saeed Akhtar, Sang Ho Yoo, Ahsan Sattar Sheikh and Muhammad Kashif. 2017. Impact of unhygienic conditions during slaughtering and processing on spread of antibiotic resistant *Escherichia coli* from poultry. Microbiology Research, 8(2):35-40. (13-11-2017)

25. Saeed Akhtar, Abdul Rauf, Muhammad Imran, Muhammad Qamar, Muhammad Riaz, Muhammad S. Mubarak. 2017. Black carrot (*Daucus carota* L.) dietary and health promoting perspectives of its polyphenols: A review. Trends in Food Science & Technology. 66:36-47 (IF 12.563).
26. Neeraja Recharla, Muhammad Riaz, Sanghoon Ko, Sungkwon Park. 2017. Novel technologies to enhance solubility of food-derived bioactive compounds: A review. Journal of Functional Foods 39 (2017) 63–73. (IF 4.451).
27. Amir Ismail, Robert E. Levin, Muhammad Riaz\*, Saeed Akhtar, Yun Yun Gong and Carlos A. F. de Oliveira. 2017. Effect of Different Microbial Concentrations on Binding of Aflatoxin M1 and Stability Testing. Food Control. 73: 492-496 (IF 5.548).
28. Khawar Jabran, Muhammad Riaz, Mubshar Hussain, Wajid Nasim, Umar Zaman, Shah Fahad and Bhagirath Singh Chauhan. Water-saving technologies affect the grain characteristics and recovery of fine-grain rice cultivars in semi-arid environment. Environmental Science and Pollution Research. 24(14)12971-12981 (IF. 4.223)
29. Amir Ismail, Muhammad Riaz\*, Saeed Akhtar, Amjad Farooq, Muhammad Arif Shahzad and Ahmad Mujtaba. 2017. Intake of Heavy Metals through Milk and Toxicity Assessment. Pakistan Journal of Zoology. 49(4): 1413-1419. (IF 0.831).
30. Amir Ismail, Muhammad Riaz\*, Saeed Akhtar, Sang-Ho Yoo, Sungkwon Park, Muhammad Abid, Muhammad Aziz and Zulfiqar Ahmad. 2017. Seasonal variation of aflatoxin B1 content in dairy feed. Journal of Animal and Feed Sciences. 26(1) 33-37 (IF 1.525).
31. Muhammad Rizwan, Sarfraz Ali, Muhammad Binyamin and Muhammad Riaz. 2017. Larval habitat substrates could affect the biology and vectorial capacity of *Culex quinquefasciatus* (Diptera: Culicidae). Journal of Medical Entomology. 54(3):638-645 (2.278).
32. Tariq Ismail, Saeed Akhtar, Muhammad Riaz, Aneela Hameed, Ahsan Sattar Sheikh and Khurram Afzal. 2017. Oxidative and Microbial stability of pomegranate peel based extracts and bagasse supplemented cookies. Journal of Food Quality. 39:658-668. (IF. 2.450)
33. Sungil Kim, Muhammad Riaz, Amjad Farooq and Sungkwon Park. 2017. Effect of distillers dried grains with solubles on quality traits and fatty acid composition of pork belly. Pakistan Journal of Zoology. 49(1):73-80. (IF 0.831)
34. Saeed Akhtar, Muhammad Arif Shahzad, Amir Ismail, Tariq Ismail, Aneela Hameed and Muhammad Riaz\*. 2017. Determination of aflatoxin M1 and heavy metals in infant formula milk brands available in Pakistani markets. Korean Journal for Food Science of Animal Resources. 37(1):79-86. (2.622)
35. Khawar Jabran, Nadeem Akbar, Wajid Hussain, Mubshar Hussain and Muhammad Riaz\*. 2017. Growth and physiology of basmati rice under conventional and water-saving production systems. Archives of Agronomy and Soil Science. Accepted (IF 3.092)
36. Amir Ismail, Saeed Akhtar, Robert E. Levin, Tariq Ismail, Muhammad Riaz\* and mamoon amir. 2016. Aflatoxin M1: prevalence and decontamination strategies in milk and milk products. Critical Reviews in Microbiology. 42(3):418-427. (IF 7.624)
37. Muhammad Imran, Masood Sadiq Butt, Saeed Akhtar, Muhammad Riaz, Muhammad Jawad Iqbal and Hafiz Ansar Rasool Suleria. 2016. Quantification of mangiferin by high pressure liquid chromatography; physicochemical and sensory evaluation of functional mangiferin drink. Journal of Food Processing and Preservation. 40(4):760-769. (IF 2.190)
38. Tariq Ismail, Saeed Akhtar, Piero Sistlili, Muhammad Riaz, Amir Ismail and Ronal G. Labbe. 2016. Antioxidant, antimicrobial and urease inhibitory activities of phenolics-rich pomegranate peel hydro-alcoholic extracts. Journal of Food Biochemistry. 40(4):550-558. (IF 2.720)

39. Amir Ismail, **Muhammad Riaz\***, Robert E. Levin, Saeed Akhtar, Yun Yun Gong and Aneela Hameed. 2016. Seasonal prevalence level of aflatoxin M1 and its estimated daily intake in Pakistan. *Food Control*. 60: 461-465. (IF 5.528).
40. Tanweer Aslam Gondal, Nuzhat Huma, Saeed Akhtar, Muhammad Riaz, Muhammad Imran, Ahmad Bilal Waqar, Ali Imran and Muhammad Atif. 2016. Potential significance of adjunct cultures and raw milk on physicochemical analysis of cheddar cheese. *Journal of Environmental and Agricultural Sciences*. 8:29-37.
41. Amir Ismail, **Muhammad Riaz\***, Saeed Akhtar, Tariq Ismail, Zulfiqar Ahmad and Muhammad Saad Hashmi. 2015. Estimated daily intake and health risk of heavy metals by consumption of milk. *Food Additives and Contaminant Part-b*. 8(4): 260-265. (IF 3.407)
42. Habibullah Nadeem, Muhammad Hamid Rashid, Muhammad Hussnain Siddique, Farrukh Azeem, Saima Muzammil, Muhammad Rizwan Javed, Muhammad Amjad Ali, Ijaz Rasul and **Muhammad Riaz**. 2015. Microbial Invertases: A review on kinetics, thermodynamics and physicochemical properties. *Process Biochemistry*. 50(8): 1202-1210. (IF. 3.757)
43. Asad Nawaz, Shinawar Waseem Ali, **Muhammad Riaz**, Zulfiqar Ahmad. Comparison of the quality of fruit juices being sold in local markets of Lahore, Pakistan. *Journal of Hygienic Engineering and Design*, 13 (2015), pp. 35-39.
44. Muhammad Riaz\*, Mamoona Amir, Saeed Akhtar, Amjad Farooq, Tariq Ismail, Amir Ismail and Aneela Hameed. 2015. Bacteriological analysis of street vended raw milk in Multan. *Pakistan Journal of Zoology*. 47(2): 568-571. (IF. 0.831)
45. Saeed Akhtar, **Muhammad Riaz**, Aneela Hameed, Tariq Ismail and Amir Ismail. 2014. Food safety conundrum- a Pakistan's scenario. *Quality Assurance and Safety of Crops & Foods*. 7(4): 559-567. (IF. 0.922)
46. Amir Ismail, **Muhammad Riaz\***, Saeed Akhtar, Tariq Ismail, Zulfiqar Ahmad and Shinawar Waseem Ali. 2014. Improvement of quality attributes of bread by the application of phytases from an indigenous strain of *Aspergillus niger*. *Pakistan Journal of Agricultural Sciences*. 51(3): 1-8. (IF 0.748)
47. Zulfiqar Ahmad, Masood Sadiq Butt, Anwar Ahmed, **Muhammad Riaz**, Syed Mubashar Sabir, Umar Farooq, Fazal Ur Rehman. 2014. Effect of *Aspergillus niger* xylanase on dough characteristics and bread quality attributes. *Journal of Food Science and Technology-Mysore* 51(10): 2445-2453 (IF 2.701).
48. Aneela Hameed, Raza Hussain, Tahir Zahoor, Saeed Akhtar, Muhammad Riaz and Tariq Ismail. 2014. Effect of oxytocin on enzyme activities in bovine milk. *International Dairy Journal*. 39(2):229-231. (IF 3.032)
49. Tariq Ismail, Saeed Akhtar, **Muhammad Riaz**, Amir Ismail. 2014. Effect of pomegranate peel supplementation on nutritional organoleptic and stability properties of cookies. *International Journal of Food Sciences and Nutrition*. 65(6):661-666. (IF 3.833)
50. Amir Ismail, **Muhammad Riaz\***, Saeed Akhtar, Tariq Ismail, Mamoona Amir, Zafar-ul-Hye. 2014. Heavy Metal Status in Vegetables and Respective Soils Irrigated by Canal, Municipal Waste and Tube-well Waters. *Food Additives & Contaminants: Part B*. 7(3): 213-219 (IF. 3.407)
51. Muhammad Sufyan Siddique, Muhammad Tauseef Sultan, Saeed Akhtar, **Muhammad Riaz**, Muhammad Sibt-e-Abbas, Amir Ismail and Farooq Hafeez. 2014. Utilization of mango kernel lipid fraction to replace normal shortenings in cereal baked products. *Food Science and Technology Research*. 20(1):13-21. (IF-0.668)
52. Zulfiqar Ahmad, Masood Sadiq Butt and **Muhammad Riaz**. 2013. Partial purification and characterization of xylanase produced from *Aspergillus niger* using wheat bran. *Pakistan Journal of Agricultural Sciences*, 50(3): 433-437 (IF 0.748)
53. Zulfiqar Ahmad, Masood Sadiq Butt, Riaz Hussain, Anwar Ahmed and **Muhammad Riaz**. 2013. Effect of oral application of xylanase on some hematological and serum biochemical parameters in broilers. *Pakistan Veterinary Journal*. 33(3): 388-390 (IF 1.318)

54. Saeed Akhtar, Anwaar Ahmed , Asif Ahmad, Zulfiqar Ali, **Muhammad Riaz** and Tariq Ismail. 2013. Iron Status of Pakistani Population-Current Issues and Strategies. *Asia Pacific Journal of Clinical Nutrition*, 22(3): 340-347 (IF 1.662)
55. Saeed Akhtar, **Muhammad Riaz\*** Tariq Ismail and Umar Farooq. 2013. Microbiological safety of street vended fresh fruit juices, drinks and conventional blends in Multan-Pakistan. *Pakistan Journal of Agricultural Sciences*, 50(2): 255-260 (IF 0.748)
56. Saeed Akhtar, Tariq Ismail, **Muhammad Riaz**. 2013. Flaxseed- A Miraculous Defense Against Some Critical Maladies- A review. *Pakistan Journal of Pharmaceutical Sciences*, 26 (1): 199-208 (IF 0.684)
57. **Muhamamd Riaz\***, Muhammad Hamid Rashid, Lindsay Sawyer, Saeed Akhtar, Muhammad Rizwan Javed, Habibullah Nadeem and Martin Wear. 2012. Physio-chemical properties and kinetics of glucoamylase produced from deoxy-D-glucose resistant mutant of *Aspergillus niger* for soluble starch hydrolysis. *Food Chemistry*. 130:24-30. (IF 7.514)
58. Muhammad Rizwan Javed, Muhammad Hamid Rashid\*, Zahid Mukhtar, **Muhammad Riaz**, HabibUllah Nadeem, Tayyba Huma & Nourin Ashiq. 2011. Kinetics and thermodynamics of high level  $\beta$ -glucosidase production by mutant derivative of *Aspergillus niger* under submerged growth conditions. *African Journal of Microbiology Research*. 5:2528-2538. (IF. 0.54).
59. Saeed Akhtar, Faqir M Anjum, Zia U Rehman and **Muhammad Riaz**. (2011). Effect of zinc and iron fortification of feed on liver and thyroid function. *Biological Trace Element Research*. 144(1):894-903. (IF 3.738)
60. Saeed Akhtar, Faqir Muhammad Anjum, Zia-Ur-Rehman, Muhammad Tauseef Sultan, **Muhammad Riaz** and Anwar Ahmed. (2011). Effect of mineral fortification on plasma biochemical profile in rats. *Biological Trace Element Research*. 143:1594-1606. (IF. 3.738).
61. Saeed Akhtar, **Muhammad Riaz**, Anwaar Ahmed and Atif Nisar. (2010). Physico-chemical, microbiology and sensory stability of chemically preserved mango pulp. *Pakistan Journal of Botany* 42: 853-862. (IF 0.972)
62. Zulfiqar Ali, Faqir Muhammad Anjum, Saeed Akhtar, Tahir Zahoor and **Muhammad Riaz**. (2010). Efficacy of Food Grade Lactic Acid Produced Through Bacterial Fermentation. *Pakistan Journal of Botany* 42: 4199-4206. (IF 0.972)
63. HabibUllah Nadeem, Muhammad Hamid Rashid\*, Bibi Asma, **Muhammad Riaz**, Muhammad Rizwan Javed and Raheela Perveen. (2009). Invertase from hyper producer strain of *Aspergillus niger*: Physiochemical properties, thermodynamics and active site residues heat of ionization. *Protein and Peptide Letters* 16: 1098-1105. (IF 1.890)
64. Muhammad Rizwan Javed, Muhammad Hamid Rashid\*, HabibUllah Nadeem, **Muhammad Riaz** & Raheela Perveen. (2009). Catalytic and thermodynamic characterization of endoglucanase (CMCase) from *Aspergillus oryzae* cmc-1. *Applied Biochemistry and Biotechnology* 157: 483-497. (IF 2.926)
65. **Muhammad Riaz**, Raheela Perveen, Muhammad Rizwan Javed, HabibUllah Nadeem & Muhammad Hamid Rashid. (2008). Kinetic and thermodynamic properties of novel glucoamylase from *Humicola Sp.* Enzyme and Microbial Technology 41 (2007) 558-564. (IF 3.493).

## BOOK CHAPTERS

1. Khurram Muaz, Surriya Manzoor, Saeed Akhtar, **Muhammad Riaz\***, Mamoona Amir, Kashif Akram, Amir Ismail. (2021). Aflatoxins Biosynthesis. Published in "Aflatoxins in Food and Feed – Biosynthesis, Health Implications, Regulations and Control". Springer Publishers.

2. Saeed Akhtar, **Muhammad Riaz\***, Muhammad Latif, Aneela Hameed, Bakhtawar Zawar, Muhammad Kashif, Amir Ismail. (2021). Health impacts of aflatoxins on adults and elderly people. Published in "Aflatoxins in Food and Feed – Biosynthesis, Health Implications, Regulations and Control". Springer Publishers.
3. Ubaid Mahmood, Faizan Munir, Muhammad Riaz and Habibullah Nadeem. 2021. Biocatalytic Processes for Biodiesel Production. In: Inamuddin, Muhammad Imran Ahmad, Rejender Boddula and Mashallah Rezakazemi (eds.) Biodiesel Technology and Applications. Materials Research Forum LLC Millersville, PA 17551, USA.
4. Faizan Muneer, Sabir Hussain, Sidra-tul-Muntaha, Muhammad Riaz, Habibullah Nadeem. 2021. Plastics Versus Bioplastics. In: Inaamuddin, Rizwana Mubin, Muhammad Imran Ahmed and Rejender Boddula. Materials Research Forum LLC Millersville, PA 17551, USA.
5. Amir Ismail, Muhammad Riaz, Yun Yun Gong, Saeed Akhtar, and Jin Sun. **2019**. Aflatoxins in Plant-Based Foods. In: Ozturk M., Hakeem K. (eds) Plant and Human Health, Volume 2. Springer, Cham.
6. Khush Bakhat Alia, Ijaz Rasul, Farrukh Azeem, Sabir Hussain, Muhammad Hussnain Siddique, Saima Muzammil, **Muhammad Riaz**, Amna Bari, Sehrish Liaqat, Habibullah Nadeem. **2019**. Microbial Production of Ethanol. In: Inamuddin, Muhammad Faraz Ahmer and Abdullah M. Asiri: Microbial Fuel Cells (eds) Materials and Applications. Materials Research Forum LLC, 105 Springdale Lane, Millersville, PA 17551, USA. <http://mrforu.com>.
7. Khush Bakhat Alia, Habibullah Nadeem, Ijaz Rasul, Farrukh Azeem, Sabir Hussain, Muhammad Hussnain Siddique, Saima Muzammil, **Muhammad Riaz** and Shabab Nasir. **2019**. Separation and Purification of Amino Acids. In: Inamuddin, Muhammad Faraz Ahmer and Abdullah M. Asiri: Microbial Fuel Cells (eds) Materials and Applications. Materials Research Forum LLC, 105 Springdale Lane, Millersville, PA 17551, USA. <http://mrforu.com>.
8. Aman Ahmad, Muhammad Hussnain Siddique, Saima Muzammil, **Muhammad Riaz**, Muhammad Waseem, Ijaz Rasul, Farrukh Azeem, Sabir Hussain and Habibullah Nadeem. **2019**. Use of Enzymes in Different Types of Fuel Cells. In: Inamuddin, Muhammad Faraz Ahmer and Abdullah M. Asiri: Microbial Fuel Cells (eds) Materials and Applications. Materials Research Forum LLC, 105 Springdale Lane, Millersville, PA 17551, USA. <http://mrforu.com>.
9. Muhammad Razeen Ahmad, Muhammad Rizwan Javed, Muhammad Ibrahim, Arfaa Sajid, **Muhammad Riaz**, Ijaz Rasul, Muhammad Hussnain Siddiqui, Saima Muzammil, Muhammad Amjad Ali and Habibullah Nadeem. **2019**. Ion Exchange Chromatography in Separation and Purification of Beverages. In: Inamuddin et al. (eds.), Applications of Ion Exchange Materials in Chemical and Food Industries. Springer Nature Switzerland AG 2019.
10. Muhammad Riaz\*, Saeed Akhtar and Tariq Ismail. **2017**. Harvesting, Threshing, Processing and Products of Rice. In: Chauhan, B.S., Jabran, K. and Mahajan, G. Rice Production Worldwide. Springer International Publishing AG 2017.

11. Tariq Ismail, Saeed Akhtar and **Muhammad Riaz**. 2016. Pomegranate peel and fruit extracts: a novel approach to avert degenerative disorders. In: Exploring the Nutrition and Health Benefits of Functional Foods (Hossain Uddin Shekhar, Zakir Hossain Howlader and Yearul Kabir). Medical Information Science Reference (An imprint of IGI Global), 701 E, Chocolate Avenue, Hershey PA, 1733 USA.
12. Saeed Akhtar, Majid Hussain, Tariq Ismail and **Muhammad Riaz**. 2016. Ethnic fermented foods of Pakistan. In: Jyoti Parkash Tamang. Ethnic Fermented Foods and Alcoholic Beverages of Asia. DOI 10.1007/978-81-322-2800-4. Springer (India) Pvt. Ltd.

## PROCESSDINGS

1. Tariq Ismail, Saeed Akhtar, Muhammad Riaz, Omar Mukhtar Tarar and Amir Ismail. 2012. Nutritional and Biochemical Evaluation of Sorghum Supplemented Sourdough Flat Bread. Proceeding of 3<sup>rd</sup> International Conference "Frontiers in Agriculture" held on October 3-5, 2012 at Dankook International Cooperation on Agriculture, Dankook University Cheonansi, Republic of South Korea.
2. Shinawar Waseem Ali, Muhammad Saleem Haider, Muhammad Riaz and Muhammad Hassan Mushtaq. 2013. Decontaminating Mycotoxins in Agricultural Produce following Bioremediation Approach. Scientific Bulletin. Series F. Biotechnologies. Vol. XVIII. 225-227.

## RESEARCH PROJECTS

### Completed:

1. **Co-Principal Investigator (Co-PI)** of the Project titled "Safety Status of Street Vended Fresh Fruit Juices in Pakistan. 2010. Cost of the project is **Rs. 3.91054 Millions** and funded by Higher Education Commission of Pakistan.
2. **Principal Investigator (PI)** of the project titled, "Chemical and Microbiological safety of ground drinking water in selected areas of Multan City". Directorate of Research BZ University, Multan Rs. **0.056** Million.
3. **Co-Principal Investigator (Co-PI)** of the Project titled, "Training of Farmers for Home Scale Preservation of Fruits and Vegetables to Curtail Post Harvest Losses" costing Rs. .813099/- Million approved by Higher Education Commission Pakistan.
4. **Principal Investigator (PI)** of the project titled, "Safety status of Street Vended Raw Milk in Southern Punjab". 2012. Cost of the project is Rs **6.348** Million funded by Higher Education Commission, Pakistan.
5. **CO-Principal Investigator (CO-PI)** of the project titled, "Management of mango industrial waste: Mango seed kernel for the production of value added food products. 2012. Cost of the project is Rs **3.808899** Million funded by Higher Education Commission, Pakistan
6. **CO-Principal Investigator (CO-PI)** of the project titled, "Nutritional profiling and antioxidant potential of selected vegetable waste and its utilization for the production of value added products". 2016. Cost of the project is Rs **2.165896** Million funded by Pakistan Science Foundation.
7. **CO-Principal Investigator (CO-PI)** of the project titled, "Nutritional profiling of selected medicinal plants of Southern Punjab and exploring their antioxidant perspectives. 2012. Cost of the project is Rs **2.02048** Million funded by Higher Education Commission, Pakistan

## SUPERVISION OF STUDENTS

**M. Phil Students:**

Sr. No.	Name	Year	Title	Status
1	Amir Ismail	2012	Production of phytases from indigenous <i>Aspergillus niger</i> for industrial applications	Completed
2	Sajid Latif	2012	Determination of heavy metals and adulterants in loose milk in Multan	Completed
3	Mamoona Amir	2013	Microbial assessment and quality analysis of street vended raw milk in southern Punjab	Completed
4	M. Umair Rafiq	2013	Microbial and heavy metal assessment in drinking water in Multan city	Completed
5	Nadeem Amin	2013	Effect of wax coating on the storage stability of mango	Completed
6	Javeria Tahir	2014	Quality assessment of milk with special reference to adulteration in Southern Punjab	Completed
7	M. Saqib Usman	2014	Assessment of heavy metals in street vended raw milk Southern Punjab	Completed
8	Khurram Muaz	2015	Assessment of growth promoter antibiotics in broiler chicken	Completed
9	Ayesha Manzoor	2015	Qualitative and quantitative assessment of adulterants in street vended milk	Completed
10	Muhammad Mudassar	2015	Microbial prevalence of fresh salads served at restaurants	Completed
11	Kashif Khizar	2016	Effect of seasonal variation on enterobacteriaceae in dairy products	Completed
12	Muhammad Naeem Arslan	2016	Estimation of micronutrients in malnourished tuberculosis patients	Completed
13	Amna Qasim	2016	Isolation and antibiotic resistance of salmonella species isolated from raw and processed eggs samples from Multan region	Completed
14	Muhammad Shahraz	2016	Association of diabetes mellitus with hepatitis C infected patients	Completed
15	Rabia Mahboob	2016	Assessment and antimicrobial resistance of Salmonella isolated from poultry	Completed
16	Saira Altaf	2017	Effect of dietary habits on zinc status of pre-schoolers to adolescent population: A case study of district Khanewal	Completed
17	Maher Wali Shah	2017	Prevalence of vitamin D and calcium deficiency with special reference to females among Pakistani population	Completed
18	Shagufta Kanwal	2017	Quality attributes of chicken meat with special reference to slaughtering methods	Completed
19	Muhammad Sohail Rasheed	2017	Impact of mycoplasma infection on broiler meat quality and evaluation of antimicrobial potential of natural plant extracts	Completed
20	Saima Khubaib	2017	Antibiotic resistance in <i>Escherichia coli</i> isolated from chicken meat	Completed
21	Muhammad Kashif	2018	Effect of various physical and chemical methods on decontamination of aflatoxin B <sub>1</sub> in red pepper ( <i>Capsicum annum L.</i> )	Completed
22	Muhammad	2018	Nutritional profiling and antioxidant potential of	Completed

23	Ramzan Rabia Anwar	2018	carrot waste for utilization in leavened bread Effect of temperature and moisture on production of aflatoxin B1 by <i>Aspergillus parasiticus</i> on black pepper ( <i>Piper nigrum</i> )	Completed
24	Areeba Usman	2018	Role of composite cereal grains formulation on prognosis of diabetic mellitus type 2	Completed
25	Ammara Jamil Siddiqui	2019	Assessment of nutritional profile and shelf life stability of date paste and its products	Completed
26	Aneesa Altaf	2019	Immobilization of <i>Saccharomyces cerevisiae</i> on sodium alginate for decontamination of aflatoxin M1 in milk	Completed
27	Sana Mohsin	2019	Assessment of total aflatoxins and heavy metals in medicinal herbs	Completed
28	Shakila Anwar	2019	Effects of artificial sweeteners and wheat bran added bread on diabetic population	Completed
29	Muhammad Amin	2020	Assessment of heavy metals in vegetables and respective soil and water from various cities of Pakistan	Completed
30	Muhammad Usama Shafiq	2020	Effect of ginger and garlic powder against type II diabetes induced artificially in albino rats	Completed
31	Afsheen Zafar	2020	Use of raw and chemically treated rice husk for heavy metal removal from water	Completed
32	Rabia Batool	2020	Use of microbial cells for heavy metals removal from water	Completed
33	Muhammad Mohsin	2020	Prevalence of deoxynivalenol in cereals	Completed
34	Muhammad Adeel Kamran	2020	Effect of bitter gourd ( <i>L. Momordica charantia</i> ) extract and powder in streptozotacin induced diabetic rats	Completed
35	Mahnoor Ali	2020	Suitability of egg shell powder as calcium fortificant in camel milk yogurt	Completed
36	Asim Ali	2020	Evaluation of organoleptic and textural properties of bread made with sprouted multi-cereal grains	Completed
37	Hamza Ali	2021	Evaluating glycemic response, nutritional, & organoleptic properties of germinated composite cereals flour	Completed
38	Fatima Bilquees	2021	Study of association between feed composition and milk composition of dairy animals in Southern Punjab	Completed
39	Muhammad Shahid	2021	Effect of fermented <i>Psidium guajava</i> (guava) leaves on streptozotacin induced diabetic mice	Completed

#### PhD Students:

Sr. No.	Name	Session	Title	Status
1	Amir Ismail	2012-17	Quality assessment and microbial decontamination of aflatoxin M1 in bovine milk	Completed
2	Mamoona Amir	2013-19	Identification of virulence genes and antibiotic resistance in <i>Escherichia coli</i> O157 isolated from broiler meat	Completed
3	Khurram Muaz	2015-20	Understanding the mechanism and improvement in stability of microbial-cell-aflatoxin M1 complex formation in bovine milk	Completed
4	Muhammad Kashif	2018-22	Prevalence and prevention of aflatoxins in Pakistani brown rice	Continued

#### CONFERENCES ORGANIZED AND PARTICIPATED

Sr. No.	Conference	Date	V
1	Organized Two Days International Conference on “Food & Nutritional Security in Changing Climate” on March 03-04, 2019	Mar 03-04, 2019	IFSN, BZU
2	Participated as Speaker in two days International Conference on “Food & Nutritional Security in Changing Climate” on March 03-04, 2019	Mar 03-04, 2019	IFSN, BZU
3	Awareness Seminar on Technology Development Fund at IMS Hall, BZU	Mar 15, 2018	IFSN, BZU
4	Organized 11 <sup>th</sup> International Biennial Conference of Pakistan Society of Microbiology titled, “ Applied Microbial Genomics in Public Health, Food, Pharma and Agriculture	Dec 18-20, 2017	IFSN, BZU
5	Participated as Speaker in 11 <sup>th</sup> International Biennial Conference of Pakistan Society of Microbiology titled, “ Applied Microbial Genomics in Public Health, Food , Pharma and Agriculture	Dec 18-20, 2017	IFSN, BZU
6	A seminar on Microbial Challenges in Food Safety	Nov 07, 2017	IFSN, BZU
7	Participated as Oral Presenter at International Conference on Food and Nutrition 2017	Oct 25-26, 2017	Kota Kinabalu, Sabah, Malaysia
8	A seminar on Writing Successful Research Proposal	Aug 23, 2017	IFSN, BZU
9	Participated as Speaker in 3 <sup>rd</sup> International Conference on Safe Food for All and Food Expo	Mar 2-3, 2017	IFSN, BZU
10	Organized 3 <sup>rd</sup> International Conference on Safe Food for All and Food Expo	Mar 2-3, 2017	IFSN, BZU
11	Participated as a Speaker in 2 <sup>nd</sup> NDSU Annual Conference on Food for Health	July 10-13, 2016	NDSU, Fargo, ND, USA
12	Participated as Speaker in Two Days International Conference on Malnutrition titled, “Malnutrition Kills! Can We See Writing on the Wall?”	April 07-08, 2016	IFSN, BZU
13	Organized Two Days International Conference on Malnutrition titled, “Malnutrition Kills! Can We See Writing on the Wall? And Food Expo	April 07-08, 2016	IFSN, BZU
14	Community Based Management of Acute Malnutrition in Pakistan at IFSN, BZU	Feb 25, 2015	IFSN, BZU
15	Organized Two Days International Conference on Malnutrition in South Asia: The Peril Persists and Food Expo 2015	Feb 23-24, 2015	IFSN, BZU
16	A seminar on Food Safety and Health: Challenges and Solutions	Jun 11, 2014	IFSN, BZU
17	A seminar on Emerging Infectious Diseases and Diagnostics	Feb 14, 2014	
18	A workshop on Scientific Writing and Publishing at ASM Bio-resource Center	Oct 02, 2013	IFSN, BZU
19	A seminar on Recent Developments in Edible Oil Production and Processing with Special Reference to Pakistan	Mar 13, 2012	IFSN, BZU
20	Participated as Speaker in International Conference on Prospects & Challenges to Sustainable Agriculture	Jul 14-16, 2011	The University of AJ & K
21	International Conference on Human Nutrition with Special Reference to Vulnerable Groups	Feb 22-25, 2010	NIFSAT, Faisalabad
22	Transition Metals in Biochemistry	Jun 24-26, 2008	University of East Anglia UK
23	International Symposium on Microbial Technologies for Sustainable Agriculture	Mar 12-16, 2007	NIBGE Faisalabad, Pakistan

## TRAININGS AND SHORT COURSES PARTICIPATED

Sr. No	Name & Place	Type of Training	Duration		Degree/Certification/Diploma
			From	To	
1	Food Product Development-Keys to Success Training at IFSN, BZU		29-08-2017	29-08-2017	Certificate
2	Multicountry Observational Study Mission on Modern Food Quality Management Systems at APO Secretariat Japan	Training	24-07-2017	29-07-2017	Certificate
3	Food/Confectionary Processing, Industrial Food Safety and Hygiene at IFSN, BZU Mulan-Pakistan	Training	23-01-2012	22-04-2012	Certificate
4	Multicountry Observational Study Mission on the Development of Biotechnology Business Models for SMEs in Agribusiness held at China Productivity Center, Taiwan	Training	07-11-2011	11-11-2011	Certificate
5	Food Safety Management System (ISO 22000), at BZU, Multan	Training	25-06-2010	25-06-2010	Certificate
6	ISO 9001:2008 and Good Manufacturing Practices in Food Plants at Multan Chamber of Commerce	Training	29-05-2010	29-05-2010	Certificate
7	University of Edinburgh	IRSIP	10-02-2008	27-07-2008	Certificate
8	University of Edinburgh	AKTA System User Training (AKT1)	28-05-2008	28-05-2008	Certificate
9	The safety measures in the use of radiation in agriculture and biology at NIAB	Training	23-04-2007	04-05-2007	Certificate
10	HACCP Training Programme at Khawaja Foods (Pvt.) Ltd	Training	3-1-2003	08-01-2003	Certificate
11	Six weeks Practical Industrial Training Haleeb Foods Ltd	Training	31-12-1999	10-02-2000	Certificate

#### WORK EXPERIENCE: (2002–to date)

1. **Associate Professor:** Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan-Pakistan from Feb 27, 2016 to date
2. **Research Assistant Professor (Post Doc Fellowship):** Department of Food Science and Biotechnology, Sejong University Seoul, Republic of Korea from March 2016 to Feb 2016.
3. **Assistant Professor:** Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan-Pakistan from December 29, 2011 to March 31, 2016.
4. **Lecturer:** Department of Food Science and Technology, Bahauddin Zakariya University, Multan-Pakistan from 01-01-2010 to 28-12-2011.
5. **Quality Assurance Manager** at Khawaja Foods (Pvt.) Ltd. Gujranwala from 22-07-2002 to 01-01-2005.
6. MPhil Scholar at National Institute of Food Science & Technology, UAF from 2000-2002

#### PROFESSIONAL ADMINISTRATIVE ASSIGNMENTS

Sr. No.	Assignment	From	To
1	Associate Editor, International Journal of Food and Allied Disciplines	2014	To date

2	Director, Center for Research in Food Safety and Applied Nutrition	11-06-2021	To date
3	Chairman, Department of Sports Sciences	21-11-2017	16-01-2020
4	Warden, Hamza Hall	05-05-2017	18-01-2019
5	Member University Purchase Committee	02-11-2015	2019
6	Member Departmental Board of Studies	05-05-2017	To Date
7	Member Departmental Admission Committee	01-09-2014	To Date
8	Member Departmental Disciplinary Committee	19-12-2012	To Date
9	Vice President Academic Staff Association of BZU	28-02-2018	27-02-2019
10	Member Syndicate as Associate Professor, Bahauddin Zakariya University Multan	15-11-2019	14-11-2022
11	Member University Finance and Planning Committee (F&PC)	16-01-2020	23-07-2022
12	Member University Library Committee	10-01-2020	23-07-2022
13	Member University Scholarship Management Committee	18-02-2020	To Date
14	Expert on Board of Studies in the department of Food Science & Technology, Islamia University Bahawalpur	11-01-2021	To Date
15	Member Implementation Committee for Annual System of Examination	15-03-2021	23-07-2022

## MEMBERSHIPS

1. Member American Society of Microbiology
2. Member International Society of Applied Life Sciences (Membership number 402012)
3. Member Pakistan Society of Botany
4. Member Pakistan Society of Food Scientists and Technologists

## ACHIEVEMENTS

1. Certificate of appreciation as a researcher of the year 2017-18 from Bahauddin Zakariya University Multan.
2. Post Doctoral Fellowship Completion Award
3. Research Productivity Award (RPA) by year 2011-12.
4. Research Productivity Award (RPA) year 2010-2011.
5. A Letter of Appreciation by CEO, National Productivity Organization for significant contribution and assistance in organizing a five days training course on "Professional Baking" at Bahauddin Zakariya University, Multan.
6. Approved as HEC Recognized Supervisor, 2010
7. International Research Support Initiative Program (6 month training scholarship) for UK, fully funded by Higher Education Commission of Pakistan.
8. Indigenous Ph.D. Scholarship (4 year program) sponsored by Higher Education Commission of Pakistan.
9. Merit Scholarship in Matriculation (87% Marks obtained).
10. Merit Scholarship in Middle Standard Examination (83% Marks obtained).

## COMPUTER LITERACY AND LANGUAGE CAPABILITY:

1. MS Word, MS Excel, Power Point, slide write, Internet, MS Outlook.

2. **English, Urdu, and Punjabi:** Good Speaking, Listening, Writing and Reading.

## PERSONAL PARTICULARS

1. **Date of Birth:** June 16, 1976
2. **Nationality:** Pakistani
3. **NIC #:** 34101-2305074-1
4. **Passport #:** AW 9910741