

CURRICULUM VITAE

Dr. Alam Zeb
Professor & Chairman



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University of Malakand,
Chakdara, Khyber Pakhtunkhwa, Pakistan
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Education

- 2010** PhD –**With Distinction (*Mit Auszeichnung Bestandene*)**
Institute of Biochemistry
Graz University of Technology, Graz, Austria
- 2007** MPhil (Biochemistry)
Institute of Chemical Sciences, University of Peshawar, Pakistan
- 2002** MSc (Biochemistry)
Department of Chemistry, University of Peshawar, Pakistan

Professional Profile

- ❑ Professor, Department of Biochemistry, University of Malakand, Pakistan (10th January 2020~)
- ❑ Associate Professor, Department of Biotechnology, University of Malakand, Pakistan (12th July 2016-9th January 2020)
- ❑ Assistant Professor, Department of Biotechnology, University of Malakand, Pakistan (30 June 2011 to 11th July 2016)
- ❑ Lecturer, Department of Biotechnology, University of Malakand, Pakistan (20 August 2003 – 29 June 2011).
- ❑ Teaching Assistant, Institute of Biochemistry, Graz University of Technology, Austria (April 2009 to February 2010).

Awards, Fellowships & Distinctions

- ❑ Ernst Mach-Nachbetreuungsstipendium (EZA) Postdoctoral Fellowship, OeAD Austria (1st May-31st July 2018)
- ❑ Productive Scientist of Pakistan (2009-)
- ❑ Research Productivity Awards (2010, 2011, 2013, 2014, 2015, 2016, 2017)

- ❑ PhD Scholarship (2008-10) by Higher Education Commission, Government of Pakistan to study at Technical University of Graz, Graz, Austria.
- ❑ HEC Approved PhD Supervisor (2011-2013, 2018-2021)
- ❑ Best Research Award, Faculty of Biological Sciences, University of Malakand (2015)

Instrumental Skills

Advance level skills of Lipids and oxidized lipids, carotenoids, vitamins, plant metabolites (polyphenols), Triacylglycerols, and Phytochemicals analysis by HPLC/DAD/ELSD or HPLC-MS (Agilent Technologies, Germany), HPTLC (CAMAG, Switzerland), GC, or GC-MS & UV Spectroscopy (Shimadzu, Japan); Elemental analysis by Atomic Adsorption Spectrometer (Perkin Elmer, USA) & Flame Photometer (Japan) and other related Chemical/Instrumental techniques.

List of Publications

BOOKS

1. Alam Zeb (2019). *Food Frying: Chemistry, Biochemistry and Safety*. John Wiley & Sons, UK, ISBN: 978-1-119-46839-4.
2. Alam Zeb (2014). *Sea buckthorn: A Functional Food*. Lambert Academic Publishing, Germany, ISBN: 978-3-8454-0946-7.

RECENT ARTICLES (2010-2020)

1. Alam Zeb, A. Hussain (2020). Chemo-metric analysis of carotenoids, chlorophylls, and antioxidant activity of *Trifolium hybridum*. *Heliyon*. 6: e03195.
2. M. Zahoor, W. Ul Bari, Alam Zeb, I. Khan (2020). Toxicological, anticholinesterase, antilipidemic, antidiabetic and antioxidant potentials of *Grewia optiva* Drummond ex Burret extracts. *Journal of Basic and Clinical Physiology and Pharmacology*. DOI: 10.1515/jbcpp-2019-0220.
3. S. Ahmad, Alam Zeb, Muhammad Ayaz, Michael Murkovic (2020). Characterization of phenolic compounds using UPLC-HRM, HPLC-DAD and anticholinesterase and antioxidant activities of *Trifolium repens* L. leaves. *European Food Research & Technology*. DOI: 10.1007/s00217-019-03416-8 (IF: 2.056).
4. I. Khan, M. Zahoor, Alam Zeb, W. U. Bari (2020). In Vitro antioxidant, antidiabetic, and anticholinesterase, and in vivo toxicological, hypoglycemic, and antilipidemic potentials of *Ziziphus oxyphylla*. *Latin American Journal of Pharmacy*. 39 (1): 7-21 (IF: 0.401).

5. U. Saleem, S. Khalid, S. Zaib, F. Anwar, B. Ahmad, I. Ullah, **Alam Zeb**, M. Ayaz (2020). Phytochemical analysis and wound healing studies on ethnomedicinally important plant *Malva neglecta* Wallr. *Journal of Ethnopharmacology*. 249: 112401 (IF: 3.414).
6. **Alam Zeb**, M. Imran (2019). Carotenoids, pigments, phenolic composition and antioxidant activity of *Oxalis corniculata* leaves. *Food Bioscience*. 32(1): 100472 (IF: 3.220).
7. D. Naz, A. Muhammad, **Alam Zeb**, I. Shah (2019). In-vitro and in-vivo anti-diabetic properties of phenolic antioxidants from *Sedum adenotrichum*. *Frontiers in Nutrition*. 6: 177.
8. S. Ahmad, **Alam Zeb** (2019). Effects of phenolic compounds from aqueous extract of *Trifolium repens* against acetaminophen-induced hepatotoxicity in mice. *Journal of Food Biochemistry*. 43(9): e12963 (IF: 1.358).
9. W. Ul Bari, M. Zahoor, **Alam Zeb**, MUK. Sahibzada, R. Ullah, AA. Shahat, HM. Mahmood, I. Khan (2019). Isolation, pharmacological evaluation and molecular docking studies of bioactive compounds from *Grewia optiva*. *Drug Design, Development and Therapy*. 13: 3026-3036 (IF: 3.208).
10. W. Ul Bari, M. Zahoor, **Alam Zeb**, I. Khan, Y. Nazir, A. Khan, NU. Rahman, R. Ullah, AA. Shahat, HM. Mahmood (2019). Anticholinesterase, antioxidant potentials, and molecular docking studies of isolated bioactive compounds from *Grewia optiva*. *International Journal of Food Properties*. 22(1): 1386-1396 (IF: 1.398).
11. **Alam Zeb**, A. A. Khan (2019). Improvement of serum biochemical parameters and haematological indices through α -Tocopherol administration in dietary oxidized olive oil induced toxicity in rats. *Frontiers in Nutrition*. 5: 137.
12. **Alam Zeb** (2019). Chemo-metric analysis of the Polyphenolic profile of *Cichorium intybus* L leaves grown on different water resources of Pakistan. *Journal of Food Measurement & Characterization*. 13 (1): 728-734 (IF: 1.415).
13. **Alam Zeb**, F. Ullah (2019). Effects of spinach leave extracts on the thermal stability and phenolic composition of sunflower oil. *European Journal of Lipid Science & Technology*. 121: 1800325 (IF: 1.852).
14. G. Ozkan, S. Ercisli, **Alam Zeb**, G. Agar, H. I. Sagbas, G. Ilhan, M. Gundogdu (2019). Some morphological and biochemical characteristics of wild grown Caucasian Whortleberry (*Vaccinium arctostaphylos* L.) genotypes from Northeastern Turkey. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*. 47(2): 378-383 (IF: 0.642).

15. **Alam Zeb**, A. Haq, M. Murkovic (2019). Effects of microwave cooking on carotenoids, phenolic compounds and antioxidant activity of *Cichorium intybus* L (Chicory) leaves. *European Food Research & Technology*. 245: 365-374 (IF: 2.056).
16. G. Ozkan, H. Fidan, S. Ercisli, A. Stoyanova, **Alam Zeb**, H. Hanina, G. Agar, H. I. Sagbas, G. Ilhan (2018). Phenotypic and biochemical parameters within historical Zivzik pomegranate cultivar. *Proceedings of Bulgarian Academy of Sciences*. 71: 1466-1472 (IF: 0.321).
17. **Alam Zeb**, A. Akbar (2018). Ellagic acid suppresses the oxidative stress induced by dietary oxidized tallow. *Oxidative Medicine & Cellular Longevity*. 2018: Article ID: 7408370 (IF: 4.868).
18. **Alam Zeb**, A. Habib (2018). Lipid oxidation and changes in the phenolic profile of Watercress (*Nasturtium officinale* L.) leaves during frying. *Journal of Food Measurement & Characterization*. 12(4): 2677-2684 (IF: 1.415).
19. M. Tariq, B.H. Abbasi, **Alam Zeb**, G. S. Ali (2018). Carbohydrate-induced biomass and elicitation of secondary metabolites in callus cultures of *Fagonia indica*. *Industrial Crops and Products* 126: 168-176 (IF: 4.191).
20. **Alam Zeb** (2018). Ellagic acid in suppressing in-vivo and in-vitro oxidative stresses. *Molecular and Cellular Biochemistry*. 448(1-2): 27-41 (IF: 2.884).
21. M. Nadeem, **Alam Zeb** (2018). Impact of maturity on phenolic composition and antioxidant activity of medicinally important leaves of *Ficus carica* L. *Physiology & Molecular Biology of Plants*. 24 (5): 881-887 (IF: 1.539).
22. **Alam Zeb**, L. Rahman (2018). *Eruca sativa* seed oil: Characterization for potential beneficial properties. *Pakistan Journal of Pharmaceutical Sciences*. 31 (4): 1251-1258 (IF: 0.596).
23. **Alam Zeb**, I. Haq (2018). Polyphenolic composition, lipid peroxidation and antioxidant properties of Chapli kebab during repeated frying process. *Journal of Food Measurement & Characterization*. 12(1): 555-563 (IF: 1.415).
24. AU. Jan, F. Hadi, **Alam Zeb**, Z. Islam (2018). Identification and quantification of phenolic compounds through reversed phase HPLC-DAD method in sunflower seeds under various treatments of potassium nitrate, zinc sulphate and gibberellic acid. *Journal of Food Measurement & Characterization*. 12(1): 269-277 (IF: 1.415).
25. **Alam Zeb**, B. Mohammad, F. Ullah (2017). Characterization of Sesame (*Sesamum indicum* L) seed oil from Pakistan for phenolic composition, quality characteristics and potential beneficial properties. *Journal of Food Measurement & Characterization*. 11 (3): 1362-1369 (IF: 1.181).

26. **Alam Zeb** (2017). A simple, sensitive HPLC-DAD method for the simultaneous determination of carotenoids, chlorophylls & α -tocopherol composition of leafy vegetables. *Journal of Food Measurement & Characterization*. 11 (3): 979-986 (IF: 1.181).
27. **Alam Zeb**, S. Ahmad (2017). Changes in acylglycerols composition, quality characteristics and in vivo effects of dietary pumpkin seed oil upon thermal oxidation. *Frontiers in Chemistry*. 5: 55 (IF: 4.155).
28. A. A. Khan, **Alam Zeb**, T.H. Sherazi (2017). Thermally oxidized olive oil produce biochemical, physiological effects and fatty liver in rats. *Chiang Mai Journal of Science*. 44 (3): 847-857 (IF: 0.409).
29. **Alam Zeb**, F. Ullah (2017). Reversed phase HPLC-DAD profiling of carotenoids, chlorophylls and phenolic compounds in *Adiantum capillus-veneris* leaves. *Frontiers in Chemistry*. 5: 29 (IF: 4.155).
30. **Alam Zeb**, P. Nisar (2017). Effects of high temperature frying of Spinach leaves in sunflower oil on carotenoids, chlorophylls and tocopherol composition. *Frontiers in Chemistry*. 5: 19 (IF: 4.155).
31. **Alam Zeb**, N. Khadim, W. Ali (2017). Changes in the polyphenolic profile, carotenoids and antioxidant potential of Apricot (*Prunus armeniaca* L.) leaves during maturation. *Agriculture*. 7(2): 9.
32. **Alam Zeb**, S. Rahman (2017). Protective effects of dietary glycine & glutamic acid toward the toxic effects of oxidized mustard oil in rabbits. *Food and Function*. 8 (1): 429-436 (IF: 3.289).
33. **Alam Zeb**, I. Uddin (2017). The co-administration of un-oxidized and oxidized Desi ghee ameliorates the toxic effects of thermally oxidized ghee in rabbits. *Journal of Nutrition and Metabolism*. 2017, Article ID: 4078360.
34. **Alam Zeb** (2016). Phenolic profile and antioxidant activity of Melon (*Cocomis melo* L.) seeds from Pakistan. *Foods*. 5(4): 67.
35. **Alam Zeb**, I. Haq (2016). The protective role of tomato powder in the toxicity, fatty infiltration and necrosis induced by oxidized tallow in rabbits. *Journal of Food Biochemistry*. 40(4): 428-435 (IF: 1.00).
36. **Alam Zeb**, F. Ullah (2016). A simple spectrophotometric method for the determination of thiobarbituric acid reactive substances (TBARS) in fried fast foods. *Journal of Analytical Methods in Chemistry* 2016: Article ID 9412767, (IF: 1.801).
37. **Alam Zeb** (2015). Phenolic profile and antioxidant potential of wild Watercress (*Nasturtium officinale* L.). *Springer Plus*. 4: 714 (IF: 0.983).

38. **Alam Zeb** (2015). A reversed phase HPLC-DAD method for the determination of phenolic compounds in plant leaves. *Analytical Methods*. 7:7753-7757 (IF: 1.949).
39. **Alam Zeb**, S. Ullah (2015). Sea buckthorn seed oil protects from the oxidative stress induced by thermally oxidized lipids. *Food Chemistry*. 186: 6-12 (IF: 4.052).
40. **Alam Zeb** (2015). Chemistry and liquid chromatographic methods for analyses of triacylglycerol primary oxidation products. *Free Radical Research*. 49 (5): 549-564 (IF: 2.989).
41. **Alam Zeb**, S. Hussain (2014). Sea buckthorn seed powder provides protection in the oxidative stress produced by thermally oxidized sunflower oil in rabbits. *Journal of Food Biochemistry*. 38 (5): 498-508 (IF: 0.741).
42. **Alam Zeb** & M. Murkovic (2013). Pro-oxidant effects of β -carotene during thermal oxidation of edible oils. *Journal of the American Oil Chemists Society*. 90 (6): 881-889 (IF: 1.645).
43. **Alam Zeb** & M. Murkovic (2013). Determination of thermal oxidation and oxidation products of β -carotene in corn oil triacylglycerols. *Food Research International*. 50 (2): 534-544 (IF: 3.052).
44. I. Slumpaite, M. Murkovic, **Alam Zeb**, P. R. Venskutonis (2013). Antioxidant properties and phenolic composition of swallow-wort (*Vincetoxicum lutea* L.) leaves. *Industrial Crops and Products*. 45(2): 74-82 (IF: 3.208).
45. **Alam Zeb** & A. Mehmood (2012). Effects of oxidized vanaspati ghee on the serum lipids profile and radical scavenging activity of the in vitro lipids of liver, brain and muscles. *Turkish Journal of Biochemistry*. 37 (4): 417-423 (IF: 0.211).
46. **Alam Zeb** & W. Rehman (2012). Effects of oxidized tallow on the rabbit serum lipids and antioxidant activity of the lipids. *Toxicological Research*. 28 (3): 151-157.
47. **Alam Zeb** (2012). Triacylglycerols composition, oxidation and oxidation compounds in camellia oil using liquid chromatography-mass spectrometry. *Chemistry and Physics of Lipids*. 165 (5): 608-614 (IF: 2.147).
48. **Alam Zeb** (2012). Oxidation and formation of oxidation products of beta-carotene at boiling temperature. *Chemistry and Physics of Lipids*. 165 (3): 277-281 (IF: 2.147).
49. **Alam Zeb** (2011). Effects of β -carotene on the thermal oxidation of fatty acids. *African Journal of Biotechnology*. 10 (68): 15346-15352.
50. **Alam Zeb** & M. Murkovic (2011). Carotenoids and triacylglycerols interactions during thermal oxidation of refined olive oil. *Food Chemistry*. 127 (4): 1584-1593 (IF: 3.655).

51. **Alam Zeb** & M. Murkovic (2010). Characterization of the effects of beta-carotene on the thermal oxidation of triacylglycerols using HPLC-ESI-MS. *European Journal of Lipid Science & Technology*. 112 (11): 1218-1228 (IF: 1.487).
52. **Alam Zeb** & M. Murkovic (2010). Analysis of triacylglycerols in refined edible oils by isocratic HPLC-ESI-MS. *European Journal of Lipid Science & Technology*. 112 (8): 844-851 (IF: 1.487).
53. **Alam Zeb** & M. Murkovic (2010). Thin-layer chromatographic analysis of carotenoids in plant and animal samples. *Journal of Planar Chromatography*. 23 (2): 94-103 (IF: 1.247).
54. **Alam Zeb** & M. Murkovic (2010). High-performance thin-layer chromatographic method for monitoring the thermal degradation of β -carotene in sunflower oil. *Journal of Planar Chromatography*. 23 (1): 35-39 (IF: 1.247).

Other Publications (2003-2009) can be found at [Scholar.google.com](https://scholar.google.com)

BOOK CHAPTERS

1. **Alam Zeb** (2017). Chemistry of lipid oxidation in edible oils. In: *Lipid Peroxidation, Inhibition, Effects and Mechanism*. A. Catala (Ed), Nova Science Publishers Inc, USA, pp: 309-320, ISBN: 978-1-53610-506-3.
2. **Alam Zeb** (2016). Coriander (*Coriandrum sativum*) oil, In: *Essential Oils in Food Preservation, Flavour and Safety*. VR. Preedy (Ed), Academic Press, UK, pp: 359-364, ISBN: 978-0-1241-6641-7.
3. **Alam Zeb** (2014). Antioxidant and anti-carcinogenic activities of Sea buckthorn (*Hippophae L.*), In: *Sea Buckthorn- A Multipurpose Wonder Plant: Emerging Trends in Research and Technologies*. V. Singh (Ed), Volume IV, Daya Publishing House, N. Delhi, pp: 361-369, ISBN: 978-9-3513-0106-6.
4. **Alam Zeb** (2012). Thin-layer chromatographic analysis of Vitamin A related carotenoids, In: *Vitamin A and Carotenoids: Chemistry, Analysis, Functions and Effects*. VR. Preedy (Eds), Royal Society of Chemistry, London, England, pp: 303-315, ISBN: 978-1-8497-3368-7.
5. **Alam Zeb** (2012). Thermal degradation of β -carotene in food oils, In: *Vitamin A and Carotenoids: Chemistry, Analysis, Functions and Effects*. VR. Preedy (Ed), Royal Society of Chemistry, London, England, pp: 129-141, ISBN: 978-1-8497-3368-7.
6. **Alam Zeb** (2011). Sea buckthorn (*Hippophae rhamnoides L. ssp. turkistanica*) seed, chemical and physico-chemical properties. In: *Nuts and Seed in Health and Diseases Prevention*. VR. Preedy et al. (Eds), Elsevier Inc. USA, pp: 1003-1010, ISBN: 978-0-1237-5688-6.

7. Alam Zeb and M. Murkovic (2011). Olive (*Olea europaea* L.) seeds, from chemistry to health benefits. In: *Nuts and Seed in Health and Diseases Prevention*. VR. Preedy et al. (Eds), Elsevier Inc. USA, pp: 847-853, ISBN: 978-0-1237-5688-6.
8. Alam Zeb & M. Murkovic (2010). β -Carotene induced oxidation of high oleic triacylglycerols model system. In: *Wertbestimmende Inhaltsstoffe in Lebensmitteln (Value Determining Constituents in Foods)*. M. Murkovic (Ed), Austrian Chemical Society, Vienna, Austria, pp: 210-214, ISBN: 978-3-9005-5467-5.
9. Alam Zeb & M. Murkovic (2010). Thermal stability of triacylglycerols in edible oils and triolein model system. In: *Wertbestimmende Inhaltsstoffe in Lebensmitteln (Value Determining Constituents in Foods)*. M. Murkovic (Ed), Austrian Chemical Society, Vienna, Austria, pp: 18-22, ISBN: 978-3-9005-5467-5.
10. Alam Zeb & I. Khan (2009). Pharmacological applications of Sea buckthorn (Hippophae), In: *Advances in Phytotherapy Research*. M. Eddouks (Ed) Research Signpost, N. Delhi, pp: 1-16, ISBN: 978-8-1308-0223-7.
11. Alam Zeb & I. Khan (2008). Composition and medicinal properties of Sea buckthorn juice, In: *Sea Buckthorn- A Multipurpose Wonder Plant. Vol. III - Advances in Research & Development*. Singh, V (Ed.), Daya Publishing House, N. Delhi, pp: 205-214, ISBN: 81-7035-520-5.

Proceedings Papers

1. F. Naz, Alam Zeb, I. Z. Qureshi (2014). Effect of gallic acid in reducing cytotoxicity of thermally oxidized tallow. *Proceedings of Pakistan Congress of Zoology*. Volume 34, pp: 70-71
2. Alam Zeb & M. Murkovic (2011). Mass spectrometric characterization of triglyceride oxidation. *Proceedings of the 2nd MS Food Day 2011*. October 19-21, University of Trieste, Italy, pp: 62-63.

Academic Experience

- Chairman, Department of Biochemistry, University of Malakand (10-2019 till date)
- Chairman, Department of Biotechnology, University of Malakand (09-2017-09-2019)
- MPhil/PhD coordinator, Department of Biotechnology, University of Malakand, 2011-2013.
- Member Board of Study, Department of Biotechnology, University of Malakand, 2013-.
- Member Board of Study, Deptt. Biochemistry, Hazara University, Mansehra, 2016-.
- Member Board of Faculty, Faculty of Biological Sciences, University of Malakand, 2013-.
- Member of Departmental Tenure Review Committee (DTRC), Department of Biotechnology, University of Malakand, 2016-

- ❑ Member of Departmental Tenure Review Committee (DTRC), Department of Microbiology, Shaheed Benazir Bhutto Women University Peshawar, 2018-

Professional Societies Membership

- ❑ International Natural Product Sciences Taskforce (INPST, 2019-)
- ❑ European Federation for the Science & Technology of Lipids (Euro Fed Lipid, 2009-2011)
- ❑ European Federation of Food Science and Technology (EFFoST, 2009-2011)
- ❑ American Oil Chemists Society (AOCS, 2008-2011)
- ❑ Korean Society for Food Science & Technology (KoSFoST, 2008-)
- ❑ Society for Free Radical Research International (SFRI, 2008-)
- ❑ International Carotenoids Society (ICS, 2005-2015)
- ❑ South African Association of Mass Spectrometry (SAAMS, 2011-)
- ❑ Asian Pacific Organization for Cancer Prevention (APOCP, 2006-)
- ❑ Chemical Society of Pakistan (Life Member, 2015-)
- ❑ Pakistan Society for Biochemistry & Molecular Biology (Life Member, 2016-)

Journal's Editorial Referee

- ❑ Bioanalysis (Future Science, Ltd UK)
- ❑ Free Radical Research (*SFRR, UK*)
- ❑ Rapid Communications in Mass Spectrometry (*Wiley, USA*)
- ❑ Journal of the American Oil Chemist's Society (*AOCS, USA*)
- ❑ Journal of Agriculture and Food Chemistry (*ACS, USA*)
- ❑ Oxidative Medicine & Cellular Longevity (Hindawi, UK)
- ❑ Analytical Methods (*RSC, UK*)
- ❑ RSC Advances (*RSC, UK*)
- ❑ Food Chemistry (*Elsevier, UK*)
- ❑ Journal of Chromatography A (*Elsevier, UK*)
- ❑ Journal of Planar Chromatography (*Akadémiai Kiadó, Hungary*)
- ❑ Journal of Separation Science (*Wiley, Germany*)
- ❑ Journal of Science of Food and Agriculture (*Wiley, Germany*)
- ❑ Journal of Food Science (*IFT, UK*)
- ❑ Food Research International (*Elsevier, Canada*)
- ❑ Food & Chemical Toxicology (*Elsevier, UK*)
- ❑ International Journal of Biometeorology (*Springer, USA*)
- ❑ Journal of Food Measurement and Characterization (Springer, USA)
- ❑ International Journal of Food Properties (Springer, UK)
- ❑ Journal of the Chemical Society of Pakistan (*CSP, Pak*)
- ❑ Frontiers in Chemistry (*Frontiers Media, Switzerland*)
- ❑ Frontiers in Nutrition (*Frontiers Media, Switzerland*)

Journal's Editorial Role

- ❑ Review Editor Frontiers in Chemistry (section Food Chemistry)
- ❑ Review Editor Frontiers in Nutrition (section Food Chemistry)

Research Theses Supervision (Degree Awarded)

□ PhD Dissertation

- 1) In-vivo effects and metabolic interactions of oxidized lipids with antioxidants (2011-16)
- 2) Biochemical and medicinal evaluation of *Trifolium repens* (2015-2019)

□ MPhil Theses

- 1) Effects of microwave heating on carotenoids, phenolic profile and antioxidant potential of *Brassica compestris* (2017-2019)
 - 2) Carotenoids, pigments, phenolic compounds and medicinal evaluation of *Phytolica letbenia* leaves and fruits (2017-2019)
 - 3) Effects of microwave heating on carotenoids, phenolic contents and antioxidant activity of *Memordica charantia* (2017-2019)
 - 4) Determination of carotenoids and phenolic profile of *Oxalis corniculata* (2015-2018)
 - 5) Variation in carotenoids, phenolic profile and antioxidant potential of different peach varieties (2015-2017)
 - 6) *In-vivo* effects of ellagic acid against the toxicity of thermally oxidized lipids (2015-2017).
 - 7) Effects of microwave heating on carotenoids, phenolic compounds and antioxidant potential of *Cichorium intybus* L. (2015-2017).
 - 8) Effects of spinach leaves extract on the stability of sunflower oil (2015-2017).
 - 9) Interaction of lipid peroxidation and antioxidants during frying of Chapli kebab (2013-2016).
 - 10) Characterization of lipid oxidation and antioxidants during deep frying of fritter (2013-2016).
 - 11) Correlation of diabetes and lipid peroxidation of local population of Batkhela district Malakand (2014-2016).
 - 12) Determination of obesity and risk factors in women population of different ages of Musa-Khel District Swat (2014-2016).
 - 13) Phytochemical investigation and antioxidant potential of apricot (*Prunus armeniaca* L.) leaves (2014-2016).
 - 14) Effects of glycine & glutamic acid in oxidative stress induced by oxidized lipids (2012-2014).
 - 15) Characterization and biological effects of oxidized and un-oxidized pumpkin seed oil in rabbits (2012-2014).
 - 16) Correlation of sea buckthorn seed oil and oxidized vegetable ghee; effects on the lipid metabolism in rabbits (2011-2013).
 - 17) Influence of sea buckthorn seed powder on the lipid metabolism, histopathological and hematological effects of oxidized sunflower oil in rabbits (2011-2013).
 - 18) Effects of metabolic extract of *Monthea buxifolia* on normal rabbits (2011-2013).
 - 19) Characterization and biological effects of in-vivo lipids of *Uromastix hardwickii* (2011-2013).
- Supervised BS (*Hons*) Biotechnology Theses at UOM.
- Co-supervise 2 MS Theses in Food Chemistry in TUG Austria.

Research Projects (Completed)

- ❑ Characterization, Isolation and production of natural antioxidants from medicinal plants (Rs. 7.6 million, Funded by *Higher Education Commission, Pakistan, 2014-17*) as Co-PI.
- ❑ Biochemical effects, metabolism and recovery of oxidized lipids from the daily diet (Rs. 8.1 million, Funded by *Higher Education Commission Pakistan 2014-16*) as solo PI.
- ❑ Effects of oxidized tallow on the lipids properties and metabolism in animals (Rs. 0.074 million, Funded by *University of Malakand, Pakistan, 2011*) as PI.
- ❑ Effects of Sea buckthorn oil against the toxicity of thermally oxidized vegetable ghee in rabbits (Rs. 0.074 million, Funded by *University of Malakand, Pakistan, 2011*) as PI.

Other Grants Obtained

- ❑ Grant for Repair and Maintenance of Scientific equipment (Rs. 0.6 million), Funded by *Higher Education Commission, Pakistan, 2019*
- ❑ Article Processing Charges (USD 2050/-) for publication through TUG Open Access publishing funds (Tech University Graz, Austria), 2018.
- ❑ Travel Grant (Rs.191,000/-) for Oral Presentation at *Euro Fed Lipid Congress, Turkey* (Higher Education Commission, Pakistan): 2013
- ❑ Travel Grant (Euro 300/-) for Oral Presentation in *Euro Fed Lipid Congress, Munich Germany*, by Doctoral School of Biomedical Science & Biotechnology (Tech University Graz, Austria): 2010.
- ❑ Travel Grant (Euro 300/-) for Poster Presentation in *3rd International IUPAC Symposium on Trace Elements in Foods, Rome Italy*, by Doctoral School of Biomedical Science & Biotechnology (Tech University Graz, Austria): 2009.
- ❑ Travel Grant (Euro 300/-) for Oral Presentation in *1st European Food Congress, Slovenia* by Doctoral School of Biomedical Science & Biotechnology (Tech University Graz, Austria): 2008.

Conferences Presentations & Talks

Oral Presentations

1. 7th Chemistry Conference "Chemistry in Engineering & Life Sciences", 24-26 November 2015, PINSTECH Islamabad, Pakistan.
2. 11th Euro Fed Lipid Congress "Oils, Fats and Lipids: New Strategies for High Quality Future", 27-30 September 2013, Antalya, Turkey.
3. 8th Euro Fed Lipid Congress "Oils, Fats and Lipids: Health & Nutrition, Chemistry and Energy" 21-24 November 2010, Munich, Germany.
4. 4th Doctoral Day. NAWI Graz Doctoral School of Molecular Biosciences and Biotechnology, 9th July 2010, Graz, Austria.
5. Österreichische Lebensmittel Chemikertage, 19-21 May 2010, Schloss Seggau, Austria.
6. Young Investigators' Seminar on Analytical Chemistry, 29 June-2 July 2009, Graz Austria.
7. TEMPUS Joint European Project 'New Bologna Oriented Doctoral Study Program in BA', 26-30 January 2009, Graz Austria.
8. 1st European Food Congress, 4-9 November 2008, Ljubljana, Slovenia.

Poster Presentations

1. Recent Advances & Challenges in Molecular Biology, Biochemistry & Biotechnology, 25-27 August 2016, Abbottabad, Pakistan.
2. Österreichische Lebensmittel Chemikertage, 19-21 May 2010, Schloss Seggau, Austria.
3. 7th Euro Fed Lipid Congress "Lipids, Fats and Oils: From Knowledge to application, 18-21 October 2009, Graz Austria.
4. 1st Styrian Conference on Lipid Mass Spectrometry, 21-22 October 2009, Graz Austria.
5. 3rd International IUPAC Symposium on Trace Elements in Foods, 1-3 April 2009, Rome Italy.
6. 9th International Symposium on Instrumental analysis, 29 June-2 July 2008, Pecs Hungary.
7. Österreichische Lebensmittel Chemikertage, 28-30 May 2008, Eisenstadt, Austria.

Abstracts

1. International Conference on New Knowledge on Chemical Reactions During Food Processing and Storage. 14-16 November 2012, Prague, Czech Republic.
2. Österreichische Lebensmittel Chemikertage 2012, 25-27 April 2012, Linz, Austria.
3. 7th Euro Fed Lipid Congress, Lipids, Fats and Oils, 18-21 October 2009, Graz Austria.