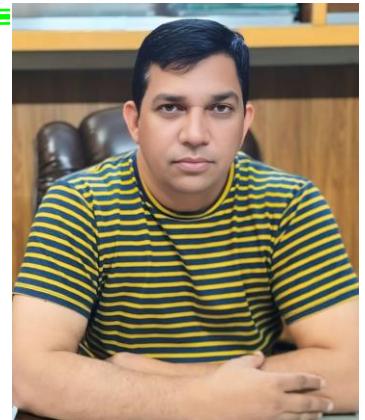


# MOAZZAM RAFIQ KHAN

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## PERSONAL DETAILS

Date of Birth: 1<sup>st</sup> March, 1975  
Father's name: Muhammad Rafiq Khan  
Gender: Male  
Marital status: Married  
Languages Known: English, Urdu & Punjabi

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## OBJECTIVE

Practical application of professional knowledge and experience

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## PROFESSIONAL EXPERIENCE

1. **Production officer Prime Dairies Lahore** (27<sup>th</sup> May, 2002 to 27<sup>th</sup> June 2003)
  2. **Teaching Assistant in NIFSAT** (23rd September 2005 to 7<sup>th</sup> February 2008)
  3. **Lecturer in NIFSAT** ( 8<sup>th</sup> February 2008 to 21<sup>st</sup> October 2009)
  4. **Assistant Professor in NIFSAT** (22<sup>nd</sup> October 2009 to 30<sup>th</sup> August 2019 )
  5. **Associate Professor in NIFSAT** ( 31<sup>st</sup> August to 10<sup>th</sup> October 2024)
  6. **Professor in NIFSAT** (11<sup>th</sup> October 2024 to Date)
- 

## EDUCATIONAL QUALIFICATIONS

1. **National Institute of Food Science and Technology, University of Agriculture, Faisalabad, Pakistan**

Ph.D. Food Science & Technology

(December, 2003 - October 2009)

**THESIS:** "Electrophoretic and Immunochemical Characterization of Pakistani wheats in Relation to Chapatti and Bread making Quality"

2. **National Institute of Food Science and Technology, University of Agriculture, Faisalabad, Pakistan**

2 years of Masters of Science Honors in Food science and Technology.

(1999- 2001) CGPA 3.84/4.00 **1<sup>st</sup> Division**

**THESIS:** "Studies on banana fruit yogurt"

**3. National Institute of Food Science and Technology, University of Agriculture, Faisalabad, Pakistan**

4 years of Bachelor of Science Honors in Agriculture Majoring Food Technology

(1995-1999) CGPA 3.59/4.00 **1<sup>st</sup> Division**

**4. Government College Faisalabad, Pakistan**

Higher Secondary School Certificate Exam (Pre-Medical), Faisalabad Board

(1991-93) 760/1100 **1<sup>st</sup> Division**

**5. Government High School G.M.Abad, Faisalabad, Pakistan**

Secondary School Certificate Exam, Faisalabad Board

(1990-91) 627/850 **1<sup>st</sup> Division**

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## **PUBLICATIONS**

**Impacted:**

- Zia, S., M.R. Khan, A.M. Khaneghah and R.M. Aadil .2023.Characterization, bioactive compounds, and antioxidant profiling of edible and waste parts of different watermelon (Citrullus lanatus) cultivars. Biomass Conversion and Bio refinery. 15:2171-2183.<https://doi.org/10.1007/s13399-023-04820-7>.

**Impact Factor: 4.00**

- Namet, S.,M.R. Khan, R.M. Adil and M.A. Zia. 2023. Development and stabilization of value added functional drink using melon by-products agricultural waste. Journal of Food processing and preservation. 2023(1).

**Impact Factor: 2.50**

- Iqbal, N., M. Asim Shabbir, M.R. Khan and M.N. Faisal. 2023. Development and bioassessment of high nutria-omega 5 cookies through animal modeling. Frontiers in Nutrition. 10:1199645. <https://doi.org/10.3389/fnut.2023.1199645>

**Impact Factor: 5.00**

- M. Asim Shabbir, F. Mehak, M.R. Khan, W. Ahmed, M.F. Nawaz, A. Hassoun, Z.F. Bhat and R.M. Aadil. 2023. Unraveling the role of natural functional oils in modulating osteoarthritis related complications. *Critical Reviews in Food Science and Nutrition.* pp.1-21. <https://doi.org/10.1080/10408398.2023.2176815>

**Impact Factor: 10.20**

- Naz, N., M.R. Khan, M. Asim Shabbir and M.N. Faisal. 2023. Effect of iron-fortified jamun leather on the Asunra-induced anemia in Sprague Dawley rats. *Frontiers in Nutrition.* 10:1195981. <https://doi.org/10.3389/fnut.2023.1195981>

**Impact Factor: 5.00**

- Kafeel, S., M. Inam-ur-Raheem, M.R.Khan and M.N. Faisal. 2023. Phytochemical characterization and antioxidant capacities of pomegranate peel. *Int. J. Food Sci. Technol.* 58(9):4543-4550.

**Impact Factor: 3.30**

- Zia, S., M.R. Khan and R.M. Aadil. 2023. Kinetic modeling of different drying techniques and their influence on color, bioactive compounds, antioxidant indices and phenolic profile of watermelon rind. *J. Food Meas. Charact.* 17:1068–1081.

**Impact Factor: 3.40**

- Zia, S., M.R. Khan, R.M. Aadil and M. Shahid. 2022. Development and storage stability of value-added watermelon fruit butter by incorporating watermelon rind byproduct. *J. Food Process. Preserv.* 46(11), e17031.

**Impact Factor: 2.50**

- Yıldız, G., G. Yıldız, M.R. Khan and R.M. Aadil. 2022. High-intensity ultrasound treatment to produce and preserve the quality of fresh-cut kiwifruit. *J. Food Process. Preserv.* 46(5). e16542.

**Impact Factor: 2.50**

- Rabail, R., W. Ahmed, M. Ilyas, M.S.R. Rajoka, A. Hassoun, A.R. Khalid, M.R. Khan and R.M. Aadil. 2022. The Side Effects and Adverse Clinical Cases Reported after COVID-19 Immunization. *Vaccines*. 10(4):488.  
<https://doi.org/10.3390%2Fvaccines10040488>

**Impact Factor: 7.80**

- Arslan, M., M. Zareef, H.E. Tahir, J. Zhang, W. Ahmad, A. Rakha, J. Shi, Z. Xiaobo and M.R. Khan. 2022. Discrimination of basmati rice adulteration using colorimetric sensor array system. *Food Control*. 132: 108513.

**Impact Factor: 6.00**

- Arslan, M., M. Zareef, H.E. Tahir, Z. Guo, A. Rakha, H. Xuetao, J. Shi, L. Zhihua, Z. Xiaobo and M.R. Khan. 2022. Discrimination of rice varieties using smartphone-based colorimetric sensor arrays and gas chromatography techniques. *Food Chem*. 368: 130783.

**Impact Factor: 8.80**

- M. Asim Shabbir., F. Mehak, Z.M. Khan, W. Ahmed, S.M. Abrar-ul-Haq, M.R. Khan, Z.F. Bhat and R.M. Aadil. 2022. Delving the role of nutritional psychiatry to mitigate the COVID-19 pandemic induced stress, anxiety and depression. *Trends in Food Science and Technology*. 120, 25-35. <https://doi.org/10.1016/j.tifs.2021.12.035>

**Impact Factor: 15.30**

- Jabeen, S., F. Javed, N.S. Hettiarachchy, A. Sahar, A. Sameen, M.R. Khan, A. Siddeeg, A. Riaz and R.M. Aadil. 2022. Development of energy-rich protein bars and in vitro determination of angiotensin I-converting enzyme inhibitory antihypertensive activities. *Food Sci. Nutr.* 10(4):1239-1247.

**Impact Factor: 3.90**

- Zia, S., **Khan, M.R.**, Shabbir, M.A., \*Aadil, R.M. 2021. An update on functional, nutraceutical and industrial applications of watermelon by-products: A comprehensive review. *Trends in Food Science and Technology*, 114, 275-291.

**Impact Factor: 15.30**

- M.H. Rasheed., M.R. Khan. U. Roobab. M.S.R. Rajoka. M.I. Raheem. R. Anwar. W. Ahmed. M. Jahan. M.R.A. Ijaz. M.M. Asghar. M. Asim Shabbir\* and R.M. Aadil. 2021. Enhancing the shelf stability of fresh-cut potatoes via chemical and nonthermal treatments. *Journal of Food Processing and Preservation.* 45(6), e15582. <https://doi.org/10.1111/jfpp.15582>

**Impact Factor: 2.50**

- Shazmeen, Haq, I. U., M.S.R. Rajoka, M.A. Shabbir, M. Umair, I.U. llah, M.F. Manzoor, A. Nemat, M. Abid, M.R. Khan and R.M. Aadil. 2021. Role of stilbenes against insulin resistance: A review. *Food Sci. Nutr.* 9(11), 6389-6405.

**Impact Factor: 3.90**

- Rabail, R., M.R. Khan, H.M. Mehwish, M.S.R. Rajoka, J.M. Lorenzo, M. Kieliszek, A.R. Khalid, \*M. Asim Shabbir and R.M. Aadil. 2021. An overview of chia seed (*Salvia hispanica L.*) bioactive peptides' derivation and utilization as an emerging nutraceutical food. *Frontiers in Bioscience – Landmark.* 26(9): 643-654. <https://doi.org/10.52586/4973>

**Impact Factor: 3.10**

- **Khan, M.R.**, Batool, M., Amir, R.M., Shabbir, M.A., Siddique, F., Aadil, R.M., Ameer, K., Din, A., Rakha, A., Riaz, A., Faiz, F. 2021. Ameliorating effects of okra (*Abelmoschus esculentus*) seed oil on hypercholesterolemia. *Food Science and Technology*, 41(1): 113-119.

**Impact Factor: 1.718**

- Shabbir, M.A., Ahmed, H., Maan, A.A., Rehman, A., Afraz, M.T., Iqbal, M.W., Khan, I.M., Amir, R.M., Ashraf, W., **Khan, M.R.**, Aadil, R.M. 2021. Effect of non-thermal processing techniques on pathogenic and spoilage microorganisms of milk and milk products. *Food Science and Technology*, 41(2): 279-294.

**Impact Factor: 1.718**

- Shabbir, M.A., Mehak, F., Khan, Z.M., Ahmad, W., **Khan, M.R.**, Zia, S., Rahaman, A., \*Aadil, R.M. 2021. Interplay between ceramides and phytonutrients: New insights in metabolic syndrome. *Trends in Food Science and Technology*, 111(5), 483-494.

**Impact Factor: 12.563**

- **Khan, M.R.**, Syed, A., Zia, S., Aadil, R.M., Manzoor, M.F., Inam-Ur-Raheem, M., Abid, M., Shabbir, M.A., Qureshi, S., Ahmed, W., Din, A., Karrar, E. 2021. Stabilization and attributive amelioration of sugarcane juice by naturally derived preservatives using aonla and moringa extract. *Food Science and Nutrition*, 9(6), 3048-3058.

**Impact Factor: 2.863**

- Rashid, M.H., **Khan, M.R.**, Roobab, U., Rajoka, M.S.R., Inam-ur-Raheem, M., Anwar, R., Ahmed, W., Jahan, M., Ijaz, M.R.A, Asghar, M.M., Shabbir, M.A., \*Aadil, R.M. 2021. Enhancing the shelf stability of minimally processed potato via chemical and non-thermal treatments. *Journal of Food Processing and Preservation*, 45(6), e15657.

**Impact Factor: 2.190**

- Afraz, M.T., **M. R. Khan**, U. Roobab, M.A. Noranizan, B.K. Tiwari, M.T. Rashid, M. Inam-Ur-Raheem, S.M.B. Hashemi and R.M. Aadil. 2020. Impact of novel processing techniques on the functional properties of egg products and derivatives: A review. *Journal of Food Process Engineering*. <https://doi.org/10.1111/jfpe.13568>.

**Impact Factor 2.356**

- Firdous, N., **M.R. Khan**, M.S. Butt and M. Shahid. 2020. Application of aloevera gel based edible coating to maintain postharvest quality of tomatoes. *Pakistan journal of agricultural sciences*. 57(1): 245-249.

**Impact Factor 0.748**

- Naz, S., M.A. Shabbir, R.M. Aadil, **M.R. Khan**, O.N. Ciftci, A. Sameen, I. Yasmin, A. Hayee and M. Maqsood. 2020. Effect of polymer and polymer blends on encapsulation

efficiency of spray-dried microencapsulated flaxseed oil. International Food Research Journal. 27(1): 78-87.

**Impact Factor 1.014**

- Sibt-e-Abbas, M., M.S. Butt, **M.R. Khan**, M.T. Sultan, M.S. Saddique and M. Shahid. 2020. Nutritional And Functional Characterization Of Defatted Oilseed Protein Isolates. Pakistan Journal of Agricultural Sciences. 57(1): 219-228.

**Impact Factor 0.748**

- Waheed, M. M. Yousaf, A. Shehzad, M. Inam-Ur-Raheem, M.K.I. Khan, **M.R. Khan**, N. Ahmad, Abdullah and R.M.Aadil. 2020. Channelling eggshell waste to valuable and utilizable products: A comprehensive review. Trends in Food Science & Technology. 106: 78-90.

**Impact Factor 12.563**

- Naz, S., M.A. Shabbir, **M.R. Khan** and M. Shahid. 2019. Comparison of flaxseed oil characteristics of three Pakistani varieties obtained by supercritical CO<sub>2</sub> and two conventional extraction methods. International Food Research Journal. 26(5): 1599-1607.

**Impact Factor 1.014**

- Amir. R. M, A, Randhawa, M. A, Nadeem, Ahmed, A, Ahmad, A, Khan, **M. R, Khan**, M.A, Kausar, R. 2019. Assessing and reporting household chemicals as a novel tool to mitigate pesticide residues in spinach (*spinacia oleracea*). Scientific Reports 9(1): 1-6.

**Impact Factor 4.379**

- Zia. S, **M. R, Khan**, Xin. A. Zing, Sehrish, M. A. Shabbir, R.M.Aadil. 2019. Combined effect of microwave and ultrasonication treatments on the quality and stability of sugarcane juice during cold storage. International Journal of Food Science and Technology. <https://doi.org/10.1111/ijfs.14167>

**Impact Factor 3.713**

- Naeem. A, M. A. Shabbir, **M. R, Khan**, Naveed. A, T.H.Roberts. 2019. Mango Seed Kernel Fat as a Cocoa Butter Substitute Suitable for the Tropics. Journal of Food Science. <https://doi.org/10.1111/1750-3841.14614>

**Impact Factor 3.167**

- Aslam. A, T. Zahoor, , **M. R, Khan**, A. Khaliq, M. Nadeem, A. Sagheer, M.F.J.Chughtai, M.W. Sajid. 2019. Studying the influence of packaging materials and storage on the physiochemical and microbial characteristics of black plum (Syzygium cumini) jam. Journal of Food Processing and Preservation. <https://doi.org/10.1111/jfpp.13941>

**Impact Factor 2.190**

- N. Siraj., M. Asim Shabbir. **M.R. Khan**. K. Rehman. 2018. Preventing the oxidation of canola oil and sunflower oil by the addition of pomegranate seed oil. *Acta Alimentaria, An International Journal of Food Science.* Published online at: <https://doi.org/10.1556/066.2018.0005>

**Impact Factor 0.61**

- Khalil, A.A., **M. R. Khan.**, M. A. Shabbir., K. Rehman. 2018. In vitro antioxidant activity and punicalagin content quantification of pomegranate peel obtain as agro waste after juice extraction. *Pak. J. Agric. Sci.* 55(1): 197-201.

**Impact Factor 0.748**

- Sibbit T, **Khan, M.R.** Shabbir, M.A. and Zia, M.A. 2018. Addition of sesamum indicum protein isolates improves the nutritional quality and sensorial attributes of wheat flour muffins. *Progress in Nutrition.* 20(2):241-247.

**Impact Factor: 0.538**

- Din, A, Chughtai, M. F. J, Khan, M. R, Shahzad, A, Khaliq, A, Nasir, M. A. 2018. Nutritional and functional perspectives of barley  $\beta$ -glucan. *International Food Research Journal.* 25(5): 1773-1784.

**Impact Factor: 1.014**

- Mehmood T, **Khan, M.R.** Shabbir, M.A. and Zia, M.A. 2018. Phytochemical profiling and HPLC quantification of citrus peel from different varieties. *Progress in Nutrition*. 20(1):279-288.

**Impact Factor: 0.538**

- Khalil, A.A., ur Rahman, U., **Khan, M.R.**, Sahar, A., Mehmood, T. and Khan, M., 2017. Essential oil eugenol: sources, extraction techniques and nutraceutical perspectives. *RSC Advances*, 7(52): 32669-32681.

**Impact Factor: 3.361**

- Shabbir, M.A., **Khan, M.R.**, Saeed, M., Pasha, I., Khalil, A.A. and Siraj, N., 2017. Punicic acid: A striking health substance to combat metabolic syndromes in humans. *Lipids in health and disease*, 16: 1-9.

**Impact Factor: 3.876**

- Imran, M., Nadeem, M., Saeed, F., Imran, A., **Khan, M. R.**, Khan, M. A. Ahmed, S. and Rauf, A. 2017. Immunomodulatory perspectives of potential biological spices with special reference to cancer and diabetes. *Food and Agricultural Immunology*, 28(4): 1-30.

**Impact Factor: 3.101**

- Arslan, M., Rakha, A., **Khan, M.R.** and Zou, X., 2017. Complementing the dietary fiber and antioxidant potential of gluten free bread with guava pulp powder. *Journal of food measurement and characterization*. 11(4): 1959-1968.

**Impact Factor: 2.431**

- Khalil, A. A., **Khan, M. R.**, Shabbir, M. A., & Rahman, K. U. 2017. Comparison of antioxidative potential and punicalagin content of pomegranate peels. *JAPS: Journal of Animal & Plant Sciences*, 27(2): 522-527.

**Impact Factor: 0.224**

- Nadeem, M, F. M. Anjum, **M. R. Khan**, M. Sajjad, S. Hussain, M. S. Arshad. 2016. Electrophoretic characteristics of gluten proteins as influenced by crop year and variety. International Journal of Food Properties. 19:897-910.

**Impact Factor: 2.727**

- Khan, M. A, M. Nadeem, A. Rakha, S. Shakoor, A. Shehzad, **M. R. Khan**. 2016. Structural characterization of oat bran (1→3) (1→4) – B-D-Glicanes by lichenase hydrolysis through high-performance anion exchange chromatography with pulsed amperometric detection. International Journal of Food Properties. 19:929-935.

**Impact Factor: 2.727**

- M. Asim Shabbir., A. Raza. F. M. Anjum. **M. R. Khan**. H. A. R. Suleria. 2015. Effect of thermal treatment on meat proteins with special reference to heterocyclic aromatic amines (HAAs). Critical Reviews in Food Science and Nutrition. 55:82-93.

**Impact factor: 11.176**

- N. Siraj., M. Asim Shabbir. T. Ahmad. A. Sajjad. **M. R. Khan**. M. I. Khan. M. S. Butt. 2015. Organogelators as a Saturated Fat Replacer for Structuring Edible Oils. International Journal of Food Properties. 18(9):1973-1989.

**Impact factor: 2.727**

- Nadeem M, Anjum F. M, **Khan M. R**, Shabbir M. A, Saeed M, Ahmed A. 2015. Immunological appraisal of wheat varieties in relation to chapatti making characteristics. Food and Agricultural Immunology .26(4): 538-557.

**Impact factor: 2.605**

- Din., M. Nadeem. **M. R. Khan**. M. Asim Shabbir. 2015. Development and application of indigenous skin coating materials on kinnow (citrus fruit) quality during storage. Acta Scientiarum Technology. 37(1): 111-116.

**Impact factor: 0.61**

- Pasha I, Saeed F, Sultan MT, **Khan MR**, Rohi M. 2014. Recent developments in minimal processing; A tool to retain nutritional quality of food. Critical Reviews in Food Science and Nutrition. 54:3, 340-351.

**Impact factor: 11.176**

- Saeed, M., F.M. Anjum, **M. R. Khan**, M.I. Khan and M. Nadeem. 2013. Isolation, characterization and utilization of starter cultures for the development of whey yoghurt drink. *British Food Journal*. 115(8): 1169-1186.

**Impact factor: 2.518**

- Amir RM, Anjum FM, Khan MI, **Khan MR**, Pasha I, Nadeem M. 2013. Application of Fourier transforms infrared (FTIR) spectroscopy for the identification of wheat varieties. *J. Food Sci. Technol.* 50(5): 1018-1023.

**Impact factor: 2.701**

- Hussain S, Anjum F. M, Butt M. S, Alamri M. S, **Khan M. R.** 2012. Biochemical and nutritional evaluation of unleavened flat breads fortified with healthy flaxseed. *Int J Agric biol.*, 14:190-196.

**Impact factor: 0.89**

- **Khan M. R.**, Anjum FM, Pasha I, Shabbir MA, Hussain S, Nadeem M. 2012. Application of enzyme linked immunosorbent assay for the assessment of spring wheat quality. *Food and Agricultural Immunology*. 23(1):1-15.

**Impact factor: 3.101**

- **Khan M. R.**, Anjum F. M, Din A, Hussain S, Shabbir M. A, Nadeem M. 2010. Immunochemical characteristics of wheat proteins-A Review. *Food and Agriculture Immunology*. 21(4): 279-294.

**Impact factor: 2.605**

- **Khan M. R.**, Anjum F. M, Zahoor T, Nawaz H. 2009. Biochemical and technological characterization of Pakistani spring wheats. *Pak. J. Agric. Sci.*, 46(4): 271-279.

**Impact factor: 0.748**

- Anjum F. M, **Khan M. R.**, Din A, Saeed M, Pasha I and Arshad MU. 2007. Wheat Gluten: High Molecular wt. glutenin subunits-structure, genetics and relation to dough elasticity. *Journal of Food Science*, 72(3):56-63.

**Impact factor: 3.167**

- Minhas R, Butt MS, Zahoor T, Rehman S, **Khan MR**, Saeed M. 2005. Preparation and evaluation of chicken rolls with baking powder. *Int J Agric bio.* 5:703-705.

**Impact factor: 0.89**

**Non-impacted:**

- Z. Akbar, A. Shehzad, T. Zahoor, **M. R. Khan**, M. A. Shabbir, A. Rakha, M. A. Jahangir, M. Z. Shuja. 2016. Effect of Soy Flour Supplementation on Quality of Cookies. *International Journal of Emerging Technology and Advanced Engineering.* 6(2): 175-177.
- **Khan, M. R.**, M. A. Shabbir., T. Mehmood., A. A. Khalil., A. Din., Z. Z. Tariq. 2015. Revelation of antioxidant potential and sensorial attributes of sweet potato based nutritional drink. *Pak. J. Food Sci.*, 25(4):155-168.
- Din., S. Parveen. H. Kausar. **M.R. Khan**. M. Asim Shabbir. A. Shehzad. 2014. Development and stability of bioactive compounds in carbonated black ice tea beverage. *British Journal of Agricultural Sciences.* 9(1): 195-204.
- Rehman, M. A., **M. R. Khan**, M. K. Sharif., S. Ahmad and F. H. Shah. 2014. Study on the storage stability of fruit juice concentrates. *Pak. J. Food Sci.*, 24(2): 101-107.
- Saeed , M., I. Yasmin., M. I. Khan., I.Pasha., **M. R. Khan**., A. Shabbir and W. A. Khan. 2014. Lactic acid bacteria in sourdough fermentation; a safe approach for food preservation. *Pak. J. Food Sci.*, 24(4): 211-217.
- M. Saeed., M. Nadeem. **M. R. Khan**. M. A. Shabbir. R. M. Amir. 2013. Antimicrobial activity of *Syzgium aromaticum* extracts against food spoilage bacteria. *African Journal of Microbiology Research.* 7(41): 4848-4856.
- M. Asim Shabbir., F. M. Anjum. **M. R. Khan**. M. Nadeem. M. Saeed. 2013. Assessment of heavy metals and aflatoxin levels in export quality indica rice cultivars with different milling fractions. *African Journal of Agricultural Research.* 8(25): 3236-3244.

- M. R. Amjid., A. Shahzad. S. Hussain. M. Asim Shabbir. **M. R. Khan.** M. Shoaib. 2013. A comprehensive review on wheat flour dough rheology. *Pakistan journal of Food Sciences.* 23(2): 105-123.
  - Razzaq, M.R., Anjum, F.M., Khan, M.I. **Khan, M.R.** Nadeem, M. Javed, M.S. and Sajid, M.W. 2012. Effect of temperature, screw speed and moisture variations on extrusion cooking behavior of Maize (*Zea mays. L.*). *Pak. J. Food Sci.*, 22(1): 12-22.
  - Ali, Akbar., A. Shehzad., **M. R. Khan.,** M. A. Shabbir., M. R. Amjad. 2012. Yeast, its types and role in fermentation during bread making process – A Review. *Pakistan Journal of Food Sciences.* 22(3): 170-178.
  - R.M. Amir., M. A. Shabbir. **M. R. Khan.** S. Hussain. 2012. Interesterification of Fats and Oils – A Review. *Pakistan Journal of Food Sciences.* 22(3): 143-153.
  - Amir R.M, Anjum F.M, **Khan M.R**, Imran M. 2011. Application of Fourier Transform Infrared (FTIR) Spectroscopy in Foods. *Internet Journal of Food Safety*, 13: 310-14.
  - Nadeem M, Anjum F.M, Pasha I, **Khan M.R**, Khan M.I. and Hussain S. 2010. Antimicrobial peptides: a new weapon to fight infections- recent advances and future prospects. *Int. J Food Safety nutrition public health and technology*, 2(1): 9-14.
  - **Khan M.R**, Anjum F.M, Hussain S and Nadeem M. 2010. A review of wheat quality assessment. *Int. J. Biosciences Agriculture and Technology*, 2(1): 12-20.
  - Zahoor T, **Khan M.R**, Huma N, Bajwa B.E. 2002. Stability and acceptability studies on banana fruit set yogurt. *Pak J Food Sci.* 12(3-4): 41-45.
  - Nadeem M, Anjum F.M, Hussain S, Khan M.I, **Khan M.R**, Shahzad M.F. 2010. Chemical characteristics and antioxidant activity of seeds of different sunflower hybrids. *Life Sci. Int. J.*, 4(1): 1349-1355.
  - Anjum F.M, Sultan A, Khan M.I, Pasha I, Hussain S, Asghar A, **Khan M.R**. 2006. Effect of interchanging starch and protein (gluten) fractions of two wheat varieties on the rheological and bread making quality. *Pak J Food Sci.* 16(1-4): 15-23.
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### **Books/ Book Chapters**

- Anjum F.M., M. I Khan., **M. R. Khan**. 2006. Bakery Ki Masnooat. University of Agriculture, Press. Faisalabad.
  - **Khan M.R.**, M.A Randhawa and M.A. Shabbir. 2016. Processing of Fruits and Vegetables. Submitted after second revisions for publication in book entitled “Handbook of Food Science and Technology”.
  - Shabbir M.A., **M.R. Khan** and N. Siraj. 2016. Rudiments of Edible Oils and Fats. Submitted after second revisions for publication in book entitled “Handbook of Food Science and Technology”.
  - Randhawa M. A, **M.R. Khan**, N. Ahmad. 2016. Beverages and related products. Submitted after second revisions for publication in book entitled “Handbook of Food Science and Technology”.
  - **Khan M.R.**, A Shahzad., A. Sameen and M.S. Butt. 2018. Developing Sustainable Agriculture in Pakistan: Value addition. Publisher CRC press.
  - Processing of Fruits and Vegetables. Submitted after second revisions for publication in book entitled “Handbook of Food Science and Technology”.
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### **INTERNSHIP**

Six weeks training experience in CPC Rafhan Ltd Faisalabad

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### **WORKSHOPS/TRAININGS/SEMINARS/SYMPORIUM/CONFERENCES**

#### **NATIONAL**

1. Four days international symposium on “Emerging Trends in Food Science and Technology” from 5<sup>th</sup> to 8<sup>th</sup>, November 2007 at UAF, Faisalabad.
2. Three days International workshop on “Extrusion Technology” from 15<sup>th</sup> to 17<sup>th</sup> August, 2008 at UAF, Faisalabad.

3. Training of the trainers "Fruits and vegetable processing and preservation" Pakistan Horticulture Development and Export Company (PHDEC)-NIFSAT, 12-7-2010 to 17-7-10.
4. Outreach training for household preservation of mango. Gujarat, Mirpur, Badala, Bhimber areas 19-7-10 to 24-7-10.
5. Training of the trainers "Fruits and vegetable processing and preservation" Pakistan Horticulture Development and Export Company (PHDEC), 26-7-10 to 31-7-10.
6. Training of the trainers "Post Harvest Handling and Processing" Pakistan Horticulture Development and Export Company (PHDEC)-NIFSAT, 26-7-10 to 31-7-10.
7. Training of the trainers "Post Harvest Handling and Processing" Pakistan Horticulture Development and Export Company (PHDEC)-NIFSAT, August 2-8-10 to 7-8-10.
8. Conference on "Food Security during Challenging Times" University Putra Malaysia (UPM), Malaysia. (7/5/2010-7/7/2010) [Foreign]
9. Workshop on "Recent advances in food analysis" University of Agriculture, Faisalabad. (2/7/2009-2/7/2009) [Local].
10. Workshop on "Food Safety Management System ISO22000:2005" University of Agriculture, Faisalabad. (10/5/2009-10/8/2009) [Local]
11. Seminar on "Economic use of postharvest cold chain" University of Agriculture, Faisalabad. (5/19/2010-5/21/2010) [Local]
12. Workshop on "Food industry needs based projects for research in academia" University of Agriculture, Faisalabad. (6/17/2010-6/17/2010) [Local]
13. Workshop on "Halal Food Issues and Ingredient Concerns" PCSIR Laboratories, Lahore-Pakistan (6/29/2009-6/29/2009) [Local]
14. Seminar on "Challenges to the Food Industry in the WTO Scenario" University of Agriculture, Faisalabad. (6/27/2005-6/28/2005) [Local]
15. Conference on "Recent advances in human nutrition with special reference to vulnerable groups" University of Agriculture, Faisalabad. (2/22/2010-2/25/2010) [Local]
16. Workshop on "Value chain in foods" University of Agriculture, Faisalabad. (11/9/2010-11/9/2010) [Local]
17. Conference on "Technological and Scientific Aspects of Dairy Products with Special Reference to French Cheeses" University of Agriculture, Faisalabad (2/21/2011-2/23/2011) [Local]

18. Workshop on "1st Food Product Development Competition" University of Agriculture, Faisalabad (2/24/2011-2/24/2011) [Local]
19. Workshop on "Nutrition in Emergency (NIE)" University of Agriculture, Faisalabad (6/26/2011-7/1/2011) [Local]
20. Workshop on "Nutrition in Emergency (NIE)" University of Agriculture, Faisalabad (7/4/2011-7/8/2011) [Local]
21. All the annual conferences organized by Pakistan Society of Food scientists and Technologists (PSFST)
22. International Conference on Emerging Issues in Food Safety, November, 14-16, 2011. Organized by National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan in collaboration with Endowment fund Secretariat, University of Agriculture Faisalabad, Pakistan in collaboration with USDA and Higher Education Commission Islamabad, Pakistan.
23. International Symposium "Diet as an Adjunct Measure for Prevention and Management of Dengue Epidemics" January 30-31, 2012 at University of Agriculture, Faisalabad-Pakistan
24. Stakeholders Workshop on "Applied Nature Need Based Research Projects of Food Industries" May 07, 2012 at University of Agriculture Faisalabad.
25. Attended E-Learning program on "Food Safety and Traceability" Organized by NPO, Pakisatn. December 11-1, 2012.
26. International Workshop on "Curriculum development for Food Safety Management and Food Services Management" March 11-12, 2013 at National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan.
27. International Conference on Emerging Issues in Nutrition and Food Safety" October 21-23, 2013 at National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan.
28. International Conference on "Functional Foods and Neutraceuticals" December 4-5, 2013 at Department of Food Science, Nutrition and Home Economics, Government College University Faisalabad.
29. Attended E-Learning program on "Risk Management of Foodborne Pathogens" Organized by NPO, Pakisatn. May 19-22, 2014.

30. International Conference on Nutritional Therapies against Lifestyle related disorders" May 29-30, 2014 at National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan.
31. One day Workshop on "Grant Writing" September 12, 2014. Organized by Office of Research Innovation and Commercialization, University of Agriculture Faisalabad-Pakistan.
32. One day Workshop on "Developing Industry Driven Technologies" September 27, 2014. Organized by Business Incubation Center, University of Agriculture Faisalabad-Pakistan.
33. International Symposium on Technological & Nutritional Aspects of Value Added Dairy Products" November 12-14, 2014. at National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan.
34. Cheese and Exotic Food Festival & International Conference on "Opportunities and Challenges in Dairy Industry" organized by NIFSAT-UAF November 26-27, 2015.
35. International Workshop on Clinical Practices in Nutrition at University of Agriculture, Faisalabad. November 17, 2015.
36. World Food Day, Ensuring Food Security through Efficient Processing. October 16, 2015.
37. Participated in Poster Competition Organized in Connection With World Food Day.
38. Two Days Training Workshop on "Entrepreneurship Approach in Value Added Baked Products Organized By NIFSAT-UAF April 28-29, 2015.
39. International Workshop on "Strategies to Develop Nutrition Related Multidisciplinary Projects" organized by NIFSAT-UAF February 27, 2016.
40. Seminar on "Obesity as Risk Factor for Heart Attack" organized by NIFSAT-UAF February 3, 2016.
41. Participated in Nutrition Mela organized by NIFSAT-UAF March 9-10, 2016.
42. National One Day Symposium on " One-Health" Organized by U.S.-Pakistan Center For Advanced Studies in Agriculture and Food Security August 08, 2016.
43. 26<sup>th</sup> All Pakistan Food Science Conference Organized by Pakistan Society of Food Scientists and Technologists in Collaboration with NIFSAT April 19, 2016.
44. International Seminar on "Public Health Nutrition" held at National Institute of Food Science and Technology, Faculty of Food, Nutrition and Home Sciences, University of Agriculture, Faisalabad, Pakistan. January 04, 2016.

45. Seminar on “Role of Nutrition in Medicine” held at National Institute of Food Science and Technology, Faculty of Food, Nutrition and Home Sciences, University of Agriculture, Faisalabad, Pakistan. March 09, 2016.
46. 1<sup>st</sup> National Conference on “Recent Advances in Functional Foods” held at Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore, Pakistan. October 05-06, 2016.

### **INTERNATIONAL TRAINING**

1. Three months short training on bioactive components of fruits and vegetables at School of Agriculture, Food and Rural Development, Faculty of Science, Agriculture and Engineering, Newcastle University UK. (June-September 2012).
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### **RESEARCH PROJECTS AS PI**

- “Value Addition of Mango through Development of Fruit Leather”. **USD 7,792/-** Funded by **Agriculture Innovation for Pakistan, University of California Davis, USA**  
**(Completed)**
- “Utilization of fruit wastes as a Value Added Functional Drink”. **3.728 Million PKR**, Funded by Higher Education Commission (HEC), Pakistan.  
**(In Progress).**  
“Value addition of guava through development of vitamin-A fortified fruit bar” **2.124 Millions PKR** funded by Pakistan Agricultural Research Council.  
**(In Progress)**

### **RESEARCH PROJECTS AS CO-PI**

- Characterization of Pakistani Mango Kernel Waste with Special Reference to its Seed Fat as a Cocoa Butter Equivalent for Value added Product”. **USD 4,928/-** Funded by **Agriculture Innovation for Pakistan, University of California Davis, USA**  
**(Completed)**

- “Utilization of Pomegranate and Sunflower Seed Waste for the Development of High Nutria-Omega 5 Cookies for Infantile Stage” **3.388 Million PKR** Funded by **Higher Education Commission (HEC), Pakistan.**

**(In-Progress)**

“Exploring the potential of non-thermal techniques for quality analysis of citrus based peel/pectin” **2.933 Millions PKR** funded by **Pakistan Agricultural Research Council.**

**(In Progress)**

“Development of indigenous adsorbent for improving the used edible fats quality of street vendor foods for peri-urban inhabitants **2.263 Million PKR** Funded by **Higher Education Commission (HEC), Pakistan.**

**(In Progress)**

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## **REFERENCES**

Prof. Dr.Imran Pasha,  
Professor and Director General,  
National Institute of Food Science and Technology, University of Agriculture, Faisalabad,

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## **PROCEEDING PUBLICATIONS**

- Food safety and security situation in Pakistan. Mian Kamran Sharif, Faqir Muhammad Anjum, Masood Sadiq Butt, **Moazzam Rafiq Khan**, Sarfraz Ahmad. (2010). Proceeding of International Conference on Food Security during Challenging Times (July 5-7), University of Putra Malaysia.22-25.
- Prospects of value addition with reference to food security in Pakistan. **Moazzam Rafiq Khan**, Faqir Muhammad Anjum, Mian Kamran Sharif, Shahzad Hussain, Sarfraz Ahmad. (2010). Proceeding of International Conference on Food Security during Challenging Times (July 5-7), University of Putra Malaysia.73-75.
- Microfiltration, a processing technology to have safe, sure buffalo dairy products with their natural quality. Sarfraz Ahmad, Faqir Muhammad Anjum, Nuzhat Huma, Mian Kamran Sharif, **Moazzam Rafiq Khan**, Gaelle Tanguy, Nadine Leconte, Frederic Gaucheron.

(2010). Proceeding of International Conference on Food Security during Challenging Times (July 5-7), University of Putra Malaysia.142-145.

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#### **INTERNATIONAL CONFERENCES- ORAL PRESENTATIONS (ABSTRACTS PUBLISHED IN PROCEEDINGS)**

1. Prospects of value addition with reference to food security in Pakistan. **Moazzam Rafiq Khan**, Faqir Muhammad Anjum, Mian Kamran Sharif, Shahzad Hussain, Sarfraz Ahmad. (2010). Proceeding of International Conference on Food Security during Challenging Times (July 5-7), University of Putra Malaysia.73-75.
2. Food safety and security situation in Pakistan. Mian Kamran Sharif, Faqir Muhammad Anjum, Masood Sadiq Butt, **Moazzam Rafiq Khan**, Sarfraz Ahmad. (2010). Proceeding of International Conference on Food Security during Challenging Times (July 5-7), University of Putra Malaysia.22-25.
3. Microfiltration, a processing technology to have safe, sure buffalo dairy products with their natural quality. Sarfraz Ahmad, Faqir Muhammad Anjum, Nuzhat Huma, Mian Kamran Sharif, **Moazzam Rafiq Khan**, Gaelle Tanguy, Nadine Leconte, Frederic Gaucheron. (2010). Proceeding of International Conference on Food Security during Challenging Times (July 5-7), University of Putra Malaysia.142-145.
4. Buffalo milk's importance for desirable textural properties of fermented dairy products like yoghurt and cheese. Sarfraz Ahmad, Faqir Muhammad Anjum, Jean-François Grongnet, Mian Kamran Sharif, Nuzhat Huma, Ayesha Sameen, **Moazzam Rafiq Khan**, Frederic Gaucheron. (Oral presentation at International Conference on Technological and Scientific Aspects of Dairy Products with Special Reference to French Cheeses (February 21-23, 2011, National Institute of Food Science and Technology, University of Agriculture, Faisalabad, Pakistan).
5. **Khan, M. R**; A. Shahzad; A. Ghafoor and T. Mehmood. 2012. Effect of osmotic dehydration and frozen storage on quality characteristics of mango slices. Future Perspectives of Food Processing Industry in Pakistan organized by Department of Food Science, GC University, Faisalabad. December 11-12, 2012.
6. **Khan, M. R**; M. A. Shabbir; N. Abbas and A. Khaliq. 2012. Potato starch and citric acid coating to increase the shelf life of apple. Future Perspectives of Food Processing Industry

- in Pakistan organized by Department of Food Science, GC University, Faisalabad. December 11-12, 2012.
- 7. Jamil, A; M. A. Shabbir; **M. R. Khan** and A. Shahzad. 2012. Neutraceutical potential of Olive oil. Future Perspectives of Food Processing Industry in Pakistan organized by Department of Food Science, GC University, Faisalabad. December 11-12, 2012.
  - 8. Zia, H. M; M. A. Shabbir; **M. R. Khan** and A. Shahzad. 2012. Stabilization of cotton seed oil with tomato peel extract. Future Perspectives of Food Processing Industry in Pakistan organized by Department of Food Science, GC University, Faisalabad. December 11-12, 2012.
  - 9. Khaliq, A; **M. R. Khan**; A. Shahzad; T. Zahoor. 2013. Effect of skim milk powder and sucrose on quality and storage stability of mango leather. International conference on Functional Foods and Nutraceuticals organized by Department of Food Science, GC University, Faisalabad. December 4-5, 2013.
  - 10. Mehmood, T; **M. R. Khan**; A. Shabbir. 2013. Quality evaluation of biscuits supplemented with papaya powder. International conference on Functional Foods and Nutraceuticals organized by Department of Food Science, GC University, Faisalabad. December 4-5, 2013.
  - 11. Shoaib, M; A. Shahzad; M. S. Butt; **M. R. Khan**; M. K. Sharif; I. Haq; M. J. Iqbal. 2013. Safety concerns about functional and nutraceutical foods. International conference on emerging issues in nutrition and food safety organized by National Institute of Food Science and Technology, university of Agriculture Faisalabad. October 21-23, 2013.
  - 12. Ghani, M.U; A. Shehzad; M. Shoaib; **M. R. Khan**; M.F. Karim; M. A. Jahangir. 2013. An overview: Functional foods and nutraceuticals. International conference on Functional Foods and Nutraceuticals organized by Department of Food Science, GC University, Faisalabad. December 4-5, 2013
  - 13. Shabbir, M. A; A. Jamil; **M. R. Khan**; M. Saeed; N. Siraj. 2013. Influence of hydrogenated and non hydrogenated oil blends on the quality and storage stability of fried chicken nuggets. International conference on Functional Foods and Nutraceuticals organized by Department of Food Science, GC University, Faisalabad. December 4-5, 2013
  - 14. Din, A; S. Parveen; B. Ashfaq; **M. R. Khan**; M. Nadeem. 2013. Food emulsions: As a source of nutraceuticals in fruits and vegetables. International conference on Functional

Foods and Nutraceuticals organized by Department of Food Science, GC University, Faisalabad. December 4-5, 2013.

15. A. Din., H. Kausar. M. Asghar. **M. R. Khan.** A. Shahzad. Asim Shabbir. 2014. Quality evaluation and storage stability of Aloe Vera-Lemon neutraceutical drinks. International Symposium on Technological and Nutritional Aspects of Value Added Dairy Products. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. Pp. 30.
16. S. Naz., M. Asim Shabbir. A. Din. **M. R. Khan.** N. Siraj. 2014. Functional properties of milk protein co-precipitates. International Symposium on Technological and Nutritional Aspects of Value Added Dairy Products. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. Pp. 56.
17. N. Siraj., M. Asim Shabbir. **M. R. Khan.** M. Saeed. A. Shehzad. 2014. Pulsed electric field: Potential applications in dairy products processing. International Symposium on Technological and Nutritional Aspects of Value Added Dairy Products. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. Pp. 85.
18. **M. R. Khan.**, T. Mehmood. M. Asim Shabbir. A. Shehzad. A. A. Khalil. R. Sikandar. 2014. Utilization of carrot pomace as a source of phytochemicals in biscuits. International Conference on Nutritional Therapies against Life Style Related Disorders. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. In collaboration with Micro Nutrient Initiative, UNIDO, GAIN and EU. Pp. 17.
19. A. Din., **M. R. Khan.** A. Shehzad. M. Asim Shabbir. M. Nadeem. 2014. Development and Quality Evaluation of Intermediate Moisture Muskmelon Chunks during Storage. International Conference on Nutritional Therapies against Life Style Related Disorders. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. In collaboration with Micro Nutrient Initiative, UNIDO, GAIN and EU. Pp. 24.
20. A. Mehmood., M. Asim Shabbir. **M. R. Khan.** M. Saeed. M. K. Sharif. N. Siraj. 2014. Influence on the Nutritional Quality of Beef Patties by the Addition of Various levels of Extruded Flaxseed Flour. International Conference on Nutritional Therapies against Life Style Related Disorders. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. In collaboration with Micro Nutrient Initiative, UNIDO, GAIN and EU. Pp. 24.

21. **M. R. Khan.**, T. Mehmood., S. Tanveer., M. F. J. Chughtai., Sanabil. 2015. Improving Food Safety During Supply Chain of Dairy Products. International Conference on Opportunities and Challenges in Dairy Industry. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. pp. 35.
22. H. M. Munir., **M. R. Khan.**, M. Naz. 2015. Anti- Diabetic Potential of Probiotic Foods in Type II Diabetic Mellitus. International Conference on Opportunities and Challenges in Dairy Industry. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. pp. 46.
23. S. Choudhry., A. Shehzad., **M.R. Khan.**, S. Rehman. 2015. Food and Health Applications of Bacterial Exopolysaccharides; Natural Modulators of Dairy Products. International Conference on Opportunities and Challenges in Dairy Industry. National Institute of Food Science and Technology, University of Agriculture Faisalabad-Pakistan. Pp. 65.
24. **M. R. Khan**, A. A Khalil, M. A. Shabbir, A. Shehzad, T. Mehmood, S. Khan. Extraction and utilization of citrus begass extract for development of functional food. Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp. 62.
25. **M. R. Khan**, T. Mehmood, M. A. Shabbir, M. Saeed, A.A Khalil, A.Din.2016. Enhancing the protective activity of broccoli sprout juice in gut inflammation by neutraceutical improvement. Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp. 109.
26. M. Saeed., I. Fatima., M. A. Shabbir., **M. R. Khan.**, I. Yasmin. 2016. Rosemary as a functional ingredient in yoghurt.. Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp. 19.
27. M. Shehzad., S. Tanweer., M. A. Shabbir., **M. R. Khan.**, A. Din. 2016. Side effects and adverse reactions of functional foods. Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp. 31.
28. Din. A, **M. R. Khan**, M. Nadeem, M. A. Shabbir, A. Shehzad. 2016. Assesment of quality attributes of moringa oleifera leaf extract based kinnow mandrain drink. Ist National

- Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp.45.
29. M. A. Shabbir, **M. R. Khan**, M. Bilal, N. Ahmad, S. Naz, N. Siraj. 2016. Enhancing bakery product's functionality by using buck wheat flour .Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp.59.
30. Miraj, M. A. Shabbir, **M. R. Khan**, N. Ahmad, S. Naz. 2016. Fish oil: A splendid and superb cardioprotective functional food. Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp. 66.
31. M.A. Shabbir, S. Naz, **M. R. Khan**, M. Saeed, A. Shehzad, I. Yasmin.2016. Microencapsulation of flaxseed oil through spray drying: A potential application as functional food. Ist National Conference on Recent Advances in Functional Foods. Department of Dairy Technology, University of Veterinary & Animal Sciences Lahore.-Pakistan. pp. 83.

### **STUDENTS SUPERVISION**

#### **Completed**

- Ph.D. = 7
- M. Sc (Hons.) = 54