

DR. NASIR AHMAD
(Assistant Professor, Food Technology)

School of Biological Sciences,
University of the Punjab, Lahore, Pakistan

Contact numbers: 0092-42-99230-960, 0092-0331-4408881, 0092-0300-4571688

Fax: 0092-42-99230-980

E-mail: mna.sbs@pu.edu.pk, mna.pk1@gmail.com



Father's Name: Rashid Ahmad

N.I.C #: 36402-9694539-1

Date of Birth: 23-03-1978

Marital Status: Married

Academic Qualification:

Certificate/ Degree	Major subjects	Institution	Year		Marks/ CGPA	Division/ Grade
Ph.D. Biological Sciences	Food Biotechnology	University of the Punjab, Lahore	Thesis	2012	Successfully defended	
			Comprehensive exam	2008	4.00/4.00	1 st Division
			Graduate Record Exam (GRE, International)	2008	Percentile "83" Scaled score "620"	Qualified
			Course work	2006	3.70/4.00	1 st Division
M.Sc. (Hons.) Food Technology	Food Technology	University of Agriculture, Faisalabad	2002		3.88/4.00	1 st Division
B.Sc. (Hons.) Agriculture	Food Technology	University of Agriculture, Faisalabad	2000		3.75/4.00	1 st Division
F.Sc.	Biology, Physics, Chemistry	B.I.S.E Multan	1996		761 / 1100 (69.18 %)	1 st Division
Matriculation	Biology, Physics, Chemistry, Mathematics	B.I.S.E Multan	1993		650 / 850 (76.47 %)	1 st Division

Ph.D. Thesis Title:

Amylolytic Enzyme(s) from Hyperthermophilic Archaea: Cloning and Characterization

Teaching Experience:

- Serving as Assistant Professor (TTS) at *School of Biological Sciences, University of the Punjab, Lahore*, since April 2018 to date.
- Served as Assistant Professor (TTS) at *Institute of Agricultural Sciences, University of the Punjab, Lahore*, since April 2015 to April 2018.
- Served as Assistant Professor (on contract basis) at *Institute of Agricultural Sciences, University of the Punjab, Lahore*, since April 2013 to April 2015.
- Served as Lecturer (on ad-hoc basis) at *Institute of Agricultural Sciences, University of the Punjab, Lahore*, since December 2011 to April 2013
- Served as Part Time Lecturer at *Institute of Agricultural Sciences, University of the Punjab, Lahore*, since November 2010 to December 2011.
- Served as Part Time Lecturer at *School of Biological Sciences, University of the Punjab, Lahore* since March 2010 to December 2011. I was a part of the team teaching PhD students in connection with their preparation of International GRE (subject).

Work Experience:

Standard Fruits Ltd. (Golden Juices)

Served as Assistant Manager Production at *Standard Fruits Ltd. (Golden Juices), Phool Nagar* from March 2004 to March 2005. Key responsibilities were production and quality assurance of fruit pulp and juices besides research and development of new formulations.

Qarshi Research International, Hattar

Served as Executive Quality Assurance at *Qarshi Research International, Hattar* from August 2003 to January 2004. Key responsibilities were quality assurance and analysis of food supplements, refreshing syrups, farm products and herbal medicines.

Kohinoor Smiths (Pvt.) Ltd.

Six weeks training at *Kohinoor Smiths (Pvt) Ltd. Raiwind Road, Lahore*. Key responsibilities were quality assurance and analysis of snack foods including potato chips, nimko and fried peanuts.

Research Intrests:

- Food biotechnology
- Application of advanced molecular biology related techniques in food science
- Purification and characterization and applications of enzymes

Awards and Research Grants:

HEC Best Innovator Award 2015/2016

- Won HEC Best Innovator Award 2015/2016

Technology Award

- Won Technology Award in 6th Invention to Innovation Summit 2017 held at University of the Punjab, Lahore on March 8-9, 2017
- Won Technology Award in 5th Invention to Innovation Summit 2016 held at University of the Punjab, Lahore on March 2-3, 2016

Fellowship Award:

- HEC's Indigenous PhD Fellowship award

US Patent Issue Fee:

- US\$ 680 by University of the Punjab, Lahore, Pakistan

US Patent Filing Fee:

- US\$ 11, 000 by HEC, Islamabad, Pakistan

Research Projects:

1. Optimization of simultaneous liquefaction and saccharification: a novel process developed by using newly discovered thermoacidophilic pullulanase (8527/Punjab/NRPU/R&D/HEC/2017). **Rs. 7.379 Million** by Higher Education Commission (HEC), Islamabad, Pakistan.
2. Process scale up and optimization for synthesis of thermostable industrial enzymes (TDF02-069). **Rs. 14.0 Million** by Higher Education Commission (HEC), Islamabad, Pakistan.
3. Enzymatic Synthesis of High Protein Flour from Damaged Rice. **Rs. 0.15 Million** by University of the Punjab, Lahore (2017-2018)
4. Exploring valuables from waste food through enzymatic processing. **Rs. 0.15 Million** by University of the Punjab, Lahore (2015-2016)
5. Exploration of raw potato starch digesting properties of a newly characterized glycosyl hydrolases. **Rs. 0.15 Million** by University of the Punjab, Lahore (2014-2015)
6. Cloning and characterization of a thermostable starch de-branching enzyme. **Rs. 0.15 Million** by University of the Punjab, Lahore (2013-2014)
7. Efficient glucose syrup production by the action of locally produced thermostable amylase. **Rs. 0.15 Million** by University of the Punjab, Lahore (2012-2013)

Research output:

Patents:

“PAKISTAN'S FIRST INTERNATIONAL PATENT IN THE FIELD OF INDUSTRIAL ENZYMES”

Ahmad, N., Rashid, N., Haider, M. S. and Akhtar, M. (2013). Single Step Liquefaction and Saccharification of Corn Starch Using an Acidophilic, - Calcium Independent and Hyperthermophilic Pullulanase. (United States Patent No. US9340778 B2 granted on 17/05/2016).

Research Publications:

Total No. : 23

Cumulative Impact Factor: 32.223

Total Citations (as retrieved from Google Scholar on 04-10-2020): 83

No.	Publication	Impact Factor	Citations
23	Naeem, S., Ahmad, N. and Rashid, N. (2020). Pcal_0842, a highly thermostable glycosidase from <i>Pyrobaculum calidifontis</i> displays both α -1,4- and β -1,4-glycosidic cleavage activities. <i>International Journal of Biological Macromolecules</i> , (Accepted).	5.162	0
22	Mehboob, S., Ahmad, N. , Munir, S., Ali, R., Younas, H. and Rashid, N. (2020). Gene cloning, expression enhancement in <i>Escherichia coli</i> and biochemical characterization of a highly thermostable amylomaltase from <i>Pyrobaculum calidifontis</i> . <i>International Journal of Biological Macromolecules</i> , 165(15):645-653. https://doi.org/10.1016/j.ijbiomac.2020.09.071	5.162	0
21	Aroob, I., Ahmad, N. , Aslam, M., Shaer, A. and Rashid, N. (2019). A highly active α -cyclodextrin preferring cyclomaltodextrinase from <i>Geobacillus thermopakistaniensis</i> . <i>Carbohydrate Research</i> , 481(15):1-8. https://doi.org/10.1016/j.carres.2019.06.004 .	2.074	1
20	Afzaal, S., Hameed, U., Ahmad, N. , Udekwu, K., Pastuszek, P. and Haider, M. S. (2019). Effect of Pasteurization treatments on <i>Leuconostoc mesenteroides</i> strains isolated from the Pakistani Foods. <i>Pakistan Journal of Agricultural Research</i> , 32(4): 625-628. http://dx.doi.org/10.17582/journal.pjar/2019/32.4.625.628 .	HEC "Y" Category journal	0
19	Afzaal, S., Hameed, U., Ahmad, N. , Rashid, N. and Haider, M. S. (2019). Molecular Identification and Characterization of Lactic Acid producing Bacterial Strains Isolated from Raw and Traditionally Processed Foods of Punjab, Pakistan. <i>Pakistan Journal of Zoology</i> , 51(3):1145-1153. Doi: 10.17582/journal.pjz/2019.51.3.1145.1153.	0.547	1

18	Anjum, S., Ahmad, N. , Hussain, Z., Haider, M. S. and Rashid, N. (2018). Valorization of waste foods using pullulan hydrolase from <i>Thermococcus kodakarensis</i> . <i>Amylase</i> 2018, 2:39–43	An international, peer-reviewed journal	0
17	Guo, J., Coker, A.R., Wood, S.P., Cooper, J.B., Keegan, R.M., Ahmad, N. , Muhammad, M.A., Rashid, N. and Akhtar, M. (2018). Structure and function of the type III pullulan hydrolase from <i>Thermococcus kodakarensis</i> . <i>Acta Crystallographica Section D: Structural Biology</i> , 74(4): 305-314.	3.099	8
16	Muhammad, M. A., Falak, S., Rashid, N., Ahmad, N. , Gardner, Q. T. A. A., Tariq, A., and Akhtar, M. (2017). Complete signal peptide of Tk1884, an α -amylase from <i>Thermococcus kodakarensis</i> , is not necessary for extracellular secretion of the enzyme by <i>Escherichia coli</i> <i>Amylase</i> 1: 75–81.	An international, peer-reviewed journal	1
15	Muhammad, M. A., Falak, S., Rashid, N., Gardner, Q. T. A. A., Ahmad, N. , Imanaka, T., and Akhtar, M. (2017). " <i>Escherichia coli</i> signal peptidase recognizes and cleaves archaeal signal sequence. <i>Biochemistry (Moscow)</i> . 82(7):821-825 Papers in Press. Published on May 8, 2017 as Manuscript BM17-112. doi: 10.1134/S0006297917070070.	1.537	3
14	Mehboob, S., Ahmad, N. , Rashid, N., Imanaka, T. and Akhtar, M. (2016). Pcal_0768, a highly active 4-alpha-glucanotransferase from <i>Pyrobaculum calidifontis</i> . <i>Extremophiles</i> , 20(4):559–566. DOI 10.1007/s00792-016-0850-x.	2.346	1
13	Azam, M., Shahid, A. A., Majeed, R. A., Ali, M., Ahmad, N. and Haider, M. S. (2016). First Report of <i>Penicillium biourgeianum</i> causing Post-Harvest Fruit Rot of Apple in Pakistan. <i>Plant Disease</i> , Posted online on 9 Mar 2016, First Look.	3.02	1
12	Ahmad, N. , Mehboob, S. and Rashid, N. (2015). Starch-processing enzymes—emphasis on thermostable 4- α -glucanotransferases. <i>Biologia</i> , 70(6): 709-725.	0.827	9
11	Naz, S., Javaid, A., Ahmad, N. , and Shoaib, A. (2014). Antibacterial activity of essential oils of <i>trachyspermum ammi</i> (L.) sprague and <i>ocimum basilicum</i> L. against <i>acidovorax</i> sp. <i>Intl. J. of Biol. and Biotechnol.</i> , 11(4): 671-675.	HEC's Z category Journal	0

10	Ahmad N. , Rashid N., Haider, M. S., Akram M., and Akhtar, M. (2013). A novel maltotriose hydrolyzing thermo-acidophilic pullulan hydrolase type III from <i>Thermococcus kodakaraensis</i> . <i>Appl. Environ. Microbiol.</i> , 80(3) :1108-1115. doi:10.1128/AEM.03139-13.	3.678	27
9	Malik B., Rashid N., Ahmad N. , and Akhtar M. (2013). <i>Escherichia coli</i> Signal Peptidase Recognizes and Cleaves the Signal Sequence of α -Amylase Originating from <i>Bacillus licheniformis</i> . <i>Biochemistry (Moscow)</i> , 78(8) :958-962.	1.149	8
8	Ahmad, N. , Rashid, N., Haider, M. S. and Akhtar, M. (2013). Single Step Liquefaction and Saccharification of Corn Starch Using an Acidophilic, Calcium Independent and Hyperthermophilic Pullulanase. (United States Patent No. US9340778 B2 granted on 17/05/2016). * One International (Technology related) Patent granted from technologically advanced countries is equivalent up to 5 publications in Impact Factor Journals (Ref: DG/QA/HEC/Policy-Dec/2008/ i140; Dated: November 04, 2008).	Equivalent to Five publications having Impact Factor	3
3	Jalal, A., <u>Rashid, N.</u> , Ahmad, N. , Iftikhar, S. and Akhtar, M. (2011). <i>Escherichia coli</i> signal peptidase recognizes and cleaves the signal sequence of xylanase from a newly isolated <i>Bacillus subtilis</i> strain R5. <i>Biochemistry (Moscow)</i> 76(3) :347-349.	1.402	9
2	Rashid, N., Ahmad, N. , Haider, M. S. and Haque, I. (2010). Effective solubilization and single-step purification of <i>Bacillus licheniformis</i> α -Amylase from insoluble aggregates. <i>Folia Microbiol.</i> 55(2) :133–136.	0.997	6
1	Ur-Rehman, S., Piggott, J. R., Ahmad, M. M., Hussain, S., Ahmad, N. and Owusu-Darko, P. (2008). Preparation and evaluation of pizza cheese made from blend of vetch-bovine milk. <i>Int. J. Food Sci. Technol.</i> 43(5) :770-778.	1.223	5

Abstracts published

Ahmad, N., Rashid, N. and Haider, M. S. (2014). Enzymatic synthesis of prebiotics: regulatory issues. *Abstract book of International Conference on “Recent Developments In Human Nutrition (ICHN-2014)”*, 19-20 March, 2014 at Pearl Continental Hotel Lahore.

Ahmad, N., Rashid, N., Haider, M. S. and Akhatar, M. (2013). Efficient synthesis of prebiotics using an extremophilic glycosyl hydrolase. *Abstract book of 3rd International Conference on “Functional Foods & Nutraceuticals (NUTRICON-2013)”*, 4-5 Dec, 2013, GC University, Faisalabad, Pakistan.

Mehboob S., **Ahmad, N.** and Naeem Rashid. (2013). Highly thermostable 4- α -glucanotransferase from hyperthermophilic archaeon *Pyrobaculum calidifontis* VA1: recombinant production and characterization. *Abstract book of 11th Biennial Conference of Pakistan Society for Biochemistry and Molecular Biology “Molecular Biosciences: Challenges and Opportunities”*, November 25-28, 2013, University of the Punjab, Lahore, Pakistan.

Ahmad, N., Rashid, N., Haider, M. S. and Akhatar, M. (2013). A flash on novel cyclodextrinase activity possessed by pullulanase from *Thermococcus kodakarensis*. *Abstract book of 11th Biennial Conference of Pakistan Society for Biochemistry and Molecular Biology “Molecular Biosciences: Challenges and Opportunities”*, November 25-28, 2013, University of the Punjab, Lahore, Pakistan.

Ahmad, N., Rashid, N., Haider, M. S. and Akhatar, M. (2013). Friendly maltooligosaccharides by the virtue of an extremist. *Abstract book of International Conference on Emerging Issues in Nutrition & Food safety*, October 21-23, 2013, National Institute of Food Science & Technology University of Agriculture, Faisalabad, Pakistan.

Ahmad, N., Rashid, N. and Haider, M. S. (2012). Thermozyms: future’s choice of food industry. *Abstract book of 1st International Conference on “Future Perspectives of Food Processing Industries in Pakistan*, 11-12 December, 2012, GC University, Faisalabad, Pakistan.

Haider, M. S., **Ahmad, N.,** Rashid, N. (2012). Production of glucose syrup by the action of recombinant α -amylase purified by an efficient method. *Abstract book of International Food Agricultural and Gastronomy Congress* 15-19 February, 2012, Antalya, Turkey.

Conferences/Seminars/Workshops

Organized International Seminar on, “*Food Integrity: Modern concept of Food Quality, Safety, Authenticity and Defence*”, held at University of the Punjab, Lahore, on December 6, 2016.

Organized International Conference on, “*Significance of Potash Use in Pakistani Agriculture*” held at Institute of Agricultural Sciences, University of the Punjab, Lahore, on November 24-25, 2016.

Organized One day Seminar/cooking competition, “*Food Buzz, 2016*”, held at Institute of Agricultural Sciences, University of the Punjab, Lahore, on April 15, 2016.

Organized One day Seminar on, “*Halal Foods, 2016*”, held at Institute of Agricultural Sciences, University of the Punjab, Lahore, on September 24, 2016.

Organized One day Seminar/awareness walk, “*Food Day, 2016*”, held at Institute of Agricultural Sciences, University of the Punjab, Lahore, on November 2, 2016.

Organized “*Annual Sports Gala 2016*”, held at Institute of Agricultural Sciences, University of the Punjab, Lahore.

Participated in Workshop on *Total Quality Management* held at Institute of Agricultural Sciences, University of the Punjab, Lahore, on January 23, 2016.

Participated in Training session on, “*Management Competencies Development*”, held at Institute of Agricultural Sciences, University of the Punjab, Lahore on December 15, 2016.

Participated in One day Seminar on “*FOOD SAFETY: OUR NATIONAL RESPONSIBILITY*” held at Institute of Agricultural Sciences, University of the Punjab, Lahore, on November 22, 2016

Organized “*5th International/10th National Conference of Pakistan Phytopathological Society on Crop Protection for Sustainable Agriculture*”. November 23-25, 2015 IAGS, University of the Punjab , Lahore.

Participation in the “*International workshop on X-ray Crystallography in Structural Biology*” on November 12-14, 2015 at National Institute of Biotechnology and Genetic Engineering, Faisalabad.

Participated in “*International Human Nutrition Conference & Expo–2015*” on 3-4 November 2015 in Pearl Continental Hotel, Lahore

Participated in “*one day training workshop on Halal Foods*” on September 01, 2015

Participated in “*The Silver Jubilee Celebrations, 25th All Pakistan Food Science Conference And Food Expo*” on March 16-17 2015 at PCSIR Laboratories Complex, Ferozpur Road, Lahore

Participated in “*Bio-safety Training Workshop for Young Scientists*”. 18th January 2013, Forman Christian College (A Chartered University), Lahore.

Participated in “*International Workshop on Advances in Food Analytical Methods: Oil/Fat and Phenolics*”. December 4-6, 2013, COMSTECH, Islamabad, Pakistan.

Organized “*National Seminar on Developing Local Food Additives/Preservatives*”. November 22, 2012, University of the Punjab , Lahore.

Participated in workshop on “*Research Ethics, EndNote and Turnitin*”. October 2-3, 2012, Department of Library and Information Science, University of the Punjab, Lahore.

Participated in “*International Workshop on Bioinformatics: Database Mining and High Throughput Genomic Analyses*”. March 19-21, 2012, COMSTECH, Islamabad, Pakistan.

Participated in “*International symposium on Glycoprotein in human and diseases*”. May 27-29, 2008, School of Biological Sciences, University of the Punjab, Lahore, Pakistan.

Participated in “*International symposium on Nano chemistry*”. September 20-21, 2006, School of Biological Sciences, University of the Punjab, Lahore, Pakistan.

Participated in “*18th FAOBMB Symposium Genomics and Proteomics in Health and agriculture*”. November 20-23, 2005, Aiwana-e-Iqbal, Lahore, Pakistan.

Oral presentations

As invited speaker

Ahmad, N., Rashid, N. and Haider, M. S. (2015). Application studies of locally synthesized recombinant amylase. “*International Human Nutrition Conference & Expo–2015*” on 3-4 November 2015 in Pearl Continental Hotel, Lahore.

Other presentations

Ahmad, N., Rashid, N. and Haider, M. S. (2014). Enzymatic synthesis of prebiotics: regulatory issues. *International Conference on “Recent Developments In Human Nutrition (ICHN-2014)”*, 19-20 March, 2014 at Pearl Continental Hotel Lahore.

Ahmad, N., Rashid, N., Haider, M. S. and Akhtar, M. (2013). A flash on novel cyclodextrinase activity possessed by pullulanase from *Thermococcus kodakarensis*. *11th Biennial Conference of Pakistan Society for Biochemistry and Molecular Biology “Molecular Biosciences: Challenges and Opportunities,”* November 25-28, 2013 University of the Punjab, Lahore, Pakistan

Ahmed, N., Rashid, N. and Haider, M. S. (2012). Locally Produced Recombinant Enzymes for Food Processing: as Good as Native Ones. *National Seminar on Developing Local Food Additives/Preservatives, November 22, 2012 University of the Punjab , Lahore.*

Haider, M. S., **Ahmed, N.**, Rashid, N. (2012). Production of glucose syrup by the action of recombinant α -amylase purified by an efficient method. *International Food Agricultural and Gastronomy Congress 15-19 February, 2012 Antalya, Turkey.*

Research supervised

Zumar Ashraf (2018). Effect of blanching on amylolysis of whole potato. M.Phil. Thesis.

Hafiza Farhat Aziz (2018). Enzymatic synthesis of sweeteners from potato flour. M.Phil. Thesis.

Asif Khalil (2018). Validation of molecular methods for identification of Halal meat animals. M.Phil. Thesis.

Muhammad Adnan Ali (2018). Dietary habits of school going children in Shalimar town, Lahore. M.Phil. Thesis.

Aqsa Akhtar (2018). Utilization of rice milling wastes through amylolysis. M.Phil. Thesis.

Rida Mukhtar (2018). Assessment of meat hygiene status and molecular identification of *Escherichia coli* in meat in Lahore. M.Phil. Thesis.

Faiza Fatima (2018). Synthesis of maltose syrup from whole oat grain powder. M.Phil. Thesis.

Iqra Ayub (2018). Effect of particle size on enzymatic hydrolysis of rice powder. M.Phil. Thesis.

Ayesha Nisar (2017). Isolation and characterization of *Salmonella* from raw, cooked and ready to eat meat products. M.Phil. Thesis.

Javeria Mushtaq (2017). Use of lipase and xylanase in wafers. M.Phil. Thesis.

Qurat-ul-Ain Bukhari (2017). Isolation and characterization of *Escherichia coli* from raw, cooked and ready to eat meat products. M.Phil. Thesis.

Hamza Tahir Chudry (2017). Extraction and enzymatic processing of barley and oat starch. M.Phil. Thesis.

Tehreem Saba (2017). Use of amylase and xylanase in wafers. M.Phil. Thesis.

Afshan Riaz (2017). Studies on the preparation and evaluation of glazed *Aloe vera*. M.Phil. Thesis.

Tehreem Fatima (2017). Amylolysis of wheat and corn. M.Phil. Thesis.

Hafiza Bushra Tariq (2017). Studies on the development of innovative shortening for wafers. M.Phil. Thesis.

Arbab Tahir (2017). Effect of pomegranate: *Aloe vera* juice blend on hypertensive and diabetic patients. M.Phil. Thesis.

Muhammad Sohaib Sarwar (2017). Rice syrup production through conventional and modern enzymatic processing. M.Phil. Thesis.

Mariam Khan (2017). Studies on the fate of aloin and bioactive components during processing of *Aloe vera* juice . M.Phil. Thesis.

Shafaqat Hussain (2016). Studies on the utilization of low grade potatoes. M.Phil. Thesis.

Muhammad Shakeel (2016). Effect of packaging material and storage conditions on bioactive components of therapeutic beverage. M.Phil. Thesis.

Atif Pervaiz (2016). Effect of processing and storage conditions on phenolic components of onion (*Allium cepa* L.). M.Phil. Thesis.

Rabeel Asghar (2016). Isolation and molecular characterization of meat borne pathogens. M.Phil. Thesis.

Anjum Shehzad (2016). Biotechnological production of lactic acid from food waste. M.Phil. Thesis.

Hasnain Farooq (2016). Characterization and Nutrition Profiling of Potato Peel Blended Composite Wheat flour Cookies. M.Phil. Thesis.

Muhammad Arfeen (2016). Characterization and Nutrition Profiling of Mango Peel Blended Composite Wheat flour Cookies. M.Phil. Thesis.

Sumera Mehboob (2015). Glycosyl Hydrolases from Hyperthermophilic Archaeon *Pyrobaculum calidifontis*: Cloning and Characterization. PhD Thesis.

Muhammad Naeem-ur Rehman Zafar (2015). Utilization of enzyme(s) for quality enhancement of white bread. M. Phil. Thesis.

Mehwish Akram (2013). Characterization of a thermostable pullulanase from *Thermococcus kodakaraensis*. M. Phil. Thesis.

Maliha Iram (2013). Site directed mutagenesis in the substrate binding domain of a thermostable pullulanase from *Thermococcus kodakaraensis*. M. Phil. Thesis.

Barizah Malik (2012). Cloning and expression of α -amylase gene from *Bacillus licheniformis*, with and without signal sequence, and characterization of the gene product. M. Phil. Thesis.

Aslam Shehzad (2011). Studies on Pullulanase Gene from Hyperthermophilic Archaeon *Pyrobaculum calidifontis*. M. Phil. Thesis.

Alia Farooq (2008). Cloning and characterization of α -amylase from *Bacillus licheniformis*. M. Phil. Thesis.

Farah Naz (2008). Purification and characterization of α -amylase from *Bacillus licheniformis*. M. Phil. Thesis.

Professional Memberships

- Member Pakistan Society of Food Scientists and Technologists
- Member American Society for Microbiology
- Member Pakistan Society for Microbiology
- Member Nutritionists Association of Pakistan
- Member Society of Chemical Industry (London and New York)

Advisory / Administrative Services Rendered

Currently serving as;

- Member Scientific Panel of Punjab Food Authority, Lahore