DR. NASIR AHMAD

(Assistant Professor Food Technology)

Institute of Agricultural Sciences,
University of the Punjab, Lahore, Pakistan

Contact numbers: 0092-42-99231846, 0092-0331-4408881, 0092-0300-4571688
Fax: 0092-42-99231187
E-mail: nasirahmad.iags@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	1st Division
			Graduate Record Exam **(GRE, International)**	2008	**Percentile** "83" **Scaled score** "620"	Qualified
			Course work	2006	3.70/4.00	1st Division
M.Sc. (Hons.) Food Technology	Food Technology	University of Agriculture, Faisalabad	2002		3.88/4.00	1st Division
B.Sc. (Hons.) Agriculture	Food Technology	University of Agriculture, Faisalabad	2000		3.75/4.00	1st Division
F.Sc.	Biology, Physics, Chemistry	B.I.S.E Multan	1996		761 / 1100 (69.18 %)	1st Division
Matriculation	Biology, Physics, Chemistry, Mathematics	B.I.S.E Multan	1993		650 / 850 (76.47 %)	1st Division

Ph.D. Thesis Title:

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

Teaching Experience:

- Serving as ***Assistant Professor (TTS)*** at ***Institute of Agricultural Sciences, University of the Punjab, Lahore,*** since April 2015 to date.

- 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. During this period I was involved in teaching theory and practical of ***"Food Processing and Preservation"*** and ***"Introduction to Food Science and Technology"*** to under-graduate students of 3rd and 6th semesters.
- 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
- Functional foods and nutraceuticals
- Purification and characterization of enzymes

Research Grants and Awards:

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. 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)
2. Cloning and characterization of a thermostable starch de-branching enzyme. **Rs. 0.15 Million** by University of the Punjab, Lahore (2013-2014)
3. 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 Pub. No. US 2014/0227744 A1 published on 14/08/2014).**

Research Publications:

8. **Ahmad, N.,** Mehboob, S. and Rashid, N. (2015). Starch-processing enzymes–emphasis on thermostable 4-α-glucanotransferases. *Biologia*, **70(6):** 709-725. (Impact Factor **0.827**)
7. Naz, S., Javaid, A., **Ahmad, N**., and Shoaib, A..**(**2014**).** Antibacterial activity of essential oils of *trachyspermum ammi* (L.) sprague and *ocimum basilicum* L. against *acidovorax* sp. *Intl. J. of Biol. and Biotechnol.*, **11(4):** 671-675. (HEC's **Z** category Journal)
6. **Ahmad N.,** Rashid N., Haider, M. S., Akram M., and Akhtar, M. (2013). A novel maltotriose hydrolyzing thermo-acidophilic pullulan hydrolase type III from *Thermococcus kodakaraensis*. *Appl. Environ. Microbiol*., **80(3):**1108-1115. doi:10.1128/AEM.03139-13. (Impact Factor 3.678)

5. Malik B., Rashid N., **Ahmad N.,** and Akhtar M. (2013). *Escherichia coli* Signal Peptidase Recognizes and Cleaves the Signal Sequence of α-Amylase Originating from *Bacillus licheniformis*. *Biochemistry* (Moscow), **78(8):**958-962. (Impact Factor 1.149)

4. **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. **US PATENT** (US PATENT Number 13/765,481 filed on 12/02/2013).

3. Jalal, A., Rashid, N., **Ahmad, N.**, Iftikhar, S. and Akhtar, M. (2011). *Escherichia coli* signal peptidase recognizes and cleaves the signal sequence of xylanase from a newly isolated *Bacillus subtilis* strain R5. *Biochemistry* (Moscow) **76(3):**347-349. (Impact Factor 1.402)

2. Rashid, N., **Ahmad**, **N.**, Haider, M. S. and Haque, I. (2010). Effective solubilization and single-step purification of *Bacillus licheniformis* α-Amylase from insoluble aggregates. *Folia Microbiol*. **55(2):**133–136. (Impact Factor 0.997)

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. *Int. J. Food Sci. Technol.* **43(5):**770-778. (Impact Factor 1.223)

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). Thermozymes: 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 "*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, 25thAll Pakistan Food Science Conference And Food Expo"* on March 16-17 2015 at PCSIR Laboratories Complex, Ferozepur Road, Lahore

Participated in *"Bio-saftey 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, Aiwan-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 Akhatar, 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

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.

Advisory / Administrative Services Rendered

Currently serving as;

- Internship coordinator of Food Sciences and Technology at IAGS
- Convener of Technical Committee to Look After the Equipments of IAGS
- Bio-Safety Officer at IAGS
- Member of Tour Committee of IAGS
- Member of Food Quality/Price Control Committee of IAGS Canteen

Techniques in hand

Physicochemical and microbiological analysis of foods including;

- Proximate analysis of foods
- Heavy metals analysis by Atomic Absorption Spectrophotometer
- Sugars analysis by UV/Visible spectrophotometer, Thin Layer Chromatography, High Performance Liquid Chromatography, Polarimeter and Refractometer
- Analysis of functional constituents of foods like antioxidants and polyphenols
- Total viable count, *Escherichia coli* and *Salmonella* detection in foods
- Molecular biology techniques like gene cloning and protein expression
- Purification and characterization of enzymes