

Dr. Irshad Ahmad
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Assistant Professor
Department of Biotechnology
University of Malakand, KPK, Pakistan

Objective

To become part of a well reputed organization with a zeal and motivation to work in a challenging environment.

Research Interests

Microbial Biotechnology, Plant Biotechnology, Yeast Biotechnology, Metabolic Engineering, Fermentation Technology, Biofuel Production, Secondary Metabolites Production, Bimolecular and Biosystem Engineering, Genetic Engineering, Synthetic Biology, Enzyme Engineering

Personal Information

Sex: Male
Date of Birth: 14/01/1978
Marital Status: Married

Education

09/2005 - 08/2011	Ph.D (Biological Sciences/Biotechnology) Cellular Metabolic Engineering Lab Department of Biological Sciences Korea Advanced Institute of Science and Technology Daejeon, Republic of Korea
03/2001 - 03/2003	M.Phil (Molecular Biology) Floriculture Biotechnology Lab National Center of Excellence in Molecular Biology University of the Punjab, Lahore, Pakistan.
03/1996 - 03/2001	B.Sc (Hon's) Agriculture (Entomology) Department of Entomology Agriculture University Khyber Pukhtunkhwa, Peshawar, Pakistan.

Ph.D Thesis Title

Enhanced xylitol production rate by engineering glycerol metabolic pathway and pentose phosphate pathway in *Candida tropicalis*

M.Phil Thesis Title

Invitro induction of mutation and molecular characterization of mutated potato cultivars

Honors & Awards

- 09/2005 - 08/2011 KAIST International Merit Scholarship for Ph.D Study
- 03/2001- 03/2003 CEMB Open Merit Scholarship for M.Phil study
- 03/1996 - 03/2000 Open Merit Scholarship for B.Sc (Hon's) Agriculture study

Teaching & Research Experience

09/2011 - Continued

Assistant Professor

Department of Biotechnology

University of Malakand, Khyber Pukhtunkhwa, Pakistan

Courses taught to M.Phil/Ph.D students: Plant Metabolism, Microbial Biotechnology

09/2005 - 08/2011

Researcher

Cellular Metabolic Engineering laboratory

Department of Biological Sciences

Korea Advanced Institute of Science and Technology

Courses taught to undergraduate students: General Biology, Introductory Biotechnology, Microbial and Cell Biotechnology.

03/2003 - 02/2005

Lecturer of Biotechnology

Department of Biotechnology

University of Malakand, Khyber Pukhtunkhwa, Pakistan

Courses taught to B.Sc (Hons) students: Molecular Biology, Environmental Biotechnology, Recombinant DNA technology, Plant Tissue Culture, Molecular Biology of Gene Regulation and Control, Plant pathology, Molecular Virology, Molecular Genetics.

03/2001 - 03/2003

Junior Research Assistant (J.R.A)

Floriculture Biotechnology Laboratory

Center of Excellence in Molecular Biology

University of the Punjab, Lahore, Pakistan.

Microbial & Molecular Biological Skills

Preparation of media, streaking and harvesting of bacterial cell culture, plant tissue culture, yeast cell culture, cell suspension culture, Spectrophotometry, isolation and estimation of total protein, PAGE, ELISA, PCR, DNA extraction, agarose gel electrophoresis, Gene cloning techniques (Isolation, Digestion, Ligation and Transformation of Gene), gene knockout techniques, southern blotting, fermentation, HPLC.

Computer Skills

10/2000 – 12/2000 Got a certificate in computer application packages from Lahore Institute of Management Sciences and Information Technology.

Capability to use efficiently electronic spreadsheets, (MS Excel), Word processors (MS Word, WordPerfect, & PageMaker etc.), and major software for molecular biology and data analysis such as DNASTAR, Genemark, BioEdit, Gel-Pro Analyzer and Vector NTI.

Symposiums & Conferences

17/03/2011 - 18/03/2011

Poster presentation "Enhancement of xylitol production by co-expressing the pentose phosphate pathway genes in *C. tropicalis*" Bioenergy Korea Conference

17/03/2011 - 18/03/2011

Poster presentation "Enhancement of xylitol production by glycerol kinase gene disruption with co-expression of *gcy1*, *gcy2* and *gcy3* genes in *C. tropicalis*" Bioenergy Korea Conference

15/02/2009 - 17/02/2009

Poster presentation "Constitutive expression of an endogenous xylose reductase gene in *Candida tropicalis* by using a promoter of glyceraldehyde-3-Phosphate dehydrogenase" 8th Osaka University-KAIST Graduate Students Symposium in Biotechnology

25/06/2006 - 28/06/2006

Participated "5th International Symposium on Glycosyl transferases" Tsukuba, Japan

10/05/2004 - 12/05/2004

Participated "Identification, Maintenance and Preservation of Micro organisms" organized by microbiology research laboratory, Department of Biological Sciences, Quaid-I-Azam University, Islamabad, Pakistan

Research Publications

Ahmad I, Nasir IA, Haider MS, Javed MA (2010) In vitro induction of mutation in potato cultivars. Pak J Phyt Path Vol 22 (1)

Ahmad I, Shim WY, Jeon WY, Yoon BH, Kim JH (2011) Enhancement of xylitol production in *Candida tropicalis* by co-expression of two genes involved in pentose phosphate pathway. Bioproc Biosyst Eng Vol 34

Ahmad I, Shim WY, Jeon WY, Yoon BH, Kim JH (2011) Enhancement of xylitol production in *gk* disrupted *Candida tropicalis* by co-expression of 3 genes involved in glycerol metabolic pathway. Bioproc Biosyst Eng (manuscript submitted)

Ahmad I, Nasir IA, Hossain B, Javed MA, Latif Z (2011) Molecular characterization of mutated potato cultivars. Pak J Agric Res (manuscript submitted)

Khan N, Shuakat SS, Ahmad I (2011) Vegetation environmental relationship of vegetation in Chitral Hindukush range of Pakistan. TWBS (manuscript submitted)

Khan N, Shuakat SS, Ahmad I (2011) A community analysis of *Quercus baloot* Griff from District Dir Northern Pakistan. African Journal of Plant Sciences (manuscript submitted)

Ullah S, Ahmad I, Hussain S, Khan N (2011) Characterization of Triphenylamino based polymethine dyes. Chinese Journal of Chemistry (manuscript submitted)

Aarzo, Ahmad I, Khan N, Kim SB (2011) Culturable diversity of halophilic bacteria in foreshore soils. International Journal of Systematic and Evolutionary Microbiology (manuscript submitted)

Membership & Social Activities

- The Korean Society for Biotechnology and Bioengineering.
- The Korean Society for Microbiology and Biotechnology.
- Member of the Human Rights Commission of Pakistan in 2000-2003.
- Organizer of Environmental Club to create awareness about environmental concerns among students and general public through seminars in CEMB, University of the Punjab.

Languages

- English (Fluent)
- Urdu (Fluent)
- Arabic (Average)
- French (Basic)
- Korean (Basic)

References

Professor Jung Hoe Kim

(Ph.D Supervisor)

Cellular Metabolic Engineering Laboratory

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Korea Advanced Institute of Science and Technology

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305-701, Republic of Korea.

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Assistant Professor Idrees Ahmad Nasir

(M.Phil Supervisor)

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University of the Punjab, Lahore, Pakistan.

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Assistant Professor Nasrullah Khan

Department of Botany

University of Malakand,

Chakdara, KPK, Pakistan

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