

Curriculum Vitae

Dr. MUHAMMAD KAMRAN AZIM

Personal Information

Date and place of birth: 20 October 1968, Karachi, Pakistan.
Marital status: Married

Position

Assistant Professor in Biochemistry

Institutional Address

International Center for Chemical and Biological Sciences
(H.E.J. Research Institute of Chemistry;
Dr. Panjwani Center for Molecular Medicine and Drug Research)
University of Karachi, Karachi-75270
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Education

Post-Doctoral training as Alexander von Humboldt Research Fellow (2001-2002)
Max Planck Institute for Biochemistry, Munich, Germany.

Ph.D. Biochemistry, (1999)
University of Karachi, Karachi, Pakistan.

M.Sc. Biochemistry, (1992)
University of Karachi, Karachi, Pakistan.

Fields of Interest

Protein Structure, Function and Bioinformatics;
By means of Protein Chemistry, Spectroscopy, Molecular Biology and Bioinformatics.

Currently interested in

- Structural Bioinformatics of microbial proteins;
- Chloroplast Genomics of agriculturally important plants;
- Protein Engineering by incorporation of non-natural amino acids;
- Structural and functional characterization of honey proteins.

Professional Experiences

Assistant Professor, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan (December 2002-present).

Humboldt Research Fellow, Department of Structural Research, Max Planck Institute for Biochemistry, Martinsried, Germany (March 2001-November 2002).

Assistant Professor, Department of Biochemistry, University of Karachi, Karachi (September 2000- February 2001).

Research Officer/Postdoctoral Fellow, H.E.J. Research Institute of Chemistry, University of Karachi, Karachi (April 2000-August 2000).

Visiting Faculty, Sir Syed University of Engg. & Technology, Karachi (January 1998-June 1998).

Visiting Faculty, Hamdard Institute of Information Technology, Hamdard University, Karachi (September 1999-February 2000).

Visiting Scientist, Daresbury Laboratory, Warrington, UK, (September 1996-October 1996).

Honors and Awards

Humboldt Research Fellowship from Alexander von Humboldt foundation, Germany, for the postdoctoral studies in the laboratory of Nobel Laureate Prof. Robert Huber at the Max Planck Institute for Biochemistry, Martinsried, Germany, (March 2001-November 2002).

FAOBMB Travel Fellowship, November 2004

ISCB Travel Fellowship, International Society for Computational Biology, July 2004.

Doctoral Research Fellowship, Pakistan Science Foundation, (May 1993-March 2000).

Academic Activities

Member, *Committee for Doctoral Program in Biochemistry*, H.E.J. Research Institute of Chemistry, University of Karachi, Karachi, Pakistan (2003-present).

Reviewer of grant applications submitted to *Higher Education Commission*, Islamabad, Pakistan (2003-present).

Life Member, *Pakistan Society of Biochemistry and Molecular Biology*.

Member, *International Society for Computational Biology*.

Member, *National Geographic Society, USA*.

Member, Organizing Committee, *4th, 5th and 6th International Symposia on Protein Structure Function Relationship*, held at Karachi in 1995, 1997 and 1999.

Instructor, *Workshop on Protein Structure Elucidation*, held at Karachi from 27 January to 2 February 1995.

Teaching Assignments

Enzymology, *Ph.D. Program in Biochemistry*, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.

Protein Chemistry, *Ph.D. Program in Biochemistry*, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.

Bioinformatics, *Ph.D. Program in Biochemistry* International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.

Bioinformatics, *Masters Program in Biotechnology*, Department of Biotechnology, University of Karachi, Karachi, Pakistan, (2003-2004).

Ongoing Research Projects with External Funding

- 1- Project entitled '**Bacterial genomics by protein structure prediction**', Funded by *PTCL* worth Rs. 2.0 million; project started in 2004.
- 2- Project entitled '**Production and characterization of engineered proteins containing non-natural amino acids; Potential tools for specific drug targeting**', Funded by *HEC* worth Rs. 1.5 million; project started in 2005.
- 3- Project entitled '**Structural bioinformatics and computer-aided modeling of proteins**', Funded by *HEC* worth Rs. 0.2 million; project started in 2003. (completed)
- 4- Project entitled '**Collaboration with Max Planck Institute of Biochemistry, Germany for Protein Engineering Research**', Funded by *HEC* worth Rs. 0.3 million in 2004. (completed)
- 5- Received grant from HEC for **Purchase of spare parts**, worth Rs. 60,000 in 2004. (completed)
- 6- Alexander von Humboldt Foundation, Germany, donated the **equipment (Fluorescence Spectrophotometer)**, worth Euro 20,000/- (Rs. 1.5 million) in 2005. (completed)
- 7- Project entitled '**Characterization of Proteins/Enzymes from Honey for use as therapeutic agents**', Funded by Ministry of Health, Government of Pakistan worth Rs. 0.22 million in 2006.

Research Collaborators

1. **Prof. Dr. M. Iqbal Choudhary**, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.
2. **Dr. Nediljko Budisa**, Max Planck Institute for Biochemistry, Munich, Germany.
3. **Dr. Sarwar Hashmi**, New York Blood Center, New York, USA.
4. **Dr. Shabana U. Simjee**, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.
5. **Dr. M. Ahmad Mesaik**, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.

Research Students

1. **Miss Khalida Shoukat**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Study of Lipid Metabolising Enzymes in *Vibrio cholerae*.
2. **Mr. M. Aurangzeb**, M.Phil./Ph.D. Program in Biotechnology.
Project title: Structural and Functional Studies of Honey Proteins.
3. **Mr. Ishtiaq Ahmed Khan**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Studies on Macromolecular Assemblies Involved in Vital Cellular Processes.
4. **Mr. Hayat Muhammad**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Protein-Protein Interaction Studies on Multimeric Proteins.
5. **Mr. Asif Iqbal**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Structural Bioinformatics of *Vibrio cholerae*.
6. **Mr. Nazimuudin**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Biochemical characterization of Honey.
7. **Ms. Yasmeen Rashid**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Structural Bioinformatics of *Nisseria meningitis*.
8. **Mr. Muhammad Sajid**, M.Phil./Ph.D. Program in Biochemistry.
Project title: Studies on antiparasitic activities of honey.

Participation and Paper Presentation in Conferences

Paper presentations in International Conferences

- 1- **Molecular Medicine in Collaboration with Bioinformatics.** *1st International Symposium and Workshop on Molecular Medicine*, Islamabad (January, 2007).
- 2- **Medicinal properties of Honey.** *10th Inter. Symposium on Natural Product Chemistry*, Karachi (January 2006).
- 3- **Principles and applications of Proteomics.** *3rd International Biotechnology Conference*, Jamshoro, Pakistan December 2005.
- 4- **Substrate induced HslVU protease complex formation;** *17th FAOBMB Symposium*, Bangkok, Thailand (November 2004).
- 5- **Mechanism of protein degradation by proteasome-related prokaryotic HslUV system;** *7th Inter. Protein Symposium*, Karachi (January 2003).
- 6- **Formation of the *E. coli* HslVU protease complex;** *9th Inter. Symposium on Natural Product Chemistry*, Karachi (January 2004).

Paper presentations in following National Conferences

- 1- 1st Pakistan Proteomics Society Workshop, Karachi, (February, 2007).
- 2- Minisymposium of NanoBiochemistry, Lahore, (September, 2006)
- 3- 8th Biennial National Conference of PSBMB, Karachi, (March 2005).
- 4- 7th Biennial National Conference of PSBMB. Lahore, (April 2003).
- 5- 15th National Chemistry Conference, Islamabad (December 2004).
- 6- 14th National Chemistry Conference, Lahore (May 2004).
- 7- 13th National Chemistry Conference, Karachi (December 2002).
- 8- 8th National Chemistry Conference, Lahore (December 1997).
- 9- 7th National Chemistry Conference, Quetta (June 1996).

Workshops Organized

1. **Workshop on Bioinformatics**, at Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical Sciences, on 4th October, 2004.
2. Hosted **Virtual Conference on Bioinformatics and Genomics** at the Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical Sciences during 21-24 September 2004.