



DR. SYED ABID ALI

M.Sc (QAU), **Ph.D** (KU), **Postdoc's** (Germany, UK, Australia)



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Area of Excellence

Teaching & Research	★★★★★
Research Supervisor	★★★★★
Biotech/Pharma-Industry	★★★★★
Reviewer of Journals	★★★★★
Protein Chemistry/ Proteomics	★★★★★
Venomics/Toxinology	★★★★★
Biotechnology/ Bioinformatics	★★★★★
Conference/Seminars Organizer	★★★★★
Collaboration & Coordination	★★★★★



Profile Summary

- An enthusiastic, creative and passionate educator, mentor and advisor with strong scientific skills and added industry exposure who believes that all students can learn and thrive in a learning environment that is stimulating, comforting and appropriate to their unique talents and capabilities.
- Research interest areas are Protein Biochemistry, Proteomics, Venomics, Toxicogenomics, Biotechnology, Bioinformatics.
- Research focus on purification and characterization of novel proteins (e.g. industrially & medically important proteins/enzymes) and peptides (e.g. peptidyl modulators of ion channels and peptidyl antibiotics) from diverse origin such as; microorganism (*Enterococcus*, *Pseudomonas* & *Penicillium* sp), medically important plant (*Salvadora*, *Sida* and *Nigella* sp) and venomous fauna of Pakistan (Snake, Jellyfish, Conus and Scorpion etc).
- Additionally, my research is inherently interdisciplinary integrating ecology, protein biochemistry, functional genomics/proteomics and pharmacological approaches to understand protein function.
- Technical expertise in the structure-function relationship of proteins and peptides using Edman degradation in combination of 1D/2D PAGE, mass spectrometry (MALDI TOF MS and LC- MS/MS) with special emphasis on protein aggregation, folding/unfolding kinetics, protein-protein and protein-peptide interactions and protein conformational studies using wide spectroscopic (UV/Vis, FR, CD, FTIR, SAXS, DSC, DLS) as well as various proteomics/bioinformatics tools.

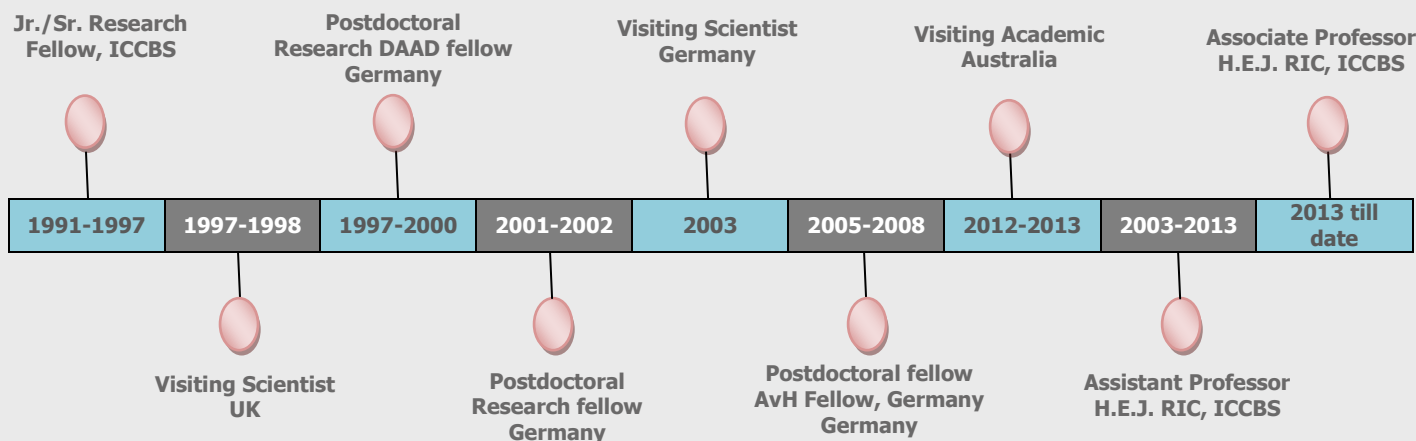


Education

Postdoc 4 Venom Evolution Lab., University of Queensland, **Australia**, 2012-13
Postdoc 3 Inst. Physiol. Chem., University of Tuebingen, **Germany**, 2005-06;2008
Postdoc 2 Center for Medical Research (ZMF), University of Tuebingen, **Germany**, 2002
Postdoc 1 Dept. Physical Biochemistry, University of Tuebingen, **Germany**, 97-2000
Ph.D (Biochemistry/Protein chemistry), HEJ, ICCBS, University of **Karachi**, 1997
M.Sc. (Biochemistry/Molec. Biology), Quaid-e-Azam University, **Islamabad**, 1991
B. Sc. (Chemistry, Microbiology & Botany), D.J. Science college, **Karachi**, 1988



Career Timeline



Work Experience

July 2013 to till date

Biochemistry:
Proteomics, Peptidomics
Protein Structure-Functions
Relationship, Environmental
Microbiology, Biotechnology *etc.*

Jan 2003 – June 2013

Biochemistry: Protein Chemistry,
Bioinformatics *etc.*

June 2012 – March 2013

Toxicogenomics, Venomics
antivenomics, Protein evolution
Physio-Pharmacology *etc.*

April – June 2008

March 2006 - April 2005

Molecular Parasitology:
Molecular biology, Cell culture *etc.*

Aug – Sep 2003

Molecular Parasitology:
PCR, Gene Sequencing,
Bioinformatics

March 2001 – Dec 2002

Molecular mechanism of Co-culture,
Cell culture, Wound healing *etc.*

April 1997 – Dec 2000

Physical Biochemistry:
Peptide Synthesis, Folding
Unfolding Kinetics, Stability *etc.*

Aug – Oct 1997

Aug 1998

Biophysics (Protein *in - solution*)
SAXS, Spectroscopy *etc.*

April 1991 – March 1997

Protein Chemistry (Protein
purification, Protein Sequencing,
Mass Spectrometry *etc.*)

Associate Professor (BPS - 20)

International Centre for Chemical & Biological Sciences HEJ Research
Institute of Chemistry University of Karachi, Karachi-75270, **Pakistan**

- Experimental Research (70%)
- Teaching: Ph.D programs in Biochemistry (20%)
Advance courses: Protein structure function relationship, architecture,
classification and Physical Biochemistry
- Advance practical course: on Protein structure and function
- Admin Work (10%)

Assistant Professor (BPS - 19)

International Centre for Chemical & Biological Sciences HEJ Research
Institute of Chemistry University of Karachi, Karachi-75270, **Pakistan**

- Same as above

Visiting Academics (HEC, Postdoctoral fellow)

Venom Evolution Laboratory, School of Biological Sciences,
University of Queensland, St Lucia, QLD-4072 **Australia**

Supervision of: **Prof. Dr. Bryan G Fry**

Postdoctoral Research (AvH Fellow)

Visiting Academics
Interfakultäres Institut für Biochemie
University of Tuebingen, Hoppe-Seyler Str. 4,
D-72076, Tuebingen, **Germany**

Supervision of: **Prof. Dr. Michael Duszenko**

Visiting Scientist

Molecular Parasitology laboratory, Institute of Physiological Chemistry,
University of Tuebingen, D-72076 Tuebingen, **Germany**

Supervision of: **Prof. Dr. Michael Duszenko**

Postdoctoral Research (*Bat-IIa*)

Center for Medical Research (ZMF),
Department of Transfusion Med, University Klinik Tuebingen, Waldhörnle
Str. 22, D-72072 Tuebingen, **Germany**

Supervision of: **PD Dr. S. Wagner; PD Dr. B. Neumeister**

Postdoctoral Research (*DAAD Fellow, FRG*)

Dept. of Physical Biochemistry, Institute of Physiological Chemistry,
University of Tuebingen, Hoppe-Seyler Str. 4,
D-72076 Tuebingen, **Germany**

Supervision of: **Prof. Dr. Dr. h.c. mult Wolfgang Voelter; PD Dr. Stanka Stoeva**

Visiting Scientist:

Molecular Biophysics Group, Daresbury Laboratory Daresbury, Cheshire,
Warrington WA4 4AD, **UK**

Supervision of: **Prof. Dr. S. Samar Hasnain; Dr. J.G. Grossmann**

Jr. to Sr. Research Fellow

HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Karachi-
75270, **Pakistan**

Supervision of: **Prof. Dr. Atiya Abbasi; Prof. Dr. Zafar H Zaidi (*Late*)**



Research Projects Accomplished/Ongoing/Submitted

14. 2016 (Submitted) Higher Education Commission (HEC) Pakistan	7.68 million Rs.	Formulation and stability studies of novel dosage forms of a therapeutic enzyme collagenase. <u>(Co Principle Investigator)</u>
13. 2015 – 2018 Higher Education Commission (HEC) Pakistan	11.073 million Rs.	Snake venom proteomics and antivenomics: A pharmacological biodiversity hotspot and dire national need to save lives. <u>(Principle Investigator)</u>
12. 2015 Higher Education Commission (HEC) Pakistan	93,500 Rs.	Competitive grant for the maintenance/ upgradation of scientific equipment. <u>(Principle Investigator)</u>
11. 2014-2015 Dean Faculty of Science, University of Karachi	75,000 Rs.	The Use of the Rabbit Intestinal nerve muscle preparation to assess the protective activity of Indian Polyvalent antivenom on neuromuscular system. <u>(Co Principle Investigator)</u>
10. 2011-2014 Pakistan Science Foundation (PSF) Islamabad	1.5 million Rs.	Marine Gastropods: Species identification, chemotaxonomy and biochemical characterization of medically important proteins Hemocyanin. <u>(Principle Investigator)</u>
9. 2010-2014 Higher Education Commission (HEC) Pakistan	3.6 million Rs.	Molecular assessment of virulence determinants, antibiotic resistance and bacterial antagonism in environmental isolates of <i>Enterococcus</i> species. <u>(Principle Investigator)</u>
8. 2010 -2011 Dean Faculty of Science, University of Karachi	70,000 Rs.	Responses of snake venoms on intestinal smooth muscles of Rabbit/Rats. <u>(Co Principle Investigator)</u>
7. 2007-2010 Higher Education Commission (HEC) of Pakistan	3.4 million Rs.	Screening, production and structure function-relationship of lipase(s) from thermophilic bacteria. <u>(Co Principle Investigator)</u>
6. 2006-2009 Higher Education Commission (HEC) of Pakistan	2.01 million Rs.	Concentrations of proteins, Vitellogenin, Vitellin and lipids in the hepatopancreas, hemolymph, adipose tissue and ovaries during ovarian development in Penaeid Shrimps (<i>F. Penicillatus</i> & <i>F. Merguiensis</i>). <u>(Co Principle Investigator)</u>
5. 2006 - 2007 Alexander von Humboldt Foundation, Bonn-Germany	20,845 €	Peptidyl inhibitors of various ion channels from snake and scorpion venoms: A possible template for drug design. <u>(Principle Investigator)</u>
4. 2006-2007 RG Pharmaceutica (Pvt) Ltd., Karachi, Pakistan	0.2 million Rs.	Screening, production and structure-function relationship of enzyme Lactases. <u>(Principle Investigator)</u>
3. 2004 & 2007 Higher Education Commission (HEC) Pakistan	60,000 & 98,000 Rs.	Received competitive grants from HEC for purchase of spare parts. <u>(Principle Investigator)</u>
2. 2004 -2007 Higher Education Commission (HEC) Pakistan	1.45 million Rs	Peptidyl antibiotics: structure-function relationship of the antimicrobial peptides and bacteriocins/lantibiotics from Indigenous <i>Enterococci</i> . <u>(Principle Investigator)</u>
1. 2004-2005 The Academy of Sciences for the Developing World (TWAS), Trieste- Italy.	5,000 \$	Snake venom peptides as possible candidates for drug design against pathogenic <i>Trypanosoma brucei</i> , a causative agent of sleeping sickness. <u>(Principle Investigator)</u>

88. **Ali, S.A.**, Alam, M., Abbasi, A., Undheim, E.A.B., Fry, B.G., Kalbacher, H. and Voelter, W. Structure-activity relationship of Chlorotoxin-like peptides. DOI: 10.3390/toxins8020036. 2016, **Toxins**, 8(2), 36,1-18.

87. Khan, S., **Ali, S.A.**, Yasmin, T., Ahmed, M. and Khan, H. Purification and characterization of 2S albumin from *Nelumbo nucifera*. **Biosci. Biotechnol. Biochem.** DOI: 10.1080/09168451.2016.1158627, 2016. 11, 1-6.

86. Debono, J., Cochran, C., Kuruppu, S., Nouwens, A., Rajapakse, N.W., Kawasaki, M., Wood, K., Dobson, J., Baumann, K., Jouiaei, M., Jackson, T.N.W., Koludarov, I., Low, D., **Ali, S.A.**, Smith, I., Barnes, A. and Fry, B.G. Canopy venom: Proteomic comparison among New World arboreal pit-viper venoms. DOI:10.3390/toxins70x000x, **Toxins**, 8(7), E210.

85. Ishtiaq, M., Munir, I., al-Rashid, M., Maria, Ayub, K., Iqbal, J., Ludwig, R., Khan, K.M., **Ali, S.A.** and Hameed, A. Novel quinoxaline based chemosensors with selective dual mode of action: Nucleophilic addition and Host-Guest type complex formation. DOI: 10.1039/C6RA14134J, 2016, **RSC Adv.**, 6, 64009–64018.

84. Ahmed, A., Khan, A.K., Anwar, A., **Ali, S.A.**, and Shah, M.R. Biofilm Inhibitory effect of Chlorhexidine conjugated gold nanoparticles against *Klebsiella pneumoniae*. DOI: 10.1016/j.jmicpath.2016.06.016., 2016, **Microb. Pathog.**, 98, 50-56.

83. Ahmad, I., Arsalan, A., **Ali, S.A.**, Bano, R., Munir, I. and Sabah, A. Formulation and stabilization of norfloxacin in liposomal preparations. doi: 10.1016/j.ejps.2016.05.017. 2016, **Eur. J. Pharm. Sci.**, 91, 208-215.

82. Arsalan, A., Naqvi, S.B.S., **Ali, S.A.**, Mehjabeen, Korai, U. and Shakeel, O. Bactericidal activity of different brands of cefepime marketed in Pakistan against Gram-positive and Gram-negative clinical isolates. 2016, **Pak. J Pharm. Sci.** In Press

81. Ahmad, I., Anwar, Z., **Ali, S.A.**, Hasan, K.A., Sheraz, M.A. and Ahmed, S. Ionic strength effects on the photodegradation reactions of riboflavin in aqueous solution. DOI: 10.1016/j.jphotobiol.2016.02.010. 2016, **J Photochem. Photobiol. B**, 157, 113-119.

80. Shaheen, F., Asad Ziaee, M, **Ali, S.A.**, Simjee, S.U., Ahmed, A. and Choudhary, M.I. Solid-phase synthesis and structural studies on Phakellistatin 15. 2016, **Rec. Nat. Prod.**, 10(4), 397-406.

79. Rizvi, M.A. and **Ali, S.A.** Medicinal flowers of Pakistan. 2016, **Inter. J. Adv. Res.**, 4 (2), 1313-1341.

78. Habiba, Noreen, R., **Ali, S.A.**, Sultana, V., Ara J. and Ehteshamul-Haque, S. Evaluation of biocontrol potential of epiphytic fluorescent *Pseudomonas* associated with healthy fruits and vegetables against root rot and root knot pathogens of mungbean. 2016, **Pak. J. Bot.**, 48(3), 1299-1303.

77. **Ali, S.A.**, Jackson, T.N.W., Casewell, et al., Extreme venom variation in Middle Eastern vipers: a proteomics comparison of *Eristicophis macmahonii*, *Pseudocerastes fieldi* and *Pseudocerastes persicus*. DOI: 10.1016/j.jprot.2014.09.003, 2015, **J. Proteomics**, 116, 106-113.

76. Kohl, B., Rothenberg, I., **Ali, S.A.**, Alam, M., Seeböhm, G., Kalbacher, H., Voelter, W. and Stoll, R. Solid phase synthesis, NMR structure determination of α -KTx3.8, its in silico docking to Kv1.x potassium channels, and electrophysiological analysis provide insights into toxin channel selectivity. DOI: 10.1016/j.toxicon.2015.04.018, 2015, **Toxicon**, 101, 70-78.

75. Iqbal, N., Hashim, J., **Ali, S.A.**, Al-Rashida, M., Alharthy, R., Ahmed, S., Khan, K.M., Basha, F.Z., Moin, S.T. and Hameed, A. Solvent-Free 1H-tetrazole, 1,2,5,6-tetrahydronicotinon-itrile and pyrazole synthesis using Quinoline Based Ionic Fluoride Salts (QuFs): Thermal and Theoretical Studies. DOI: 10.1039/C5RA16075H, 2015, **RSC Adv.**, 5, 95061-95072.

74. Noreen, R., **Ali, S.A.**, Hasan, H.A., Sultana, V., Ara, J. and

Research Publications Profile [2016]

No. of Publications	International	National	Total Impact factor
88	69	19	167.745

Total Citations: 617

65. Abid, R., **Ali, S.A.**, Munir, I. and Qaiser, M. Hybridization in the *Sida ovata* complex (Malvaceae) III. Evidences from seed micro-morphology and seed protein analysis. DOI: 10.1080/11263504.2014.901434, 2014, **Plant Biosystems**, 148 (5) 1027-1031.

64. Rizvi, M.A., Yasmeen, K. and **Ali, S.A.** Detection of trace elements in medicinal flowers of Pakistan. 2014, **Int. J. Adv. Res.**, 2 (11) 195-203.

63. Faheem, M., **Ali S.A.**, Alam, M. and Khan, M.F. Evaluation of the toxic effect of common pesticides cypermethrin, imidacloprid and Neem (*Azadirachta indica*) fruit extract, on earthworm (*Pheretima posthuma*). 2014, **Int. J. Adv. Res.**, 2 (11) 262-271.

62. Korejo, F., **Ali, S.A.**, shafique, H.A., Sultana, V., Ara, J. and Ehteshamul-Haque, S. Antifungal and antibacterial activity of endophytic *Penicillium* species isolated from *Salvadora* species. 2014, **Pak. J. Botany**, 46(6), 2313-2318.

61. Bokhari, S.S., Tariq, S., **Ali, S.A.**, Sultana, S., Ara, J. and Ehteshamul-Haque, S. Management of root rot and root-knot disease of mungbean with the application of mycorrhizospheric fluorescent *Pseudomonas* under field conditions. 2014, **Pak. J. Botany**, 46 (4) 1473-1477.

60. Jesupret, C., Kate, B., Jackson T.N.W., **Ali S.A.** et al., Vintage venoms: proteomic and pharmacological stability of snake venoms stored for up to eight decades. DOI:10.1016/j.jprot.2014.01.004. 2014, **J. Proteomics**, 105, 285-294.

59. Ahmad, I., Anwar, Z., Iqbal, K., **Ali, S.A.**, Mirza, T., Khurshid, A., Khurshid, A. and Arsalan A. Effect of Acetate and Carbonate Buffers on the Photolysis of Riboflavin in Aqueous Solution: A Kinetic Study. DOI: 10.1208/s12249-013-0067-6. 2014, **AAPS Pharm SciTech**, 15 (3), 550-559.

58. **Ali, S.A.** Yang D., Jackson T.N.W., Undheim, E.A.B., Koludarov, I., Wood, K., Jones, A., Hodgson, W.C., McCarthy, S., Ruder, T. and Fry, B.G. Venom proteomic characterization and relative antivenom neutralization of two medically important Pakistani Elapid snakes (*Bungarus sindanus* and *Naja naja*). 2013, **J. Proteomics**, 89, 15-23.

57. **Ali, S.A.**, Baumann, K., Jackson, T.N.W., Wood, K., Mason, S., Undheim, U.A.B., Nouwens, A., Koludarov, I., Hendrikx, I., Jones, A., and Fry, B.G. Proteomic comparison of *Hypnale hypnale* (Hump-Nosed Pit-Viper) and *Calloselasma rhodostoma* (Malayan Pit-Viper) venoms. 2013, **J. Proteomics**, 91 (8), 338-343.

56. Ahmad, I., Iqbal, K., Sheraz, M.A., Ahmed, S., **Ali, S.A.**, Kazi, S.H., Mirza, T., Bano, R. and Aminuddin, M. Solvent effect on photoinitiator reactivity in the polymerization of 2-hydroxyethyl methacrylate. DOI:10.1155/2013/838402. 2013, **Adv. Phys. Chem.**, eJ, 1-6.

55. Undheim, E.A.B., Sunagar, K., Herzig, V., Kely, L., Low, D.H.W., Jackson, T.N.W., Jones, A., Kurniawan, N., King, G.F., **Ali, S.A.**, Antunes, A., Ruder, T. and Fry BG. A Proteomics and Transcriptomics Investigation of the Venom from the Barychelid Spider *Tritrame loki* (Brush-Foot Trapdoor). DOI: 10.3390/toxins5122488. 2013, **Toxins**, 5 (12), 2488-2503.

54. Sunagar, K., Jackson, T.N., Undheim, E.A., **Ali, S.A.**, Antunes, A. and Fry, B.G. Three-fingered RAVeRs: rapid accumulation of variations in exposed residues of snake venom toxins. DOI: 10.3390/toxins5112172. 2013, **Toxins**, 5(11), 2172-208.

39. Hasan, S.A., **Ali, S.A.**, Abbasi, A. and Kamal, M. Purification and biochemical characterization of a Ca²⁺-independent, thermostable and acidophilic α -amylase from *Bacillus* sp. 2011 **Afr. J. Biotech.**, 10 (32), 6082-6089.

- Ehteshamul-Haque, S. Evaluation of biocontrol potential of fluorescent *Pseudomonas* associated with root nodules of mungbean. DOI: 10.1016/j.cropro.2015.04.018, 2015, **Crop Protection**, 75, 18-24.
73. Jouiaei, M., Casewell, N.R., Yanagihara, A.A., Nouwens, A., Cribb, B.D., Whitehead, D., Jackson, T.N.W., **Ali, S.A.**, Koludarov, I., Alewood, P., Hansen, J. and Fry, B.G. Firing the sting: chemically induced discharge of cnidae reveals novel proteins and peptides from box jellyfish (*Chironex fleckeri*) venom. DOI:10.3390/toxins70x000x, 2015, **Toxins**, 7(3), 936-950.
72. Ahmad, I., Arsalan, A., **Ali, S.A.**, Sheraz, M.A., Ahmed, S., Zubair Anwar, Z., Munir, I. and Shah, M.R. Formulation and stabilization of riboflavin in liposomal preparations. DOI: 10.1016/j.jphotobiol.2015.10.017, 2015, **J Photochem Photobiol. B**, 153, 358-366.
71. Arsalan, A., Naqvi, S.B.S., **Ali, S.A.**, Ahmed, S. and Shakeel, O. In vitro bactericidal activity of cefepime and ceftiofame against clinical isolates at Karachi. 2015, **Pak. J Pharm. Sci.** 28 (3), 841-847.
70. Hameed, A., **Ali, S.A.**, Khan, A.A., Moin, S.T., Khan, K.M., Hashim, J., Basha, F.Z. and Malik, M.I. Solvent-Free Click Chemistry for Tetrazole Synthesis from 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU)-Based Fluorinated Ionic Liquids, their Micellization, and Density Functional Theory Studies. DOI: 10.1039/C4RA13393E, 2014, **RSC Adv.** 4, 64128-64137.
69. Baumann, K., Casewell, N.R., **Ali, S.A.**, Jackson, T.N.W., Cutmore, S., Nouwens, A., Lavergne, V. and Fry, B.G. A ray of venom: combined proteomic and transcriptomic investigation of fish venom composition using barb tissue from the blue-spotted stingray (*Neotrygon kuhlii*). DOI: 10.1016/j.jprot.2014.06.004, 2014, **J. Proteomics**, 109, 188-198.
68. **Ali S.A.**, Alam M., Abbasi A., Kalbacher H., Schaechinger T.J., Hu Y., Zhijian C., Li W and Voelter W. Structure-activity relationship of a highly selective peptidyl inhibitor of Kv1.3 voltage-gated K⁺-channel from scorpion (*B. sindicus*) venom. DOI: 10.1007/s10989-013-9362-z, 2014, **Int. J. Peptide Res. Ther.**, 20 (1), 19-32.
67. **Ali, S.A.**, Hasan, K.A., Bin Asif, H. and Abbasi, A. Environmental Enterococci: I. Prevalence of virulence, antibiotic resistance and species distribution in poultry and its related environment in Karachi, Pakistan. DOI: 10.1111/lam.12208, 2014, **Lett. Appl. Microbiol.** 58, 423-432.
66. Savanur, A., **Ali, S.A.**, Munir, I., Abbasi, A., Alam, M., and Shaikh, H.A. Pharmacological and biochemical studies on the venom of a clinically important viper snake (*Echis carinatus*) of Pakistan. DOI: 10.1016/j.toxicon.2014.01.005, 2014, **Toxicon**, 80, 47-57.
53. Jackson, T.N.W., Sunagar, K., Undheim, E.A.B., Koludarov, I., Chan, A.H.C., Sanders, K., **Ali, S.A.**, Hendriks, I., Dunstan, N. and Fry, B.G. Venom Down Under: dynamic evolution of Australian Elapid snake toxins. DOI: 10.3390/toxins5122621. 2013, **Toxins**, 5 (12), 2621-2655.
52. Sunagar, K., Fry, B.G., Jackson, T.N., Casewell, N.R., Undheim, E.A., Vidal, N., **Ali, S.A.**, King, G.F., Vasudevan, K., Vasconcelos, V. and Antunes, A. Molecular evolution of vertebrate neurotrophins: co-option of the highly conserved nerve growth factor gene into the advanced snake venom arsenal. DOI: 10.1371/journal.pone.0081827. 2013, **PLoS One**, 8 (11), e81827.
51. Ruder T, **Ali S.A.**, Ormerod K, Brust A, Manchadi ML, Ventura S, Undheim EA, Jackson TNW, Mercier AJ, King GF, Alewood PF, and Fry BG. Functional characterization on invertebrate and vertebrate tissues of tachykinin peptides from octopus venoms. 2013, **Peptides**, 47, 71-76.
50. Low D.H.W., Sunagar K., Undheim E.A.B., **Ali S.A.**, Alagon A.C., Ruder T., Jackson T.N.W., Gonzalez S.P., King G.F., Jones A., Antunes A. and Fry B.G. Dracula's children: The proteomics, transcriptomics and molecular evolution of vampire bat venom proteins. 2013, **J. Proteomics**, 89, 95-111.
49. Ruder T, Sunagar K., Undheim E.A., **Ali S.A.**, Wai T.C., Low D.H.W., Jackson T.N.W., King G.F., Antunes A. and Fry B.G. Molecular phylogeny and evolution of the proteins encoded by coleoid (cuttlefish, octopus, and squid) posterior venom glands. 2013, **J. Mol. Evol.** 76 (4), 192-204.
48. Fry B.G., Undheim E.A., **Ali S.A.**, Jackson T.N., Debono J., Scheib H., Ruder T., Morgenstern D., Cadwallader L., Whitehead D., Nabuurs
38. Hejzian-Y, S.H., Sepehri, H., Dashti-R, M.H., Mahdavi, S.M., Bagheri, S.M., Morshedi, M., Rezvani, M.E., **Ali, S.A.** and Ali, M.S. Does essential oil of *Carum copticum* affect acetylcholine-induced contraction in isolated rat's Ileum? 2011, **Afr. J. Pharm. Pharmacol.** 5 (12), 1432-1435.
37. **Ali, S.A.**, Ayub, Z, Bano, A and Fatima, H. Biochemical studies on *Siphonaria* (Gastropoda: Pulmonata) from the Karachi Coast of North Arabian Sea. 2011, **Pak. J. Zoology**, 43 (6), 1085-1093.
36. Korejo, F., **Ali, S.A.**, Tahir, S.S., Rajput, M.T., and Akhter, M.T. Comparative morphological and biochemical studies of *Salvadora* species found in Sindh, Pakistan. 2010, **Pak. J. Botany**, 42 (3), 1451-1463.
35. Dolashki, A., Abrashev, R., Stevanovic, S., Stefanova, L., **Ali, S.A.**, Velkova, L., Hristova, R., Angelova, M., Voelter, W., Devreese, B., Van Beeumen, J. and Dolashka-Angelov, P. Biochemical properties of Cu/Zn-superoxide dismutase from fungal strain *Aspergillus niger* 26. 2008, **Spectrochim. Acta A**, 71, 975-983.
34. **Ali, S.A.**, Grossmann, J.G. Abbasi, A. and Voelter, W. Structural and conformational analysis of scorpion (*Buthus sindicus*) hemocyanin using low resolution techniques. 2007, **Protein Peptide Lett.** 14(5), 481-488.
33. Merkel, P., Beck, A., Muhammad, K., **Ali, S.A.**, Schönfeld, C., Voelter, W. and Duzenko, M. Spermine isolated and identified as the major trypanocidal compound from the snake venom of *Eristocophis macmahoni* causes autophagy in *Trypanosoma brucei*. 2007, **Toxicon**, 50, 457-469.
32. **Ali, S.A.**, Wang, B., Alam, M., Beck, A., Stoeva, S., Voelter, W., Abbasi, A. and Duzenko, M. Structure-activity relationship of an α -toxin Bs-Tx28 from scorpion (*Buthus sindicus*) venom suggests a new α -toxin subfamily. 2006, **Arch. Biochem. Biophys.** 445, 81-94.
31. Saeed, S., Rasool, S.A., Ahmed, S., Khanum, T., Khan, M.B., Abbasi, A., and **Ali, S.A.** New insight in staphylococcal research: bacteriocin and/or bacteriocin-like inhibitory substance(s) produced by *S. aureus* AB188. 2006, **World J Microbiol. Biotechnol.**, 22, 713-722.
30. Lutfullah, G., **Ali, S.A.** and Abbasi, A. Molecular mechanism of high altitude respiration: Primary structure of a minor hemoglobin component from Tufted duck (*Aythya fuligula*, Anseriformes). 2005, **Biochem. Biophys. Res. Commun.**, 326, 123-130.
29. Pirzada, Z.A., **Ali, S.A.**, Khan, M.B. and Rasool, S.A. Production and physico-chemical characterization of bacteriocins-like inhibitory substances from marine bacterium zm81. 2004, **Pak. J. Biol. Sci.** 7, 2026-2030.
28. Saeed, S., Rasool, S.A., Ahmed, S and **Ali, S.A.** Immunological and toxicological studies of staphylococcal Bac188 (A bacteriocin/bacteriocin-like inhibitory substance) on experimental animals. 2004, **Pak. J. Biol. Sci.** 7 (11), 1888-1892.
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19. Iqbal, A., **Ali, S.A.**, Abbasi, A., Voelter, W. and Rasool, S.A. Production, purification and some properties of Bac201, a bacteriocin-like inhibitory substance produced by *Staphylococcus aureus* AB201. 2001, **J. Basic Microbiol.** 41 (1), 25-36.

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44. Alam, M., **Ali, S.A.**, Abbasi, A., Kalbacher, H. and Voelter, W. Design and synthesis of peptidyl-FRET substrate for tumor marker enzyme human matrix metalloprotease-2 (hMMP2). 2012, **Int. J. Peptide Res. Ther.**, 18, 207-215.
43. Fatima, H., Ayub, Z., Siddiqui, G. and **Ali, S.A.** Fatty acid composition of two candidate species of aquaculture, *Fenneropenaeus merguensis* and *F. Penicillatus* (crustacea: decapoda) in Pakistan. 2012, **Pak. J. Zoology**, 44 (4), 969-975.
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17. Alam, J.M. and **Ali, S.A.** Biochemical and biological properties of the venom from *Vipera russelli russelli* (viperidae) of different ages. 2001, **Pak. J. Zoology**, 33 (3), 243-246.
16. **Ali, S.A.**, Stoeva, S., Abbasi, A., Alam, J.M., Kayed, R., Faigle, M., Neumeister, B. and Voelter, W. Isolation, structural, and functional characterization of an Apoptosis-Inducing L-amino acid oxidase from Leaf-nosed viper (*Eristocophis macmahoni*) snake venom. 2000, **Arch. Biochem. Biophys.** 384 (2), 216-226.
15. Grossmann, J.G., **Ali, S.A.**, Abbasi, A., Zaidi, Z.H., Stoeva, S., Voelter, W. and Hasnain, S.S. Low-resolution molecular structures of isolated functional units from arthropodan and molluscan hemocyanin. 2000, **Biophys. J.**, 78(2), 977-981.
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8. Iqbal, A., Ahmed, S., **Ali, S.A.**, and Rasool, S.A. Isolation and partial characterization of Bac201: A plasmid-associated Bacteriocin-like Inhibitory Substance from *Staphylococcus aureus* AB201. 1999, **J. Basic Microbiol.** 39 (5-6), 325-336.
7. **Ali, S.A.**, Stoeva, S., Schutz, J., Kayed, R., Abbasi, A., Zaidi, Z.H. and Voelter, W. Purification and primary structure of low molecular mass peptides from scorpion (*Buthus indicus*) venom. 1998, **Comp. Biochem. Physiol. A**, 121 (4), 323-332.
6. **Ali, S.A.**, Alam, J.M., Zaidi, Z.H. and Abbasi, A. Isolation and characterization of a toxic phospholipase A₂ from sea snake (*Hydrophis cyanocinctus*) venom. 1998, **Pak. J. Zoology**, 30 (4), 289-294.
5. Alam, J.M. and **Ali, S.A.** Comparative biochemical and biological studies on venom of Cobra (*Naja naja naja*) snakes of varying ages from different localities. 1998, **Pak. J. Zoology**, 30 (3), 203-206.
4. Georgieva, D.N., Stoeva, S., **Ali, S.A.**, Abbasi, A., Genov, N. and Voelter, W. Circular dichroism study of the hemocyanin thermostability. 1998, **Spectrochim. Acta. A**, 54, 765-771.
3. Khurshid, R., Akhtar, M.S., **Ali, S.A.** and Abbasi, A. Characterization of breast tissue of normal/breast cancer patient. 1997 **Pak. J. Biochem. Mol. Biol.** 30, 39-48.



Published Academic Books

3. **Ali, S.A** & Abbasi, A., Scorpion Hemocyanin: The Blue Blood. (2011), VMD Verlag Saarbrücken, **Germany** (ISBN 978-3-639-33725-9).

2. Abbasi, A. & **Ali, S.A.** Protein Structure-Function Relationship Proceedings of the 8th International Symposium on Protein Structure - Function Relationship, 2005, Ajab Printing Press, Karachi, **Pakistan** (ISBN 969-8113-09-6).

1. Abbasi, A. & **Ali, S.A.** Protein Structure - Function Relationship Proceedings of the 7th International Symposium on Protein Structure - Function Relationship, 2003, BCC & T Press, University of Karachi, **Pakistan** (ISBN 969-8113-08-8).

2. **Ali, S.A.**, Zaidi, Z.H. and Abbasi, A. Oxygen Transport proteins: II. Structure, organization and subunit heterogeneity in scorpion hemocyanins. 1995, **Pak. J. Biochem. Mol. Biol.** 28, 95-103.

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Patent

Submitted

Hameed, A., Iqbal, N., Hashim, J., Khan, K. M., . Moin, S. T., Ahmad, S., **Ali, S. A.**, Basha, F. Z., Al-Rashida, M., Alharthy, R. D. and Perveen, S. A process for the preparation of Quinoline based ionic fluoride salts (QUFS). Filing U. S. Patent Application Serial No. 15/158,867 (2016).

In validation and Preparation

Ali, S.A., Muhammad, N., Saima Z., Hussain, M., Abbasi, A., Bassarak, B. and Duszenko, M. Probiotic *Enterococcus faecium* HA121: an environmental isolate which produces multiple antimicrobial peptide-enterocin(s).



Chapters in Books

	Authors/Editors	Title of Chapters/Book	Year & Pages	Publishers
7.	Fry BG, Undheim EAB, Jackson TNW, Georgieva D, Vetter I, Calvete J, Scheib H, Cribb B, Manchadi, MLR, Gutiérrez JM, Lomonte B, Nicholson GM, Dziemborowicz S, Lavergne V, Ragnarsson L, Rash L, Mobli M, Hodgson WC, Casewell NR, Nouwens A, Wagstaff S, Ali SA , Whitehead D, Herzig V, Monagle P, Kurniawan N, and Sunagar K.	Research methods: <i>Chapter 7</i> . Book Title; Venomous reptiles and their toxins: evolution, pathophysiology and biodiscovery.	2015 153-214	Oxford University Press, ISBN-13: 978-0199309399
6.	Fry B.G., Koludarov I., Jackson, T.N.W., Holford, M., Terrat, Y., Casewell N.R., Undheim, E.A.B., Vetter, I., Ali S.A. , Low, D.H.W. and Sunagar K.	Seeing the woods for the trees: understanding venom evolution as a guide for biodiscovery: <i>Chapter 1</i> . Book Title; Venoms to drugs: venom as a source for the development of human therapeutics.	2014 1 - 36	Royal Society of Chemistry, London, UK. G.F. King, R. Ganellin, S. Guccione (eds.) ISBN: 9781849736633
5.	Ali, S.A.	Creation and utilization of knowledge in the developing world: Overview of the role of Germany in the development of higher education sector in Pakistan. 10 th years Georg-Forster Programme symposium "Knowledge Creates Development" (17-18, April) Alexander von Humboldt Foundation Bonn, Germany.	2008 49-52	Wissen schafft Entwicklung: Wissenschaftsförderung als Instrument der Entwicklungspolitik.. (Discussion paper)
4.	Khan, S., Ali, S.A. , and Abbasi, A.	Isolation, purification and characterization of acid phosphatase from the seeds of <i>Nelumbo nucifera</i> . Proceedings of the 8 th International Symposium on Protein Structure Function Relationship	2005 331-339	Ajab Printing Press, Karachi, Pakistan. (Abbasi A. & Ali S.A. Eds)
3.	Ali, S.A. , Alam, M., Kamal, M., Alam, J.M. and Abbasi, A.	Role of proteins as biochemical markers for identification: New approaches for structural and functional taxonomy. Proceedings of the 7 th International Symposium on Protein Structure Function Relationship	2003 179 - 194	BCC & T Press, University of Karachi, Pakistan. (Abbasi A. & Ali S.A. Eds)
2.	Abbasi, A., Lutfullah, G., Sattar, R., and Ali, S.A.	Structural basis of protein function: the role of residues in stability and activity. Proceedings of the 7 th International Symposium on Protein Structure Function Relationship.	2003 17 - 40	BCC & T Press, University of Karachi, Pakistan. (Abbasi A. & Ali S.A. Eds)
1.	Kamal, M., Ali, S.A. and Abbasi, A.	Molecular modeling of subtilisin from <i>Bacillus subtilis</i> strain RT5. Proceedings of the 7 th International Symposium on Protein Structure Function Relationship	2003 145- 154	



Research Thesis Supervised/Co-supervised/In Prep.

No.	Students Name	Degree	Title	Year	Status
22.	Ms Iqra Munir	Ph.D	<i>Proteins in-solution</i> : solubility, aggregation and folding/unfolding mechanism of therapeutic protein human/bovine serum fetuin-A. (Supervised)	2016	In Prep
21.	Ms Fozia Humayun	Ph.D	Molecular, biochemical and biophysical characterization of proteins and peptides from marine gastropods of Pakistan. (Supervised)	2016	In Prep
20.	Mr Hassaan Bin-Asif	Ph.D	Molecular assessment of virulence determinants, antibiotic resistance and bacterial antagonism in environmental <i>Enterococcus</i> species isolated from soil. (Supervised)	2016	In Prep
19.	Mr Adeel Arsalan	Ph.D	Photo-stabilization of some drugs by liposomal drug delivery systems. (Co-supervised with Prof. Dr. Iqbal Ahmed)	2016	Submitted
18.	Ms Arifa Savanur	Ph.D	Purification, characterization and mode of action of Viper snake venom(s) and their purified neurotoxins on neuromuscular system. (Supervised)	2016	Awarded
17.	Ms Farzana Korejo	Ph.D	Studies on the endophytic bacteria and fungi associated with <i>Salvadora</i> species in Sindh. Department of Botany, University of Karachi, Karachi, Pakistan. (Co-supervised with Prof. Dr. S. Ehteshamul-Haque)	2015	Awarded
16.	Ms Samina Kabir Khanzada	Ph.D	Analysis of fatty acid, basic elements and protein contents of the flowering medicinal plants found in Sindh -Pakistan. Institute of Botany, University of Sindh, Jamshoro. (Co-supervised with Prof. Dr. Wazir Sheikh)	2013	Awarded
15.	Ms Habib Fatima	Ph.D	Some biochemical and physiological aspects of reproduction and moulting in Penaeid Shrimps <i>Fenneropenaeus (Penaeus) penicillatus</i> and <i>F. (P.) merguensis</i> . CEMB, University of Karachi. (Co-supervised with Prof. Dr. Zarrien Ayub)	2013	Awarded
14.	Mr M. Naveed Sheikh	M.Phil	Development of biomarkers for the identification of Pakistan <i>Oyster</i> species. CEMB, University of Karachi. (Co-supervised with Prof. Dr. Ghazalla Siddiqui)	2012	Awarded
13.	Mr Mehtab Alam	Ph.D	Venom proteins and peptides as a possible template for drug design: The isolation, purification and structural studies on Scorpion (<i>Buthus indicus</i>) venom. (Supervised)	2011	Awarded
12.	Ms Asma Naz	M.Phil	Purification and characterization of proteins and peptides from the venom of Cobra snake (<i>Naja naja naja</i>) for their antiplatelet aggregation potential. (Supervised)	2011	Awarded
11.	Ms Saima Zia	M.Phil	Purification and characterization of antibacterial proteins and peptides from the indigenous Enterococci. (Supervised)	2011	Awarded
10.	Mr Niaz Muhammad	M.Phil	Isolation and screening of peptidyl-antibiotic(s) producing bacteria from soil: purification, characterization and structure activity relationship. Kohat University of Science & Technology. (Co-supervised with Mrs. Aneela Roohi)	2011	Awarded
9.	Mr Bilal Ahmad Chishti	B.S	Aggregation studies of Bio-Polymers. Department of Applied Chemistry and Chemical Technology, University of Karachi, Karachi. (Supervised)	2011	Awarded
8.	Mr Saad Ali Khan	B.S	Isolation and purification of biologically active peptides from Cobra (<i>Naja naja naja</i>) venom. Department of Applied Chemistry and Chemical Technology, University of Karachi, Karachi. (Supervised)	2011	Awarded
7.	Ms Farzana Korejo	M.Phil	Micromorphological and chemotaxonomic study of the <i>Salvadora</i> Species, found in Sindh. Institute of Botany, University of Sindh, Jamshoro. (Co-supervised with Prof. Dr. M. Tahir Rajput)	2009	Awarded
6.	Mr M. Tuaha Akhter	M.Sc	Extraction, optimization, estimation and characterization of major seed storage proteins from <i>Nigella Satavia</i> (Black seed). Department of Applied Chemistry and Chemical Technology, University of Karachi, Karachi. (Supervised)	2009	Awarded



Research Thesis Supervised/Co supervised

No.	Students Name	Degree	Title	Year	Status
5.	Ms Sidra Khan	M.Sc	Extraction, optimization and characterization of proteins from <i>Trigonella foenum</i> (Graecum seed). Department of Applied Chemistry and Chemical Technology, University of Karachi, Karachi. (Co-supervised with Prof. Dr. Mehdi H. Kazmi)	2008	Awarded
4.	Ms Sadia Saeed	Ph.D	Staphylococcin 188 from an indigenous <i>Staphylococcus aureus</i> : basic and applied research. Department of Microbiology, University of Karachi, Karachi. (Co-supervised with Prof. Dr. Sheikh Ajaz Rasool)	2006	Awarded
3.	Ms Rabia Sattar	Ph.D	Structural characterization of biologically important proteinase and its inhibitors by homology modeling. HEJ Research Institute of Chemistry, University of Karachi, Karachi. (Co-supervised with Prof. Dr. Atiya Abbasi)	2004	Awarded
2.	Mr Christian Reichert Diplome	MS	Purification and characterization of proteins from <i>Echis carinatus</i> (saw-scale-viper) venom. University of Applied Sciences, Nürnberg, Germany. (Co-supervised with Prof. Dr. Hermann Bauer)	2004	Awarded
1.	Mr Robert Knape Diplome	MS	Purification and characterization of proteins from Cobra (<i>Naja naja naja</i>) snake venom. University of Applied Sciences, Nürnberg, Germany. (Co-supervised with Prof. Dr. Hermann Bauer)	2004	Awarded



Relevant Scientific Skills

Scientific Fields

Protein Isolation & Purification, Characterization

Tools and Techniques

- Isolation of Proteins and Peptides: from diverse sources such as Animals, Plants, Microorganism
- Purification of Proteins and Peptides: using multidimensional Chromatography (SEC/IEX/HIC/A and RP HPLC) as well as Large-scale Conventional Chromatography.
- Electrophoresis (SDS-PAGE, Tris-Tricine, Acid Urea-PAGE).
- 2D PAGE; 1D IEF, 2D PAGE, 2D DiGE, CE, Western blotting, Electroelution, Zymography *etc.*
- High Throughput Enzyme assay's (Chromogenic, FRET-based) *etc.*

Protein Structure & Elucidation

- Amino acid analysis and Protein Sequencing (Edman Degradation)
- Mass spectrometry (MALDI-TOF-MS; LC-ESI-MS, MS/MS *etc.*)
- Dynamic light scattering (DLS); DSC, UV/Vis, CD, FTIR, FR Spectroscopy of Proteins *etc.*
- Transmission electron microscopy of macromolecules (TEM), SEM, SEM-EDX *etc.*
- Solution X-ray scattering studies (SAXS) of macromolecules (SRS User)
- Bioinformatics: Protein homology modelling, docking *etc.*

Molecular Biology/Biotechnol Others

- Cell culture, Microbial techniques, PCR, DNA-gel electrophoresis, EMSA, RFLP *etc.*
- Platelet aggregometer, DNA sequencing, Fluorescence microscopy, ELISA *etc.*
- Solid phase peptide synthesis, Fermentation *etc.*
- Bioinformatics & Proteomics tools.



Contribution in Academic Conferences

No.	Presented As	Title	Conference	Year	Organizers
17.	Invited Lecture	Snake venom proteomics and antivenomics: a pharmacological biodiversity hotspot and the dire national need to save precious lives.	5th International symposium cum-training course on molecular medicine and drug research (MMDR-5)	12-15th Jan' 2015	ICCBS, University of Karachi, Pakistan
16.	Invited Guest Speaker	Delivered lecture entitled; Scorpion Venom Peptides - Tools for Calliperion ion Channels.		21st Nov' 2014	Shaheed Zulfikar Ali Bhutto Institute of Science & Technology, ZABIST, Clifton Karachi, Pakistan.
15.	Scientific Talk	Biocontrol potential of endophytic fluorescent <i>Pseudomonas</i> isolated from <i>Salvadora</i> species.	APS and MSA Joint Meeting, <i>Phytopathology</i> 103(Supp. 2): S2.38.	10-14th Aug 2013	Austin Texax USA .
14.	Invited: Key Note Lecture	Scorpion venom peptides - Tools for calliperion ion channels.	National Conference on Trends in Biochemistry and Molecular Biology.	21 st Feb, 2012	Quaid-i-Azam University Islamabad Pakistan
13.	Scientific Talk	Scorpion venom peptides - the natural treasure.	1st International Symposium on Nanomedicine: Past, Present & Future Prospects.	20 -21 st Dec, 2010	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
12.	Scientific Talk	Scorpion venomomics: Mass library to structure-activity relationship of peptidyl neurotoxins	10 th Biennial Conference of Pakistan Society for Biochemistry and Molecular Biology: Biomolecular Sciences in Development.	1-5 th Dec, 2010	KIBGE University of Karachi
11.	Scientific Talk	Monitoring cellular aggregation in liquid culture of Enterococci by dynamic light scattering (DLS).	12 th International Symposium on Natural Product Chemistry.	22-25 th Nov, 2010	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
10.	Invited: Key Note Lecture	Peptidyl modulators of sodium channel from Scorpion (<i>Buthus indicus</i>) venom: Structure-activity relationship	8 th International and 20 th National Chemistry Conference. (Keynote Lecture)	15 -17 th Feb, 2010	Department of Chemistry, Quaid-i-Azam University, Islamabad, Pakistan
9.	Invited Lecture	Environmental monitoring to probiotics: enterococci and enterocins.	Environmental challenges in the new millennium, at the First Humboldt Kolleg	19-21 st Nov, 2009	International Conference in University of Dhaka Dhaka- Bangladesh
8.	Scientific Talk	Single step detection of hepatitis B, Beta thalassemia major and <i>Salmonella typhi</i> by direct blood PCR analysis	Annual National Conference of Pakistan Association of Pathologists.	6 th -8 th Nov, 2009	PIMS, Islamabad Pakistan
7.	Invited Lecture	Overview of the role of Germany in the development of higher education sector in Pakistan: Past, Present and Future.			Alexander von Humboldt Foundation, Berlin Germany
6.	Invited lecture	Venom proteins and peptides as possible candidate for drug design: I. Scorpion Venomics.	First International Conference on Biotechnology and Informatics	10 -12 th April, 2006	BUIT, Quetta. Pakistan
5.	Scientific Talk	Venom Protein and Peptide as Possible Template for Drug Design: I. Structural basis of the interaction of peptidyl inhibitors (α KT-3) with human K ⁺ -channels (Kv1.1-1.3), from scorpion venom.	9 th International Symposium on Natural Product Chemistry	10-13 th Jan, 2004	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.
4.	Scientific Talk	Low resolution techniques (Transmission electron microscopy and Solution X-ray scattering) for macromolecular structure elucidation.	5 th International & 15 th National Chemistry Conference	24-27 th Nov, 2004	Quaid-i-Azam University, Islamabad
3.	Scientific Talk	Circular dichroism studies on hemocyanins	7 th International Conference on Circular dichroism.	1999	at Mierki, Poland
2.	Scientific Talk	Scorpion (<i>Buthus indicus</i>) hemocyanin: Primary structure elucidation and the anomalous behavior of subunit Bsin1 to Edman degradation analysis.	7 th National Chemistry Conference.	2-4 th Jun, 1996	University of Quetta, Balochistan
1.	Scientific Talk	Oxygen Transport Proteins: Structure and organization of hemocyanin from scorpion (<i>Androctonus australis</i> and <i>Buthus indicus</i>).	Proc. 2 nd Int. Biochem. Cong. Published in <i>Scientific J.</i> p-52.	16-18 th Nov' 1993	Institute of Biochemistry & Biophysics. University of Tehran, Iran .



Contribution in Academic Conferences

No.	Presented As	Title	Conference	Year	Organizer
31.	Poster	Environmental Enterococci: Species distribution, prevalence of virulence and antibiotic resistance in poultry and its related environment in Karachi, Pakistan.	14th Asian symposium on medicinal plants, spices and other natural products.	9-12 Dec 2013	ICCBS, University of Karachi, Pakistan
30.	Poster 2 nd Poster Prize	One step forward to resolve ambiguities about anti-tumor effect of toxic nanoparticle from scorpion venom.	1st International Symposium on Nanomedicine: Past, Present & Future Prospects	20 -21 st Dec, 2010	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
29.	Poster 2 nd Poster Prize	Highlighting the Darkness: Design and synthesis of low <i>K_m</i> peptidyl-FRET substrate for tumor marker enzyme MMP2.	12 th International Symposium on Natural Product Chemistry.	22 nd -25 th Nov, 2010	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
28.	Poster	Towards easy handling of unwanted lipidic substrates: optimization, production and partial purification of a thermostable lipase from <i>Bacillus</i> Sp.	11 th International Symposium on Natural Product Chemistry	29 Oct-1 st Nov, 2008	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
27.	Poster 1 st Poster Prize	A molecule to breath with: characterization of hemoglobin from Leaf-nosed Viper (<i>E. macmahonii</i>) and Sindh Krait (<i>B. sindanus sindanus</i>).	9 th International Symposium on Protein Structure Function Relationship	11 -14 th Jan, 2007	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
26.	Poster	Purification and characterization of a novel covalently linked heterodimeric phospholipase A ₂ from the venom of Sindh Krait.	9 th International Symposium on Protein Structure Function Relationship	11 -14 th Jan, 2007	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
25.	Poster	Bacillus Sp. RM15: an eye-catching entrant for in-vitro as well as in-vivo biocatalysis of lipidic substrates.	9 th International Symposium on Protein Structure Function Relationship	11 -14 th Jan, 2007	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
24.	Poster	Signals of death: breaking the PLA code	9 th International Symposium on Protein Structure Function Relationship	11 -14 th Jan, 2007	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
23.	Poster	Screening, influence of cultivation condition and partial purification of α-galactosidase from yeast.	6 th International Biennial Conference of Pakistan Society for Microbiology	18-21 st March, 2007	Quaid-e-Azam University, Islamabad.
22.	Poster 1 st Poster Prize	Partial purification and physico-biochemical characterization of a novel class-III bacteriocin(s) from Enterococci-HA38.	10 th International Symposium on Natural Product Chemistry	6-9 th Jan, 2006	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
21.	Poster 2 nd Poster Prize	Purification and characterization of a major 25 kDa alkaline serine protease from the seeds of <i>C. colocynthis</i>	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
20.	Poster 2 nd Poster Prize	Delving out interaction sites and possible mode of action of class IIa bacteriocins established by molecular docking studies.	5 th International Biennial Conference of Pakistan Society	10-15 th Jan, 2005	Pakistan Society for Microbiology University of Karachi
19.	Poster 3 rd Poster Prize	Little more than just yoghurt: Screening and isolation of yeast isolates as potential enzymatic source.	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
18.	Poster	Bioinformatics of Class IIa bacteriocins: Unleashing the site and nature of interactions with simulated membrane by molecular docking studies.	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
17.	Poster	Isolation and characterization of industrially important thermophilic microbial strains from Hot springs of Karachi.	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
16.	Poster	Screening and optimization for the production of extra-cellular lipase from <i>Basillus</i> sp. Isolated from Hot spring of Manghopir – Karachi.	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi



Contribution in Academic Conferences

No.	Presented As	Title	Conference	Year	Organizer
15.	Poster	Effect of culture conditions on growth and Alkaline phosphatase production from <i>Bacillus</i> sp.	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
14.	Poster	Purification and characterization of acid phosphatase from the seeds of <i>Lotus Nelumbo nucifera</i> .	8 th International Symposium on Protein Structure Function Relationship	7-10 th Jan, 2005	HEJ Research Institute of Chemistry, ICCBS, University of Karachi
13.	Poster	Preliminary epidemiology of malaria: Prevalence of <i>Plasmodium falciparum</i> /malariae in the population of Lyari and its association with the ABO and Rh blood group systems.	5 th International Biennial Conference of Pakistan Society for Microbiology	10-15 th Jan, 2005	Pakistan Society for Microbiology University of Karachi
12.	Poster	A comparative study of different methods for the detection and measurement of bacteriocinogenic activity in Group-D <i>Streptococci</i> .	5 th International Biennial Conference of Pakistan Society for Microbiology	10-15 th Jan, 2005	Pakistan Society for Microbiology University of Karachi
11.	Poster	New insight in staphylococcal research: bacteriocin or/and bacteriocin-like inhibitory substance(s) produced by <i>S. aureus</i> AB188.	5 th International Biennial Conference of Pakistan Society for Microbiology	10-15 th Jan, 2005	Pakistan Society for Microbiology University of Karachi
10.	Poster	Venom Protein and Peptide as Possible Template for Drug Design: II. Interaction of a Peptidyl Inhibitor (Bs- α KTx6) from the Scorpion Venom with Human K ⁺ - Channel.	9 th International Symposium on Natural Product Chemistry	10-13 th Jan, 2004	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.
9.	Poster	A snake venom blocks energy metabolism in <i>Trypanosoma brucei</i> .	Molecular Parasitology Meeting (MPM)	2003	MPM at Woods Hole, MA, USA.
8.	Poster	On-line cRP-LC-ESI-MS and NanoES for establishing mass library: structure elucidation of an α -neurotoxin analog from scorpion (<i>Buthus indicus</i>) venom.	<i>Proteomics Forum</i> 2001 München	16-19 th , Sep 2001	<i>Proteomics Forum</i> 2001 at Technical University München, Germany
7.	Poster	Structure-function relationship of K ⁺ -channel inhibitor: A naturally occurring peptide toxin (Bs6) from the venom of scorpion <i>Buthus indicus</i> .	8 th International Symposium on Natural Product Chemistry at Karachi.	18-22 nd Jan, 2000	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan
6.	Poster 1 st Poster Prize	Oxygen transport proteins: Structural studies of scorpion (<i>Buthus indicus</i>) hemocyanin in the native state and as purified subunit Bsin1.	6 th International Symposium on Protein Structure-Function Relationship	7-10 th Feb 1999	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.
5.	Poster	Oxygen transport proteins: III. Characterization of scorpion (<i>Buthus indicus</i>) hemocyanin subunit Bsin1, some unresolved problems in their structure and function.	7 th International Symposium on Protein Structure-Function Relationship	6-9 th Jan, 1997	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.
4.	Poster	Scorpion (<i>Buthus indicus</i>) hemocyanin: Primary structure elucidation and the anomalous behavior of subunit Bsin1 to Edman degradation analysis.	7 th National Chemistry Conference.	2-4 th Jun, 1996	University of Quetta, Balochistan
3.	Poster	Subunit heterogeneity in arthropod hemocyanins: studies on scorpions (<i>Androctonus australis</i> and <i>Buthus indicus</i>) hemocyanins.	Proc. 4 th International Symposium on Protein Structure-Function Relationship at Karachi, Pakistan. Plenum Press, New York, p-272.	20-25 th Jan 1995	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.
2.	Poster	Characterization of proteins from Mangrove <i>Avicenna marina</i> .	Proc. 4 th International Symposium on Protein Structure-Function Relationship at Karachi, Pakistan. Plenum Press, New York, p-269.	20-25 th Jan 1995	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.
1.	Poster	Isolation and characterization of hemocyanin from <i>Buthus indicus</i>	Protein Structure Function Relationship TWEL Publisher Karachi, p-317	8-12 th Jan, 1993	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.



Contribution in Academic Workshop

No.	Contribution as	Title Conference/Workshop	Institution	Year
11.	Attended	4th Pak-France Binational Workshop on Drug Discovery and Molecular Medicine.	Dr. Panjwani Center for Molecular Medicine and Drug Research (ICCBS), University of Karachi, Pakistan and Embassy of Republic of France, Islamabad, Pakistan	Oct 12-14, 2015
10.	Attended	NASIC Workshop on Modern Spectroscopic Techniques and their Applications in Structure Determination.	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan and Network of Academies of Sciences in Islamic Countries (NASIC)	Dec 1-3, 2014
9.	Invited lecture and Instructor	Symposium cum Workshop on Tools in Biomedical Research. Invited Lecture and Instructor on "Circular Dichroism (CD) Spectroscopy: an efficient tool for understanding protein structure and function".	Department of Biochemistry, University of Karachi, Karachi Pakistan	1-3 rd March, 2011
8.	Invited lecture and Instructor	International Workshop on Techniques in Nanomedicine Research. Invited Lecture and Instructor on "Dynamic Light Scattering (DLS)".	Jointly Organize by USAID & ICCBS, University of Karachi, Karachi Pakistan	22 -23 rd Dec, 2010
7.	Attended	The 32 nd A-IMBN/AMBO International training Course - "Exploring Structural Biology by Synchrotron Protein Crystallography	Academia Sinica, Taipei, Taiwan	30 th Sep - 7 th Oct, 2009
6.	Invited lecture and Instructor	International Workshop on "Characterization of Proteins". Invited Lectures and Instructor on "Electrophoresis and Bioinformatics".	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.	15-22 nd Jan, 2007
5.	Demonstrator and Organizer	Workshop on "Characterization of Proteins	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.	11-18 th Jan, 2005
4.	Attended	Workshop on "Sequenz-, Struktur-, Funktions-Analysen: Arbeitsfelder der angewandten Bioinformatik"	University of Tuebingen, Tuebingen, Germany	15-30 th , Jun 2000
3.	Organizer	International Workshop on "Protein Structure Elucidation"	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.	27 th Jan –2 nd Feb, 1995
2.	Organizer	International Workshop on "Protein Structure: Chemical and Physical Aspects"	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan.	14 – 23 rd Jan, 1993
1.	Organizer	International Workshop on "Immuno-Chemical Techniques"	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan	28 th Nov –12 th Dec, 1991



Collaborators

No.	Name	Collaborators	Institution
1.	Prof. Dr. Michael Duszenko	International	Institut für Biochemie, Institute of Physiological Chemistry, University of Tuebingen, Hoppe-Seyler Str. 4, Tuebingen, Germany .
2.	Prof. Dr. Hubert Kalbacher	International	Interfakultäres Institut für Biochemie, University of Tuebingen, Hoppe-Seyler Str. 4, D-72076, Tuebingen, Germany .
3.	Prof. Dr. Dr. h.c. mult Wolfgang Voelter	International	Institut für Biochemie, Institute of Physiological Chemistry, University of Tuebingen, Hoppe-Seyler Str. 4, Tuebingen, Germany .
4.	Dr. Nicholas R Casewell	International	NERC Research Fellow, Alistair Reid Venom Research Unit, Liverpool School of Tropical Medicine, Pembroke Place Liverpool L3 5QA, U.K.
5.	Prof. Dr. Cao Zhijian	International	Key Laboratory of virology, College of Life Sciences, Wuhan University, Wuhan, China .
6.	Prof. Dr. Bryan G. Fry	International	Venom Evolution Laboratory, School of Biological Sciences University of Queensland St. Lucia, Qld, 4072 Australia .



Collaborators

No.	Name	Collaborators	Institution
7.	Prof. Dr. Atiya Abbasi	National	International Center for Chemical Sciences, HEJ Research Institute of Chemistry, University of Karachi, Karachi-75270, Pakistan.
8.	Prof. Dr. Asghari Bano	National	Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan.
9.	Prof. Dr. Mustafa Kamal	National	Department of Biotechnology, University of Karachi, Karachi-75270, Pakistan.
10.	Prof. Dr. Syed Ehteshamul-Haque	National	Department of Botany, University of Karachi, Karachi, Pakistan.
11.	Prof. Dr. Zarrien Ayub	National	Centre of Excellence in Marine Biology, University of Karachi, Karachi-75270, Pakistan.
12.	Prof. Dr. Iqbal Ahmed	National	Department of Pharmaceutics, Baqai Institute of Pharmaceutical Sciences, Baqai Medical University, Karachi-74600, Pakistan.
13.	Dr. Muhammad Ali Sheraz	National	Chairman, Department of Pharmacy Practice, Baqai Institute of Pharmaceutical Sciences, Baqai Medical University, Karachi-74600, Pakistan.
14.	Dr. Abdul Hameed	National	HEJ Research Institute of Chemistry, ICCBS, University of Karachi, Karachi-75270, Pakistan.



Owner/Awards/Others

No.	Owners	Year	Institution
1.	Scholarships	2012-2013	Higher Education Commission (HEC) of Pakistan Postdoctoral Fellowship, UQ, Australia
		2005-2006	Alexander von Humboldt - Georg Forster Research Fellowship, AvH-Bonn, Germany
		1997-2002	Deutscher Akademischer Austauschdienst, DAAD-Bonn, Germany
		1997-1998	CCLRC-Daresbury Laboratory, U.K
2.	Ph.D Supervisor	1991-1996	Jr/Sr. Research Fellow: HEJ Research Institute of Chemistry, University of Karachi, Pakistan.
		2003-till	PCST/HEC - Approved Research Supervisor in Biological Sciences
3.	Award	2003-till 2003-2008 2014	PCST Productive scientist RPA award "RPA2014 Category A"
4.	Member	2003-till	Committee for Doctoral Program in Bioorganic-chemistry, H.E.J. Research Institute of Chemistry, University of Karachi, Karachi, Pakistan.
5.	Reviewer	2009 - till 2003-till	Member Board of Studies in the Department of Biotechnology, University of Karachi. Member purchase committee, ICCBS, University of Karachi.
			Grant applications submitted to PSF/HEC-Islamabad Scientific Journals (FEBS-Lett, PPL, ABB, BBRC, WJMB, J Proteomics, CBP, IJPRT, Toxins, Toxicon, JVR)
6.	Memberships	2003-till	International Society on Toxinology (IST) American Chemical Society (ACS) Pakistan Society of Biochemistry and Molecular Biology (PSBMB) Chemical Society of Pakistan (CSP), Zoology Society of Pakistan (ZSP) Pakistan Society of Pharmacology (PSP)
7.	Organizer	1991-till	Organize, presented and demonstrated at many national and international symposiums and workshops
8.	Scientific Research	1995-till	Over Eighty Research Papers, Three Books & Seven Chapters in Books are in credentials.
9.	Impact Factor	1995-till	167.745
10.	Total Citation	Till 2016	~617
11.	IT skills		Windows/Linux/Internet/Bioinformatics
12.	Languages		English, Urdu, Basic German and French



References

No.	Name	Relation	Address & Email	Telephone No.	Fax
1.	Prof. Dr. Atiya Abbasi	Ph.D. supervisor	HEJ Research Institute of Chemistry, (ICCBS) University of Karachi Karachi-75270, Pakistan Email: atiya786@super.net.pk	+92-21-34962785	+92-21-34963124/4963373
2.	Prof. Dr. Dr. h.c. mult Wolfgang Voelter	PDR supervisor	Interfakultäres Institut für Biochemie, University of Tuebingen Hoppy-Seyler Str. 4 D-72076, Tuebingen, Germany E-mail: wolfgang.voelter@uni-tuebingen.de	+49-07071/2973041	+49-07071/650016
3.	Prof. Dr. Bryan G. Fry	PDR supervisor/ Research Collaborator	Venom Evolution Laboratory, School of Biological Sciences University of Queensland St. Lucia, Qld, 4072 Australia Email: bgfry@uq.edu.au	+61400193182	+61 7 3365 1655



Students/Research Assistants

No.	Students Name	Degree	Title	Year	Status
9.	Ms Saira Akram	M.Phil	Will be submitted	2016	In Progress
8.	Ms Farhat Perveen	M.Phil	Will be submitted	2016	"
7.	Ms Sumbul Mujahid	M.Phil/Ph.D	Biotechnological exploitation of fungal species for the production of industrially and medicinally important enzymes.	2016	"
6.	Ms Bente Zehra	M.Phil/Ph.D	Molecular insights of <i>in vitro</i> modulation of invasive and metastatic potential of NSCLC using natural or synthetic compounds.	2014	"
5.	Ms Sindhu Zahid	Ph.D	Molecular assessment of tetracycline resistance in environmental strains of Enterococci in Karachi Pakistan.	2014	"
4.	Ms Areej Alvi	M.Phil/Ph.D	Venomomics and antivenomics studies on the snake venoms of Pakistani Cobra (<i>Naja</i>) species.	2013	"
3.	Ms Syed Uroosa Hashmi	M.Phil/Ph.D	Structure-activity relationship of proteins and peptides from the venom of Pakistan Russell's viper (<i>Daboia russelii</i>).	2013	"
2.	Ms Mariam Rehman	M.Phil/Ph.D	Molecular Assessment of Ampicillin Resistance in Enterococcus species isolated from Sewage and Its related Environment in Karachi, Pakistan.	2012	"
1.	Mr Khwaja Ali Hassan	M.Phil/Ph.D	Molecular assessment of prevalence, virulence determinants and antibiotic resistance in <i>Enterococcus</i> species isolated from poultry & Its related environment in Karachi, Pakistan.	2012	"

Research Assistants:

1. Ms Mehwish Perveen (HEC Funded)
2. Ms Amayla Fazal (HEC Funded)