

Ishtiaq Ahmad



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Present Contact Address: Dr Ikram ul Haq Institute of Industrial Biotechnology, GC University, Lahore, Pakistan
Cell: +92-3334414512

Education: **PhD Biotechnology (Thesis Submitted evaluation awaited)**
Department of Biological Sciences, International Islamic University Islamabad, Pakistan.
Thesis Title: Virtual Screening based identification of Potential Novel Antimicrobial and Anti viral Drug Leads and their Experimental Validation
MPhil Molecular Biology and Biotechnology
Institute of Molecular Biology and Biotechnology, The University of Lahore, Lahore, Pakistan (HEC Recognized University)
Thesis: Bioinformatics applications
Title: The Role of protein modifications by sugars and phosphate in their structure-function behavior:
Computer assisted study on slectins.
CGPA: 3.45 out of 4.00.

MSc (Zoology)
Bahaudin Zakariya University, Multan, Pakistan

BSc (Zoology, Botany and chemistry)
Bahaudin Zakariya University, Multan Pakistan.

Computer Skills: Can run all basic computer applications including MS Windows, MS Office (word, excel, power point), Internet applications and a fairly good knowledge of specialized computer skills such as programming language C++ and data base management systems (access, MySQL). Extended experience of working with specialized Bioinformatics and Computational Biology computer programs and software (Sequence analysis programs, prediction programs, 3-D structural annotation visualization and modification software, homology modeling, programs, protein-protein interactions and protein docking programs).

Major Achievements: Developed an algorithm for analyzing protein sequence in the vicinity of post-translational modification site, named MAPRes (Mining Association Patterns among preferred amino acid Residues in the vicinity of amino acids targeted for post-translational modifications). This algorithm has been implemented to phosphorylation and glycosylation data successfully. The MAPRes has been developed in visual C# 2.0 and DOT NET platform (Ishtiaq Ahmad et al., 2008, *Proteomics*, 8: 1954-1958).

Research Interests: Main focus of my future research interest is to work for *in silico drug designing process followed by its verification utilizing experimental approaches* for understanding the molecular interactions implicated in physiology of normal processes and pathology of different diseases.

Current Position:

Mar. 11, 2010 to date

Lecturer

Dr Ikram ul Haq Institute of Industrial Biotechnology, GC University, Lahore, Pakistan

Web: www.gcu.edu.pk

Previous Work Experience:

Oct. 2005 to Mar. 2010

Senior Research Officer

Institute of Molecular Sciences and
Bioinformatics 28- Nisbet road Lahore,
Pakistan. Tel: +92-42-7241653, Fax: +92-42-7245753
web: www.imsb.edu.pk

Responsibilities

1. Organizing research activities
2. Project designing in Molecular Biology
3. Research in computational biology and Bioinformatics
4. Developing new programs/databases in Bioinformatics

Jun. 2003 to Sept.2005

Research Officer

Institute of Molecular Sciences and
Bioinformatics 28-Nisbet road Lahore,
Pakistan. Tel: +92-42-7241653, Fax: +92-42-7245753
web: www.imsb.edu.pk

Jun. 2002 to May. 2003

Research fellow (M. Phil Research)

Institute of Molecular Sciences and
Bioinformatics 28-Nisbet road Lahore,
Pakistan. Tel: +92-42-7241653, Fax: +92-42-7245753
web: www.imsb.edu.pk

Jun. 2001-May 2003

Studentship

The University of Lahore, Lahore

Sept. 2002 to Sept. 2003 **Visiting Lecturer (Anatomy, Physiology and Medical Biology for paramedics)**
 Ace Institute of health sciences
 6-P Model Town Ext. Lahore, Pakistan

Sept. 1997 to Apr. 2001 **Lecturer O- and A-levels Biology**
 The City Central School Multan, Pakistan
Responsibilities
 1. Teaching Biology to O- and A-Levels
 2. Activity designing in Biology, Chemistry and Geography for O-Levels and Pre O-Levels
 3. In charge Science Club and Science Lab.

Fellowships **Fellow of Zoological Society of Pakistan (ZSP)**

Fellow and Secretary General Bioinformatics Society of Pakistan (BSP)

Research supervision

List supervision of graduate students, postdocs and undergraduate honors theses showing:

Years	Degree	Name
2010	B.Sc (Hons.) (Biotechnology IIB GCU)	Sardar Faizan
2010	B.Sc (Hons.) (Biotechnology IIB GCU)	M. Tayyab Javed
2010	B.Sc (Hons.) (Microbiology IIB GCU)	Madiha Irshad
2010	B.Sc (Hons.) (Microbiology IIB GCU)	Kinza Shabbir
2011	B.Sc (Hons.) (Biotechnology IIB GCU)	Amna Anees
2011	B.Sc (Hons.) (Biotechnology IIB GCU)	Amna Ijaz
2011	B.Sc (Hons.) (Biotechnology IIB GCU)	Madeeha Hassan
2011	B.Sc (Hons.) (Biotechnology IIB GCU)	Kanwal Nazir
2013	B.Sc (Hons.) (Microbiology IIB GCU)	Afia Batool
2015	B.Sc (Hons.) (Microbiology IIB GCU)	Asma Humayon
2015	B.Sc (Hons.) (Microbiology IIB GCU)	Sana Zahra
2015	B.Sc (Hons.) (Biotechnology IIB GCU)	Sidra Shafiq
2015	B.Sc (Hons.) (Biotechnology IIB GCU)	Aysha Maqbool
2017	B.Sc (Hons.) (Microbiology IIB GCU)	Ayesha Rafiq
2017	B.Sc (Hons.) (Microbiology IIB GCU)	Sadia Sikander
2017	B.Sc (Hons.) (Biotechnology IIB GCU)	Kibriya Shahzadi
2018	B.Sc (Hons.) (Microbiology IIB GCU)	Nayab Sultan
2019	B.Sc (Hons.) (Microbiology IIB GCU)	Ayeza Amir
2021	B.Sc (Hons.) (Biotechnology IIB GCU)	Rabia Amjad
2022	B.Sc (Hons.) (Microbiology IIB GCU)	M. Haseeb Ahmad
2022	B.Sc (Hons.) (Microbiology IIB GCU)	Farwa Zafar
2023	B.Sc (Hons.) (Microbiology IIB GCU)	Hadia Islam

2023	B.Sc (Hons.) (Biotechnology IIB GCU)	Anam Atif
2024	B.Sc (Hons.) (Microbiology IIB GCU)	Laiba Amjad
2024	B.Sc (Hons.) (Microbiology IIB GCU)	Laraib Sohail
2024	B.Sc (Hons.) (Microbiology IIB GCU)	Arslan Rasheed
2024	B.Sc (Hons.) (Microbiology IIB GCU)	Urwa Ishtiaq
2024	B.Sc (Hons.) (Microbiology IIB GCU)	Mahnoor Khalid
2025	B.Sc (Hons.) (Microbiology IIB GCU)	Wazeer M. Abdullah
2025	B.Sc (Hons.) (Microbiology IIB GCU)	Ayesha Munir
2025	B.Sc (Hons.) (Biotechnology IIB GCU)	M. Ali Arif
2025	B.Sc (Hons.) (Biotechnology IIB GCU)	Mlyka Khan
2013	MPhil (Microbiology IIB GCU)	Sidra Shan
2014	MPhil (Biotechnology IIB GCU)	Shahida Hussain
2015	MPhil (Microbiology IIB GCU)	Afia Batool
2015	MPhil (Microbiology IIB GCU)	M. Nauman
2016	MPhil (Biotechnology IIB GCU)	M. Tayyab
		Machel
2019	MPhil (Biotechnology IIB GCU)	Syeda Tehmina Bukhari
2022	MPhil (Microbiology IIB GCU)	Anam Khalid
2023	MPhil (Biotechnology) IIB GCU	Rabia Amjad
2024	MPhil (Biotechnology) IIB GCU	Arooma Awan
2025	MPhil (Biotechnology) IIB GCU	Hina Ashraf
2026	MPhil (Biotechnology) IIB GCU	Syeda Ayesha Hashmi

Research Co-supervision

2012	M. Phil (Microbiology IIB GCU)	Mahmood A. Yawer
2012	M. Phil (Microbiology IIB GCU)	Asma Nazir
2012	M. Phil (Botany PU Lhr)	Hafsa Leghari
2012	M. Phil (Botany PU Lhr)	Anila Akbar
2015	BS (Environmental Sciences, PU)	Zunaira Jabeen
2016	M. Phil (Microbiology IIB GCU)	Ayesha Akhtar
2017	M. Phil (Biotechnology IIB GCU)	Sidra Shafiq
2017	M. Phil (Biotechnology IIB GCU)	Areej Md Hafiz
2017	M. Phil (Biotechnology IIB GCU)	Sidra Shafiq
2018	M.Phil (Biotechnology IIB GCU)	Khadija Tul Kubra
2019	M.Phil (Microbiology IIB GCU)	Sadia Sikander
2021	M.Phil (Biotechnology IIB GCU)	Zeeshan Khalil
2021	M.Phil (Microbiology IIB GCU)	Sundas Sharif
2022	B.Sc (Hons.) (Microbiology IIB GCU)	M. Atif
2022	B.Sc (Hons) Biotechnology IIB GCU	Rimsha Sahar
2022	MPhil (Microbiology) IIB GCU	Rameen Imran
2022	MPhil (Microbiology) IIB GCU	Saba Mehboob
2023	MPhil (Microbiology) IIB GCU	Isha Fatima

2024	MPhil (Micobiology) IIB GCU	Sana Ghaffar (Contd.)
2025	MPhil (Micobiology) IIB GCU	Nayab Amjad
2025	BS MLT IIB GCU	M. Abdullah Akram
2026	M. Phil (Biotechnology IIB GCU)	Syed Usman Hashmi

Seminar/Conference Organizer:

2006 **Symposium:** A One day International Symposium on Enzymes and PTMs

Venue and Date: On 16th September at School of Biological Science
University of the Punjab; Funded by Pakistan

Academy

of Sciences

Role: Member Organizig team

2008 **Symposium:** A two day International Symposium on Glycoproteins in Health and Disease

Venue and Date: On 06-07 May at School of Biological Science
University of the Punjab; Funded by Pakistan

Academy

of Sciences

Role: Member Organizig team

2014 **Seminar:** One day Seminar on Biochemistry, Molecular Biology and Biochemistry

Venue and Date: On 23rd October at IIB conference room

Role: Chief Organizer

2025 **Conference:** 8th International MLCON conference

Venue and date: On 29th April; at GCU Lahore, Pakistan

Role: Organizing Secretary

Seminars & Workshops:

Since 1996

Participating Annual Zoological Congress arranged by Zoological Society of Pakistan

March 2002

Participated 7th Eurasia conference on Chemical Sciences.

April 2003

Attended 1st International workshop on Bioinformatics arranged By Comsetech (PTCL) Pakistan.

December 2003

Attended a seminar on Bioinformatics, Information Technology and Biostatistics arranged by Islamic Society of Statistical Sciences at NCBA & E Gulberg III, Lahore, Pakistan.

June 2006

Participated in National workshop on allergy vaccine development in Pakistan arranged at Punjwani center for molecular medicine

	and drug research (PCMD) University of Karachi, Karachi, Pakistan
November 2014	Organized a Seminar titled “1st one day seminar on Biochemistry, Molecular Biology and Bioinformatics” at IIB, GCU, Lahore
October 2015	Attended a training workshop “Cascading Master Trainers-Faculty Professional Development Programme” organized by QEC (GCU) Lahore
January 2016	Attended a workshop titled “Bioinformatics workshop: Hands on Training on Analysis of Biological Data Using R ”
Oral Presentations:	
December 2003	Presented a paper in a seminar on Bioinformatics, Information Technology and Biostatistics. Title: “Functional Control of Integrins: Predicting the Role by Post-translational modifications and Integrin mediated drug targeting”
April 2004	Presented a Paper in 24th Zoological Congress at Allama Iqbal Open University Islamabad. Title: “Prediction of Selectin Function Based on Post-translational Modifications”.
April 2004	Oral Presentation made in 2nd National Conference of Biology held at Govt. college University Lahore. Title: “Predicting the Potential Glycosylation and Phosphorylation Sites in Cytoplasmic Domains of Human Selectins Involved in Modulating their Physiology and Turnover”.
March 2005	Presented a Paper in 25th Zoological Congress at Sindh Agriculture University Tandojam. Title: “Role of O-GlcNAc Modification, Phosphorylation and their Interplay in Octamer Binding Transcription Factors”.
April 2006	Presented a Paper in 26th Zoological Congress at University of the Punjab, Lahore. Title: Interplay of Glycosylation and Phosphorylation: Prediction of Proteins Functional Modifications
Feb-Mar 2007	Presented a Paper in 26th Zoological Congress at Bahauddin Zakariya University Multan Title: <i>In silico</i> Predicting Important Functional Sites of

Proteins and their Posttranslational Modifications.

- April 2007 **Presented a Paper in 1st International Conference on Role of Chemistry and Biochemistry in National Development at University of Baluchistan Quetta.**
Title: Approach for Identifying Potential Post-translational Modifications and their Interplay Sites involved in Multi-functionality of Proteins
- March 2008 **Presented a Paper in 28th Zoological Congress at Govt. College University Faisalabad**
Title: Functional Switches of Proteins Involve Specific Post-Translational Modifications: Preferred Amino Acid Pattern(s) for Different Modifications.
- Jan. 2009 **Presented a Paper in International Conference on Molecular Medicine held at HEJ Research Institute of Chemistry, University of Karachi, Karachi.**
Title: Role of Post-translational Modifications (PTMs) in Health and Disease: Protein Functional Switches Involve Specific PTMs
- March, 2010 **Presented a paper in 30th Zoological Congress held at University of Agriculture Faisalabad**
Title: Switching of Cerebellar and Hippocampal LTP and LTD can be regulated by alternative Phosphorylation and *O*-GlcNAc Modifications of GluR1 and GluR2
- November 2014 **Presented a paper in 2nd International Conference on Biotechnology for Sustainable Development at IIB GCU, Lahore**
Title: *In silico* Drug Designing against DENV and *Mycobacterium tuberculosis*
- April 2017 **Presented as a resource person on bioinformatics tools for sequence Analysis**
- March 2021 (online) **Presented a paper in conference on Conference on Recent Advances in Applied Biosciences (CRAABS)” at Department of Biology Lahore Garrison University, Lahore.**
Title: “Designing Derivatives of Anti-rheumatics and Selection of Lead Compounds as Possible Drug Candidate(s)”
- November 2022 **Presented a paper in conference “8th International and 17th National conference on advances in plant sciences in the era of climate change” at Institute of Botany University of the Punjab, Lahore Pakistan.**
Title: “Enhanced production of Lovastatin by *A. terreus* through prevailed phosphorylated Ser636 of MAT domain: *In silico* analysis
- Invited Oral Presentations:**
December 2005 **Presented The Research Work done in Bioinformatics at Institute of Molecular Sciences and Bioinformatics Entitled “Prediction of**

Proteins Functional Modifications: Alternative Glycosylation and Phosphorylation ” in 4th symposium on “Genomics, Bioinformatics, Biotechnology and Economic Development” organized by Centre for Molecular Genetics, University of Karachi, Karachi, Pakistan.

September 2006

Presented a Paper entitled “*Prediction of Proteins Functional Post-translational Modification Sites and their Interplay*” on a symposium organized by Pakistan Academy of Sciences at School of Biological Sciences University of the Punjab, Lahore, Pakistan.

May 2008

Presented a paper entitled “*A Primary Sequence Pattern of Protein is a Requirement but not Sufficient for Glycosylation and other Post-Translational Modifications*” on a symposium organized by Pakistan Academy of Sciences at School of Biological Sciences University of the Punjab, Lahore, Pakistan.

March 2009

Presented a paper in an international conference held at CEMB, University of the Punjab
Title: Post-translational Modifications and their Interplay Exhibit a Vital Role in Drug discovery

May 2010

Delivered a talk in a conference cum workshop held at University of veterinary and animal science, Lahore
Title: Protein sequence analysis for post-translationally modified amino acids

November 2012

One day Seminar on Bioinformatics and Computational Biology at Comsats, Islamabad
Title: Research Work at IIB in the area of Bioinformatics and Computational Biology

October 2014

One day Seminar on Biochemistry, Molecular Biology and Bioinformatics held at IIB GCU Lahore
Title: Drug Design and Development

April 2025
 April,

One day “8th International MLCON conference” held on 29th 2025 at GCU Lahore, Pakistn.
Title: Digital Twins in Health care System

Poster Presentations:
March 2021 (online)

1. Student poster presentation at the conference titled “**Conference on Recent Advances in Applied Biosciences (CRAABS)**” on 31st March 2021 Authors: Ishtiaq Ahmad and Ayza Amer **(Won first prize in poster competition)**

2. Student poster presentation at the conference titled “**Conference on Recent Advances in Applied Biosciences (CRAABS)**” on 31st March 2021 Authors: Sundas Sharif, Mahmood-ul-Hassan, and Ishtiaq Ahmad **(Won 3rd prize in poster competition)**

April 2025
 conference”

1. Student Poster Presentation at “8th International MLCON held on 29th April, 2025 at GCU Lahore, Pakistn. Authors: Wazeer

Muhammad Abdullah and Ishtiaq Ahmad; Title: “Pangenome Analysis of *Helicobacter pylori* Strains: Implication of GroEL (Cpn60) Interaction with

Oligomers in Alzheimer's Disease” (**Won 1st position in poster competition**)

2. Student Poster Presentation at “8th International MLCON conference held on 29th April, 2025 at GCU Lahore, Pakistn. Authors: Syed Usman Hashmi, Syeda Ayesha Hashmi and Ishtiaq Ahmad; Title: “Identification of Potential Biomarker in Gastric/Stomach Cancer using Microarray Based Expression Network Analysis through *in silico* Tools” (**Won 2nd position in poster competition**)
3. Student Poster Presentation at “8th International MLCON conference held on 29th April, 2025 at GCU Lahore, Pakistn. Authors: Maneeha Ajmal and Ishtiaq Ahmad; Title: “Identifying Stage Specific Biomarkers and Therapeutic Targets for Alzheimer’s Disease from Microarray Gene Expression Data Utilizing R”
4. Student Poster Presentation at “8th International MLCON conference held on 29th April, 2025 at GCU Lahore, Pakistn. Authors: Syeda Ayesha Hashmi, Syed Usman and Ishtiaq Ahmad; Title: “Computational Analysis of Acquired Antimicrobial Resistance Genes in Plasmids of *Streptococcus sp*”
5. Student Poster Presentation at “8th International MLCON conference held on 29th April, 2025 at GCU Lahore, Pakistn. Authors: M. Abdullah Akram, Asad ur Rehman and Ishtiaq Ahmad; Title: “Comparative Analysis of DNA Methylation Based Clocks as Prognostic Biomarkers across Breast Cancer, Type 2 Diabetes, and Alzheimer's Disease”.

Administrative and other Responsibilities

1. Departmental Advisor, the Scientific Ravi 2010-12.
2. Departmental Controller of Examinations, Dec 2011-Jan 2014.
3. Member Departmental QEC committee 2011-12
4. In-charge departmental tea club 2011-2013
5. In-charge IIB chemical store 2014-16
6. Convener Departmental QEC committee 2015
7. Secretary departmental BOS 2015-19
8. Member Departmental QEC committee 2017-19
9. Departmental Focal Person for International students 2021-to date
10. Coordinator BS MLT program Fall semester 2021-to date

11. Advisor Al-Razi Society for Medical Lab Technology since Feb 2024 to date.

List of Publications

1. Sikander Ali, Saba Mahboob, **Ishtiaq Ahmad**, Muamad Usman Ahmad, Hafiza Kanwal, Sndas Sharif, Khayala Mammadova, Muhammad Arshad M. Microbial production and biocatalytic docking of pectin lyase for green oil extraction in biorefinery applications. *Arch Microbiol.* 2026 Feb 16;208(4):197.
2. Muhammad Usman Ahmad, Sundas Sharif, Sikander Ali, **Ishtiaq Ahmad**, Qaiser Farid Khan, Iram Liaqat, Kaynat Williaml, Tawaf Ali Shah , Abdulhakeem S. Alamri, Charis M. Galanakis and Majid Alhomrani (2025). Exploring in vitro and in silico potential inhibitory effects of eugenol and its analogues for broad range development of antibacterial drugs. *Discover Life*, **55**:5.
3. Sikander Ali, Rabab Maqsood, Muhammad Usman Ahmad, **Ishtiaq Ahmad**, Zahid Hussain, Ammar Naveed, Muhammad Ammar Javed, Aqsa Zahid, Muhammad Nauman Aftab, Baber Ali, Humaira Rizwana, and Mohamed Soliman Elshikh, (2024). Exploring catalytic degradation of environmental fenamiphos by yeast enolase cross-linked with COOH-functionalized silver nanoparticles. *Environmental Science: Nano*, **11**(7), 3080-3091.
4. Waqar Ahmad, Khadija Shabbiri, **Ishtiaq Ahmad** (2020) Prediction of human tau 3D structure, and interplay between O- β -GlcNAc and phosphorylation modifications in Alzheimer's disease: elegans as a suitable model to study these interactions *in vivo*. *Biochem. Biophys. Res. Commun.* **528**(3):466-472
5. Fayyaz Ahmed, Nasir Mahmood, Saman Shahid S, Zahid Hussain, **Ishtiaq Ahmed**, Amir Jalal, Bushra Ijaz, Abubakar Shahid, Ghulam Mujtaba, Tanveer Mustafa (2016) Mutations in Human Interferon α 2b Gene and Potential asRisk Factor Associated with Female Breast Cancer. *Cancer Biother Radiopharm*, **31**:199-208.
6. Muhammad Tariq Zahid, Farah R. Shakoori, Soumbel Zulifqar, **Ishtiaq Ahmed**, Khalid. Al-Ghanim K, Shahid Mehboob, Abdul Rauf Shakoori (2016). Molecular Characterization of a Copper Metallothionein Gene From a Ciliate Tetrahymena farahensis. *J Cell Biochem.*, **117**:1843-1854.
7. Ikram ul Haq, Mahmood Ali Khan, Bushra Muneer, Zahid Hussain, Samra Afzal, Sana Majeed, Naeem Rashid, Muhammad Mohsin Javed, **Ishtiaq Ahmad** (2012). Cloning, characterization and molecular docking of a highly thermostable β -1,4-glucosidase from *Thermotoga petrophila*. *Biotechnol Lett.* **34**:1703-1709.
8. Nasir-ud-Din, **Ishtiaq Ahmad**, Ikram-ul-Haq, Sana Elahi, Daniel C. Hoessli and A.R. Shakoori. (2010). The function of GluR1 and GluR2 in cerebellar and hippocampal LTP and LTD is regulated by Interplay of phosphorylation and O-GlcNAc modification. *J. Cell. Biochem.*, **109**: 585-597. (IF 3.54)
9. **Ishtiaq Ahmad**, Abid Mehmood, Ahmed Khurshid, Wajahat M. Qazi, Daniel C. Hoessli, Evelyne Walker-Nasir, Abdul R. Shakoori and Nasir-ud-Din. (2009) Phosphoproteome sequence analysis and significance: Mining association patterns around phosphorylation sites utilizing MAPRes. *J. Cell. Biochem.*, **108**: 64-74. (IF 3.54)
10. Afshan Kaleem, **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, Muhammad Saleem, Abdul Rauf Shakoori and Nasir-ud-Din. (2009) Epidermal growth factor receptors: function modulation by phosphorylation and glycosylation interplay. *Mol. Biol. Reports.* **36**: 631-639. (IF 1.75)
11. Sana Elahi, Afshan Kaleem, **Ishtiaq Ahmad**, Ikram-ul-Haq, Abdul Rauf Shakoori and Nasir-ud-Din. (2009). Functional regulation of glutamate receptor GluR1: Long term potentiation depression of GluR1 by post-translational modification. *Pakistan J. Zool.*, **41**: 71-78. (IF 0.189)
12. Daniel C. Hoessli and **Ishtiaq Ahmad**. (2008) Multifunctional Proteins and Cancer: Mistletoe Lectins in Apoptosis. *Curr Org. chem.* **12**: 918-925. (IF 3.184)
13. Nasir-ud-Din, **Ishtiaq Ahmad**, A.R. Shakoori, and Daniel C. Hoessli. (2008). Developing Protein Structure-Function Relationship *In silico*. *Curr Org. chem.* **12**: 957-971. (IF 3.184)
14. **Ishtiaq Ahmad**, Wajahat M. Qazi, Ahmed Khurshid, Munir Ahmed, Daniel C. Hoessli, Iffat Khawaja, M. Iqbal Choudhary, Abdul R. Shakoori and Nasir-ud-Din. (2008) MAPRes: Mining Association Patterns Among Preferred Amino Acid Residues in the Vicinity of Amino Acids Targeted for Post-translational Modifications. *Proteomics*. **8**: 1954-1958. (IF 4.586)
15. Sebastien Tauzin, Heidrun Ding, Karim Khatib, **Ishtiaq Ahmad**, Dimitri Burdevet, Gerhild van Echten-Deckert, Jonathan A. Lindquist, Nasir-ud-Din, Bettina Borisch and Daniel C. Hoessli. (2008) Oncogenic association of the Cbp/PAG adaptor protein with the Lyn tyrosine kinase in human B-NHL rafts. *Blood*, **111**: 2310-2320. (IF 10.432)

16. Afshan Kaleem, Ahmed Khurshid, Ishtiaq Ahmad, Evelyne Walker-Nasir, Sadia Khan, M. Iqbal Choudhary, A.R. Shakoori and Nasir-ud-Din. (2008). Terminal galactose as cancer recognition marker: Computing analysis with implications of vicinal sugars, linkage and anomery. *Pak. J. Zool.*, **40**: 135-143. (IF 0.189)
17. **Ishtiaq Ahmad**, Wajahat M. Qazi, Daniel C. Hoessli, Evelyne Walker-Nasir, Abdul R. Shakoori and Nasir-ud-Din. (2008) MAPRes: An Efficient Method to Analyze Protein Sequence around Post-translational Modification Sites. *J Cellular Biochem.* **104**: 1220-31. (IF 3.540)
18. **Ishtiaq Ahmad**, Tehmina S. Khan, Daniel C. Hoessli, Evelyne Walker-Nasir, Afshan Kaleem, Abdul R. Shakoori and Nasir-ud-Din. (2008). *In silico* Modulation of HMGN-1 Binding to Histones and Gene Expression by Interplay of Phosphorylation and *O*-GlcNAc Modification. *Protein Peptide Lett.*, **15**: 193-199. (IF 1.281)
19. Afshan Kaleem, Daniel C. Hoessli, **Ishtiaq Ahmad**, Evelyne Walker-Nasir, Wajahat, Anwar Nasim, Abdul Rauf Shakoori and Nasir-ud-Din. (2008) Immediate Early Gene Regulation by Interplay between Different Post-translational Modifications on Human Histone H3. *J. Cellular Biochem.* **103**: 835-851. (IF 3.540)
20. Tasnim. A. Khwaja, Tayyaba Wajahat, **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, Afshan Kaleem, A. R. Shakoori and Nasir-ud-Din. (2008) Modulation of Apoptotic Bcl-2 Proteins by Mistletoe Lectin-1: Functional Consequences of Protein Modifications. *J. Cellular Biochem* **103**: 479-491. (IF 3.540)
21. Saira Anwar Malik, **Ishtiaq Ahmad**, Tehmina Saleem Khan, Abdul Rauf Shakoori and Nasir-ud-Din. (2007). Runx1 transcription repression and stability: Interplay between phosphorylation and *O*-GlcNAc modification. *Pak. J. Zool.*, **39**: 299-309. (IF 0.189)
22. Waqar Ahmad, **Ishtiaq Ahmad**, Afshan Kaleem, Evelyne-Walker-Nasir, Daniel C. Hoessli and Nasir-ud-Din. (2007) Human Histone H1.5: Role of Phosphorylation and Glycosylation in Cell Cycle. *Proc. Pak. Acad. Sci.*, **4**: 85-96.
23. **Ishtiaq Ahmad**, Waqar Ahmad, Evelyne-Walker-Nasir, M. Saleem, Abdul R Shakoori and Nasir-ud-Din. (2007) Histone H1 Sub-types in Mouse: Interplay between Phosphorylation and *O*-Glycosylation. *Pak. J. Zool.* **39**: 245-257. (IF 0.189)
24. Nasir-ud-Din, **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir and M. Iqbal Choudhary. (2007). Glycosylphosphatidylinositol (GPI) Anchored Proteins of *Plasmodium falciparum*: Antigenic Determinants and Role of Sugar Moieties in the GPI anchor. *Curr. Org. Chem.*, **11**: 609-618. (IF 3.184)
25. Evelyne Walker-Nasir, **Ishtiaq Ahmad**, Muhammad Saleem and Daniel C. Hoessli. (2007). Glycosyltransferase and Glypiation Inhibitors. *Curr. Org. Chem.*, **11**: 691-607. (IF 3.184)
26. **Ishtiaq Ahmad**, Daniel C. Hoessli, Ramneek Gupta, Evelyne Walker-Nasir, Saleem M. Rafik, M. Iqbal Choudhary, Abdul Rauf Shakoori and Nasir-ud-Din. (2007). *In silico* Determination of Intracellular Glycosylation and Phosphorylation Sites in Human Selectins: Implication for Biological Function. *J. Cellular Biochem.* **100**: 1558-1572. (IF 3.540)
27. **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, A.R. Shakoori and Nasir-ud-Din. (2006). Interplay between Phosphorylation and Glycosylation Involving Protein Modifications at Hydroxy Amino Acids: Prediction of Signaling Functions of the Human β_3 Integrin Family. *J. Cellular Biochem.* **99**: 706-718. (IF 3.540)
28. **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, Salim M. Rafik, A.R. Shakoori and Nasir-ud-Din. (2006). Oct-2 DNA binding transcription factor: functional consequences of phosphorylation and glycosylation. *Nucleic Acids Res.* **34(1)**: 175-184. (IF 6.878)
29. Tayyaba Wajahat, Afshan Kaleem, **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, Wajahat M. Qazi, Muhammad Saleem, Abdul R. Shakoori and Nasir-ud-Din, (2006). Mammalian Epidermal Growth Factor Receptor: Role of Phosphorylation and Glycosylation. *Pak. J. Zool.* **38**: 85-92.
30. Afshan Kaleem, **Ishtiaq Ahmad**, Tayyaba Wajahat, Daniel C. Hoessli, Evelyne Walker-Nasir, Syed Altaf Hussain, Wajahat M. Qazi, Abdul Rauf Shakoori and Nasir-ud-Din, (2006). Somatic Cell Cycle Regulation by Histone H3 Modifications: Action of OGT and Kinases. *Pak. J. Zool.* **38**: 137-144.
31. Wajahat M. Qazi, Munir Ahmed Daniel C. Hoessli, **Ishtiaq Ahmad**, Iffat Khawaja, Tayyaba Wajahat, Afshan Kaleem, Evelyne Walker-Nasir, Nazim Rahman, A.R. Shakoori, and Nasir-ud-Din., (2006) Consensus sequences as targets for phosphorylation of amino acids in phosphoproteins: Statistical Computing Analysis. *Pak J. Zool.*, **38**: 55-63.
32. **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, A.R. Shakoori and Nasir-ud-Din. (2005). Prediction of Tyr residues involved in autophosphorylation of FLT3 positive leukemias. *Pakistan J. Zool.* **37**: 289-292.
33. **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, Abdul R. Shakoori and Nasir-ud-Din. (2005). Recognition of Protease Binding Site in Bovine Pancreatic RNase B: Role of Thr45 Modification by *O*-GlcNAc, Phosphate and their Interplay. *Pakistan J. Zool.* **37**: 81-86.

34. **Ishtiaq Ahmad**, Evelyne Walker-Nasir, A. R. Shakoori, M. Saleem, Saleem, M. Rafik, Syed Altaf Hussain, and Nasir-ud-Din. (2004). Interplay of Glycosylation and Phosphorylation in Murine Oct-2 Regulates its POU Domain Binding. *Pakistan J. Zool.* **36**: 333-338.
35. **Ishtiaq Ahmad**, Daniel C. Hoessli, Evelyne Walker-Nasir, Ahmad Khurshid, Saleem M. Rafik, Abdul Rauf Shakoori and Nasir-ud-Din. (2004). Protein Modification and Functional Implications for oct-4 in Human Stem Cells. *Pakistan J. Zool.* **36**: 211-217.
36. **Ishtiaq Ahmad**, A.R. Shakoori Ahmed Khurshid and Nasir-ud-Din, (2004). Predicting the Role by Post-translational Modification in Functional Control of Integrins as Model and Integrin Mediated Drug Targeting: an Application of Bioinformatics. *Proc. Islamic Soc. Statist. Sci.* Ed. Munir Ahmad pp. 43-58.
37. A. R. Shakoori, **Ishtiaq Ahmad**, Ahmed Khurshid and Nasir-ud-Din, (2004). Possible Functional Role of Selectins: Prediction Based on Post-translational Modification Sites. *Proc. Islamic Soc. Statist. Sci.* Ed. Munir Ahmad pp. 1-12.
38. Nasir-ud-Din, **Ishtiaq Ahmad**, Ahmad Khurshid, E. Walker-Nasir Fayyaz-ud-Din and A.R. Shakoori, (2004). Evolving New Concepts in Pursuit of Expanding Vision: Bioinformatics as a Source of New Approaches-Combinatorial Metabolism in *Plasmodium falciparum*. *Proc. Islamic Soc. Statist. Sci.* Ed. Munir Ahmad pp. 13-30.
39. **Ishtiaq Ahmad**, M. Ovais, Fayyaz-ud-Din, M. Iqbal Choudhary Abdul Rauf Shakoori and Nasir-ud-Din, (2004). Prediction of the Role of Post-translational Modifications in Processing of Transforming Growth Factor β 1 in *Mus musculus*. *Pakistan J. Zool.*, **36**: 85-88.
40. Nasir-ud-Din, **Ishtiaq Ahmad**, Asma Iqbal, and Daniel C. Hoessli, (2004). Combinatorial Metabolism in *Plasmodium falciparum*-Infected Erythrocyte and Interplay of Glycosylation & Phosphorylation. *Curr. Org. Chem.*, **8**: 453-461. (3.184)
41. M.A. Saeed, **Ishtiaq Ahmad**, Uzma Yaqub, Shazia Akbar, Amran Waheed, Muhammad Saleem and Nasir-ud-Din. (2003-2004). *Aloe vera*: A Plant of Vital Significance. *Science vision*, **9**: 171-183.
42. **Ishtiaq Ahmad**, Evelyne Walker-Nasir, Daniel C. Hoessli, Ahmed Khurshid, A. R. Shakoori and Nasir-ud-Din, (2003). Control of Platelet Aggregation Based on Post-translational Modifications of the Cytoplasmic Domain of Alpha IIb Beta-3 Platelet Integrin. *Pakistan J. Zool.*, **35**: 329-335.
43. Evelyne Walker-Nasir, **Ishtiaq Ahmad**, Daniel C. Hoessli, A. R. Shakoori and Nasir-ud-Din. (2003). Mucin Glycoproteins: A review. *Proc. Pakistan Acad. Sci.*, **40**: 205-232.
44. **Ishtiaq Ahmad**, Ahmad Khurshid, Evelyne Walker-Nasir, Daniel C. Hoessli, Abbas H. Khan, S. Altaf Hussain, Mohammad Ovais, Abdul Rauf Shakoori and Nasir-ud-Din, (2003). Protein Modification Predictions: Interplay between Phosphorylation & Glycosylation in Mammalian Proteins. *Pakistan J. Zool.*, **35**: 221-230.
45. Ahmad Khurshid, **Ishtiaq Ahmad**, Mohammad Ovais, E. Walker-Nasir, A.R. Shakoori and Nasir-ud-Din, (2003). Implications and Applications of Micro Arrays in Glycomics. *Pakistan J. Zool.*, **35**: 259-262.
46. **Ishtiaq Ahmad**, Ahmad, Khurshid, Evelyne Walker-Nasir, Daniel. C. Hoessli, Mohammad Ovais, Muhammad Saleem, Abdul Rauf Shakoori, And Nasir-ud-Din, (2003). Artificial Neural Networks and Protein Modification Predictions: Glycosylation in Mammalian Proteins. *Pakistan J. Zool.*, **35**: 139-149.
47. Evelyne Walker-Nasir, **Ishtiaq Ahmad**, Daniel C. Hoessli, Zafar Saeed, Abdul Rauf Shakoori and Nasir-ud-Din, (2003). Sialic Acid in Health and Disease. *Pakistan J. Zool.*, **35**: 51-67.
48. **Ishtiaq Ahmad**, Daniel. C. Hoessli, Muhammad Saleem, Zafar Seed, Abdul Rauf Shakoori, And Nasir-ud-Din, (2002). Integrins: Cell-Cell and Cell-Matrix Adhesion Molecules-A review. *Pakistan J. Zool.*, **34**: 339-358.
49. **Ishtiaq Ahmad**, Daniel C. Hoessli and Nasir-ud-Din, (2002). Glycoproteins and their Role in Health and Disease. *Proc. Pakistan Acad. Sci.*, **39**: 263-282.
50. **Ishtiaq Ahmad**, Daniel C. Hoessli, M. Iqbal, Choudhary, S. Altaf Hussain, M.A. Ikram, E. Walker-Nasir, A. Khurshid, M. Saleem, Abdul Rauf Shakoori and Nasir-ud-Din, (2002). Mammalian Lectins-A review. *Pakistan J. Zool.*, **34**: 81-99.
51. **Ishtiaq Ahmad**, Daniel C. Hoessli, M. Iqbal Choudhary, Ahmad Khurshid, Muhammad Saleem, S. Altaf Hussain, Abdul Rauf Shakoori and Nasir-ud-Din, (2002). Selectins: Cell-Cell Adhesion Molecules. *Proc. Pakistan Acad. Sci.*, **39**: 97-114.