

Muhammad Ilyas (*PhD*)

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RESEARCH INTERESTS

Translational Genomics, Biomedical Informatics, Personalized Genomics

EDUCATION

Centre of Excellence in Molecular Biology 2015

University of the Punjab, Pakistan

PhD Molecular Biology

Advisors: Prof. Dr. Ziaur Rahman; Prof. Dr. Jong Bhak (South Korea)

EXPERIENCE

Islamia College University Peshawar Dec 2018 – Present

Assistant Professor

Hazara University, Mansehra, Pakistan Jan 2016 – Dec 2018

Assistant Professor

Institute of Neurology, University College London, UK Sep-Dec 2018

Postdoc Research Fellow

Centre for Human Genetics, Mansehra, Pakistan May 2016 – Mar 2018

Director

Harvard Medical School, Massachusetts, USA Jan-Jun 2015

Research Fellow

Personal Genomics Institute, South Korea 2013

Researcher

Korean Bio Information Center, South Korea 2009-2010

Researcher

Centre of Excellence in Molecular Biology, Pakistan 2008-2009

Research Officer

AWARDS

Charles Wallace Fellowship 2018/19

AAAS Sponsorship Award 2015

Higher Education Commission Foreign Fellowship 2014

Research Productivity Award PCST 2012

Best Research Paper Award HEC 2011

PUBLICATIONS (SELECTIVE)

1. Afridi, S.G., Irfan, M., Ahmad, H., Aslam, M., Nawaz, M., **Ilyas, M.** and Khan, A., 2018. Population genetic structure of domain I of apical membrane antigen-1 in Plasmodium falciparum isolates from Hazara division of Pakistan. *Malaria journal*, 17(1), p.389.
2. Batool, Z., Perveen, R., Sheikh, N., Khan, A.A., **Ilyas, M.**, Shahzad, M. and Kaleem, S., 2018. Genetic analysis of 15 autosomal STRs in Yousafzai population of Pakistan. *International journal of legal medicine*, pp.1-2.
3. Wadood, A., Mehmood, A., Khan, H., **Ilyas, M.**, Ahmad, A., Alarjah, M. and Abu-Izneid, T., 2017. Epitopes based drug design for dengue virus envelope protein: a computational approach. *Computational biology and chemistry*, 71, pp.152-160.
4. Tabassum, S., **Ilyas, M.**, Ullah, I., Israr, M., & Ahmad, H. 2017. A comprehensive Y-STR portrait of Yousafzai's population. *International Journal of Legal Medicine*, 1-2.

5. Tabassum S, Ahmad H, **Ilyas M** et al. 2016. Mitochondrial DNA analysis of five Pathan tribes from Pakistan. *International Journal of Biosciences*.8(5):262-273
6. Rahman, Z., Rashid, N., Nawab, J., **Ilyas, M.**, Sung, B.H. and Kim, S.C., 2016. Escherichia coli as a fatty acid and biodiesel factory: current challenges and future directions. *Environmental Science and Pollution Research*, pp.1-12.
7. Halim S, Jawad M, **Ilyas M** et al. 2015. In silico Identification of novel IL-1 inhibitors to target protein-protein interfaces. *Computational Biology and Chemistry*. *Computational Biology and Chemistry*. 58: 158–166
8. **Ilyas M**, Husnain T and Bhak J et al. 2015. Whole genome sequencing of an ethnic Pakhtun from the north-west of Pakistan. *BMC Genomics*. 16:172
9. **Ilyas M**, Sadia S and Halim SA et al. 2015. Functional Annotation of Genomic Variations in Pakistani Population. *Pak J. Zoology*. 47(3): 877
10. **Ilyas M**, Rahman Z, Husnain T and Bhak J. 2014. Pharmacogenomic Profile of a Pakistani Individual. *Sci. Tech. and Dev*. 33 (4): 183-187
11. **Ilyas M**, Sadique S, Masood K, Qamar R, Chohan SN. 2011. The Development of Computational Biology in Pakistan: Still a Long Way to Go. *PLoS Comput Biol*. 7(6).
12. Afzal S, **M Ilyas**, et al. 2011. Envelope 2 protein phosphorylation sites S75 & 277 of hepatitis C virus genotype 1a and interferon resistance: A sequence alignment approach. *Virology Journal*. 8:71
13. Akram M, **M Ilyas**, et al. 2011. Characterization of Hepatitis C Virus genotype 3a Hypervariable region 1 in patients achieved rapid virological response to alpha interferon and Ribavirin Combination therapy. *Virology Journal*. 8:253
14. **Ilyas M**, M Alam, H Ahmad et al. 2009. Awareness regarding bioethical issues among the students & faculty of Hazara University Mansehra, Pakistan. *Pak J M ed Sci*. 25(1):97-102
15. **Ilyas, M.**, Alam, M., & Ahmad, H. 2008. Bioethical Dilemmas in a Pakistani Context. *Eubios Journal of Asian and International Bioethics* 18 (3):93-94
16. **Ilyas, M.**, Alam, M., & Ahmad, H. 2009. The islamic perspective of organ donation in Pakistan. *Saudi Journal of Kidney Diseases and Transplantation*, 20(1), 154.
17. **Ilyas, M.**, Alam, M., Ahmad, H., & Ghafoor, S. (2009). Abortion and protection of the human fetus: religious and legal problems in Pakistan. *Human Reproduction & Genetic Ethics*, 15(2), 55-59.

PRESENTATIONS

1. Trends Shaping the Genomics Revolution. 07-09 February, 2019. Advancements in Biotechnology and Biocomputing. Islamic International University Islamabad, **Pakistan**. *Keynote Speaker*
2. Genealogical Study of the Origin of Pakhtuns. Guest Speaker, 4th June, 2016. Jahanzeb Postgraduate College Swat **Pakistan**. *Invited Speaker*.
3. Pakistan and the Personalized Medicine Era. International Symposium on Advances in Molecular Biology of Plants and Health Sciences from 29-31st December. University of the Punjab **Pakistan**. *Invited Speaker*.
4. Applications of Next Generation Sequencing in Personalized Genomics. NGS Workshop. Centre of Excellence in Molecular Biology, **Pakistan**. September 2015. *Invited Speaker*.
5. Sequencing and analysis of a Pakistani human genome for clinical and evolutionary inference. International Conference on Latest Trends in Biotechnology and Biodiversity; **Dubai**, UAE; August 24-26, 2015
6. Population Genetic Inference from an Individual Genome of Northwest Pakistan. “New England Science Symposium” at Harvard Medical School **Boston USA**. April 11, 2015
7. Screening Copy Number Variation in Pakistani Whole Genomes. 11th Annual Junior Investigators’ Health Disparities Research Meeting at Dana-Farber Cancer Institute, **Massachusetts USA** May 7, 2015
8. Personal Genomics: a case study. Digital Youth Summit 2014 organized by World Bank, Peshawar 2.0 and KP IT Department, **Peshawar**, Khyber Pukhtunkhwa. 21-22 May, 2014. *Invited Speaker*.
9. Metabolic Pathways and Protein-Protein Interaction using Microarray Data. International Microarray Workshop 2014. Centre of Excellence in Molecular Biology, **Lahore-Pakistan**. *Invited Speaker*.

10. Genome-wide analysis of copy-number changes in Pakistani population. “11 Biennial international conference on Molecular Biosciences”. University of the Punjab, **Lahore - Pakistan**.
11. Facilitator at the occasion of distance learning course on “Bioinformatics for Medical Students” organized by ISCB-RSG-**Pakistan** and Pakistan Medical Research Student Society. 29th January-5th February, 2012. *Focal Person*.
12. Bioinformatics Progress in Pakistan. “Basic Bioinformatics Skills” organized by ISCB-RSG-Pakistan, NAYS and GC University, **Faisalabad**. 11th May, 2012. *Focal Person*.
13. Current Status of Bioinformatics in Pakistan. “Bioinformatics Symposium” organized by ISCB-RSG-**Pakistan**. 2011
14. Analysis of Envelope Glycoprotein E epitopes of Dengue Virus-3. A Bioinformatics Approach. 4th Asian Young Researchers Conference on Computational and Omics Biology, **Singapore** 2010
15. Computational Study of Retinaldehyde Binding Protein 1 (RLBP1). “International Symposium 2009, Future Trends in Molecular Biological Research & its Applications in Agriculture and Health” at Centre of Excellence in Molecular Biology, **Lahore**.