

(Short C.V )

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Education

**Academic Visitor (Post PhD Training, Sept; 2005- Sept; 2006) Department of Biology Sir Alexander Fleming building Imperial College of Science Technology and Medicine London SW7 2AZ**

During one year I have been working as an Academic Scientist in the laboratory of Dr Spanu D Pietro at SAFB Imperial London on various molecular aspects of plant biotechnology using various advance techniques such as DNA fingerprinting, AFLP, RT-PCR, SNPs, DGGE, RNAi and gene silencing or/and gene down-regulation

**Ph.D Genetics (Oct 1994 - Nov 1998) Department of Biology Sir Alexander Fleming building Imperial College of Science Technology and Medicine London SW7 2AZ**

Current research is mainly on adaptation to environment for mutation, recombination and gene conversion frequencies in *Sordaria fimicola*, in collaboration with Prof. Nevo at the Institute of Evolution, Haifa Israel and with Dr BC Lamb Imperial College of Science Technology and Medicine London. We know that biological diversity is mainly generated through mutation and recombination. To study the biodiversity we need some way to quantify that, but difficult to measure. We have tested whether mutation, gene conversion and recombination frequencies differed between strains of the fungus, from a harsher and from a milder micro scale environment. We have already established through our research that strains of *Sordaria fimicola* from south facing slope had much higher inherited spontaneous mutation as well as accumulated mutation than the strains from north facing slope. Gene conversion and recombination frequencies for various white mutations from SFS strains are significantly higher than those from NSF strains. These differences are inherited and for mutation persisted for two generation of selfing.

Collective mutation frequencies for ascospore colour mutations were determined over 16 loci. We had extended this work to other loci and are trying various more mutations to see whether such mutation rate provide any basis for natural selection in natural environment or not. Initially the work

was done on all these parameters collaborating with Dr BC Lamb at Imperial College London and now we are looking forward to establishing the molecular basis for gene conversion and mutation rates in naturally isolated strains from benign and as well as from harsh environments.

**DIC from Sir Alexander Fleming Biomedical Section Imperial College London.**

**M.Phil Genetics (Oct 1985 - Oct 1987) Department of Biological Sciences Quaid-e-azam University Islamabad Pakistan**

**M.Sc Botany (1985) with Academic Roll of Honor from Government College, Lahore**

**B.Sc Botany, Chemistry and Zoology (1982) from Government College, Lahore**

Skill

FORTTRAN, BASIC, Good three years working experience of FORTRAN and BASIC, and basic knowledge of C++

Desktop packages:

Word

Excel

PowerPoint

Access

Microgill Origin.

Good six years experience of working with these packages particularly during MPhil and PhD theses writing and in writing up of various educational report, research papers and have used them for the analyses of huge amount of data collected during the stay at Imperial London

**Professor:** Department of Botany, University of the Punjab, Quaid-e-Azam Campus Lahore Pakistan (present post)

**Adjunct Professor:** Institute of Molecular Science and Bioinformatics Lahore Pakistan

**Associate Professor:** Offer from Forman Christian College & University Lahore but did not join.

**Lecturer / Assistant Professor:** I have been working as faculty member since December 1986 and had post and undergraduate teaching experience at Government College, University Lahore and as well as at Imperial College, London and had a chance of supervising various research projects over the years.

**Demonstration at Imperial College, London:** For five years, I have been doing demonstration to post and undergraduate classes at Imperial College London and have been supervising many undergraduate summer research projects and have had experience of supervising main applied genetic final year postgraduate research projects at Imperial. I had also worked as sub-warden in various students' halls during my stay in London.

Interests and activities

Reading, Playing table tennis and cricket

Memberships:

**International advisor:** (BIC' 05)

International symposium on Bio-Inspired-Computing BIC' 05 UTM Johor, Malaysia

Member Pakistan Association for the Advancement of Science

Member Royal College of Sciences Association (RCSA) UK

Member British Genetical Society (MBGS) UK

IMPACT FACTOR 20plus with over 80+ citation

**Professor Bernard C. Lamb Research supervisor Imperial College London**

### **SELECTED PUBLICATIONS, not all**

Afshan Kaleem, Ishtiaq Ahmad, Daniel C. Hoessli, Evelyne Walker-Nasir, Muhammad Saleem, Abdul Raof Shakoori and Nasir-ud-Din. **Epidermal growth factor Receptors: Function modulation by phosphorylation and Glycosylation interplay.** (2008) Molecular Biology Reports (accepted in press)

Ishtiaq Ahmed, Waqar Ahmed, Evelynhe Walker-Nasir, M. Saleem, Abdul Rauf Shakoori and Nasir-ud-Din. **Histone H1 Sub-types in Mouse: Interplay between phosphorylation and O-glycosylation.** *Pakistan J. Zool.*, 39: 245-57 2007

Evelynhe Walker-Nasir, Ishtiaq Ahmad, Muhammad Saleem and Nasirud-Din. **Glycosyltransferase and Glypiation Inhibitors**, *Curr. Org. Chem.* 11: 591-607, 2007

Afshan Kaleem, Tehmina saleem Khan, Waqar Ahmed, Muhammad Saleem, Abdul Rahman khawaja, Syed Altaf Hussain, Abdul Rauf Shakoori and Nasir ur din Post-translational modifications of Non-histone high mobility group nucleosomal proteins. *Pakistan J. Zool.*, 39(1): 57-64, 2007

Tayyaba Wajahat, Afshan Kaleem, Ishtiaq Ahmad, Daniel C. Hoessli, Evelyne Walker-Nasir, wajahat M. Qazi, Muhmmad Saleem, Abdul Rauf Shakoori and Nasir-ud-Din. **Mammalian Epidermal Growth Factor Receptor: Role of Phosphorylation and Glycosylation.** *Pakistan J. Zool.*, 38(2): 85-92, 2006-07

**\*\*Bernard C. Lamb and Muhammad Saleem, Responses to selection for postmeiotic segregation frequencies in *Ascobolus immersus*. Genetical research, 81: 7-13, 2003 (Cambridge UK)**

M. Sabeen, R. Arif, S. M Ghouri, J. S. Baig, Syed. Q and M. Saleem, Bioreactor studies on the production of Bacitracin by mutant strain of *Bacillus licheniformis* BLS-NTTG 04, *Science International* 17(3): 245-250, 2005

**\*Ishtiaq Ahmed, Evelyne Walker-Nasir, A. R. Shakoori, M. Saleem, M. Saleem Rafik, Syed altaf hussain, and Nasir-ud-din, Interplay of Glycosylation and Phosphorylation in Murine Oct-2 regulates its POU Domain Binding Pakistan journal of Zoology 36(4) 333-338, 2004**

R. Arif, J. S. Baig, Syed. Q and M. Saleem, Solid – State fermentation for the production of Bacitracin by mutant strains of Bacillus licheniformis Science International 16(4) 283-285 2004

M. Sabeen, R. Arif, M. S. Ghouri, J. S. Baig, Syed. Q and M. Saleem, Optimization of cultural condition for the production of Bacitracin by Bacillus licheniformis BLS 13 Science International 16(4) 295-299 2004.

S. Mushtaq, M. Saleem and S. W. Hassan, Transformation of PHY B gene in potato (Solanum tuberosum) cultivar desiree Pakistan journal of scientific research 3(4) 34-38, 2003

**\*\*Muhammad Saleem, Bernard C. Lamb and Eviatar Nevo, Inherited differences in crossing-over and gene conversion frequencies between wild strains of Sordaria fimicola from "Evolution Canyon" Genetics 2001,159, 1573-1593 (USA)**

**\*Lamb, B. C., Zisis Kozlakidis, M. Saleem, Inter-strain cross-fertility tests on cultures from Israel, America and Canada in the homothallic fungus, Sordaria fimicola. Fungal Genetic Newsletter, 47, 69-71 2000 (USA)**

**\*\*Lamb, B.C., M. Saleem, W. Scott, N. Thapa, and E. Nevo, Inherited and environmentally induced differences in mutation frequencies between wild strains of Sordaria fimicola from "Evolution Canyon", Genetics 1998, 149, 87-99 (USA)**

**\*Ishtiaq Ahmed, Ahmed Khurshid, EvelyneWalker-Nasir, Daniel C Hoessli, Muhammad Ovais, Muhammad Saleem A R Shakoor and Nasir ur din Artificial Neural Networks and protein modification predictions: Glycosylation in Mammalian proteins Pakistan Journal of Zoology, 35(2): 139-149, 2003**

**\*Ishtiaq Ahmed, Daniel C Hoessli, M Iqbal Ch, Ahmad khurshid, Muhammad Saleem, Syed A. Hussain, Abdul Raof Shakoor and Nasir ur din Review: Selectins: Cell-cell Adhesion Molecules Proc. Pakistan Acad. Sci. 39(1): 97-114, 2002**

**\*Ishtiaq Ahmed, Daniel C Hoessli, M Iqbal Ch, M Saleem A R Shakoor and Nasir ur din Review: Mammalian Lectins Pakistan Journal of Zoology, 34(2): 81-99, 2002**

**\*Ishtiaq Ahmed, Daniel C Hoessli, M Iqbal Ch, M Saleem A R Shakoor and Nasir ur din Review: Integrins Pakistan Journal of Zoology, 34(4): 339-358, 2002**

Bushra Tabassum, Muhammad Saleem, Tasnim Kausar and S. Hussain, Biodegradation of Agrowaste by Trichoderma viride mutants Science International, 15(1): 95-99, 2003

Talat Taskeen, S. W. Hussain and Muhammad Saleem, Study of variation in agronomic traits among rice cultivars Science International, 15(3): 299-302, 2003

**Z. A Chishti, S, W Hussain, S. S Mehdi and M. Saleem, Study of variation in agronomic traits among cotton cultivars Pakistan Journal of Scientific Research, 54 (3-4): 301-304 2002**

**S. Kokab, M. Saleem and S. Baig, Protease production by wild strains of Lactobacillus spp. Pakistan Journal of Science, 54 (3-4): 81-87, 2002**

**Muhammad Saleem, Waseem Hussan Syed, Muhammad Akram shahid, Qasiar M. Khan and M Anwar-ul-Haq, Study of antimutagenic properties of Turmeric (Curcuma longa) by AMES test (plate incorporation inhibition assay) Science International, 14(4) 313-318, 2002**

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