

Altaf Ahmed Simair, (Ph.D.)

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Hyderabad, Sindh, Pakistan.
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Summary

Doctoral-level experience in fermentation process development, scale-up of an enzyme, and biofuel production. Hands-on experience with statistical experimental design and analysis. Excellent analytical and problem-solving skills with strong communication and technical leadership ability.

Specialities

- Microbial fermentation & physiology (Bacteria and fungi)
- Different modes of fermentation (aerobic/anaerobic): Batch and fed-batch
- Bioreactor operation (5mL-50L) including feedback control programming
- Scale-up/down and Tech transfer; fermentation pilot plant design
- Downstream processing including disk-stack centrifuge and Ultra-filtration
- Standard purification techniques
- Protein purification and kinetics
- Recombinant D.N.A./Gene Cloning
- Transformation
- Genome analysis/Fingerprinting
- Protein structure/function/stability relationships
- Medicinal plants and their role in human welfare
- Metabolite analysis
- Bio-informatics
- Structural Biology

Education

- Ph.D., (Bio-Technology), February 12, 2013
Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro, Sindh, Pakistan
- M.Sc., Plant Sciences, 1994-95
Shah Abdul Latif University Khairpur Mir's Sindh, Pakistan.
- B.Sc., (Botany, Zoology, Chemistry), 1992-93
Shah Abdul Latif University Khairpur Mir's Sindh, Pakistan.

Professional appointments

March 10, 1997

Lecturer

Department of Botany, Government Degree College & Postgraduate center, Ghotki.
February 15, 2005, to October 30, 2014

Lecturer and Assistant Professor

Department of Botany, Government College & Postgraduate center, Hyderabad.
November 1, 2014, to October 30, 2016

Post-Doctoral Research Fellow

Biochemistry and molecular biology, Nucleic acid and structural biology group College of

Chemistry, Bio-Engineering and Biotechnology, **Donghau University, Shanghai, China**

April 18, 2018, to onwards

Assistant Professor

Chairman,

Department of Botany, G.C. University, Hyderabad, Sindh, Pakistan.

<https://www.gcu.edu.pk/pages/botany>

August 25, 2023

Professor

Chairman,

Department of Botany, G.C. University, Hyderabad, Sindh, Pakistan.

Services:

Chairman,

Department of Botany,
GC University, Hyderabad

Chairman,

Board of Studies
Department of Botany,
GC University, Hyderabad

Member, Academic Council

Department of Botany,
GC University, Hyderabad

Member Advisory Council,

GC University, Hyderabad
https://gcu.edu.pk/adv_concil

Controller of Examinations

GC University, Hyderabad GC University, Hyderabad

Author of Biology textbooks 9-10th classes, Sindh Textbook Board Jamshoro.

<http://ebooks.stbb.edu.pk/english/class-x>

Author of Biology textbooks 11-12th Intermediate classes, Sindh Textbook Board Jamshoro.

Teaching experience at different levels from College to university at both national and international levels.

Research Grants/Projects

- General Financial Grant from the China Postdoctoral Science Foundation No. 2015M571456

Member Scientific Committee

- Biotechnology Summit, October 08-10, 2014, University of Del Mar, Huatulco, Mexico.

Editorial Member

- **SciFed Journal of Chemical Research** <http://scifed.com/journal-of-chemical-research/editorial-board.php>
International Journal of Vaccines and Technologies
<http://clytoaccess.com/international-journal-vaccines-and-technologies>
- **Pakistan Journal of Biotechnology** http://pjbt.org/pages/Editorial_Board.html
- **M.O.J. Immunology** <http://medcraveonline.com/MOJI/editorial-board>
S.M. Journal of Bioprocessing & Biotechniques
<http://smjournals.com/bioprocessing-biotechniques/editorial-board.php>

Member Review Committee

- The member review committee of national and international peer-reviewed journals

Participation in Conferences & Symposia

1. International Symposium on genetics and human phenomics held on May 11-13, 2016, organized by Fudan University, Shanghai, China
2. International Metabolic Engineering Society (IMES) organized Metabolic Engineering Summit (ME Summit 2015) held on November 30 to December 2, 2015, at Beijing Conference Center, Beijing, China.
3. Pak-China Joint Symposium on Applications of Biotechnology in Plant and Animal Sciences' June 27-28, 2012, organized by Sindh Agricultural University Tandojam, Pakistan.
4. 5th International Symposium on Biotechnology (IBS-2009) was held on October 4-7, 2009, at the Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro.
5. 4th International Symposium on Biotechnology and 1st Pakistan-China-Iran International Conference on Biotechnology Bioengineering-Biophysical Chemistry (ICBBBC'07) November 4-8, 2007 at Institute of Biotechnology and Genetic Engineering, University of Sindh, Jamshoro.
6. 3rd International Symposium on Biotechnology held on December 15-18, 2005, at the Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro
7. Second International Symposium in Biotechnology, held on January 19-21, 2005, at IBGE, Institute of Biotechnology & Genetic Engineering, University of Sindh, and Jamshoro.

Participation in National & International Workshops and Short Training Courses (Awards and Travel Grants)

1. Workshop on "Biosafety Awareness" organized by The Pakistan Biological Safety Association (PBSA), Islamabad (Sindh Chapter), and Fogarty International Center, National Institute of Health, U.S.A. held on December 28-30, 2017 at Liaquat University of Medical and Health Sciences, Jamshoro, Sindh, Pakistan.
2. Food Biotechnology Training Course for Developing Countries "Food Biotechnology: Research frontiers and practical training" held on November 26 to December 2, 2015, at CAS-TWAS Centre of Excellence for Biotechnology (CoEBio) **Beijing, China**
3. Workshop on "Molecular Biology Techniques Related to Infectious/Genetic Diseases and Human Identification" held on July 6-17, 2015 at Molecular Medicine Unit, University of Kelaniya, **Ragama, Sri Lanka**
4. Food Biotechnology Training Course for Developing Countries "Unraveling the Complexity of Mixed Cultures in Food Fermentations" held on November 15-19, 2014 at CAS-TWAS Centre of Excellence for Biotechnology (CoEBio) **Luzhou, Sichuan, China**
5. Workshop on Biotechnological Techniques "Methods for Studying Protein-Protein Interactions" held on October 29, 2012, to November 09, 2012, at International Centre for Genetic Engineering and Biotechnology, ICGEB Campus **New Delhi, India.**
6. Workshop on Biotechnological Techniques "Molecular Techniques in Bioenergy" held on October 08-17, 2012 at International Centre for Genetic Engineering and Biotechnology, ICGEB Campus **New Delhi, India**
7. Training course on Biotechnological Techniques held on December 11-14, 2006, at Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro
8. Training course on Biotechnological Techniques held on June 27 to July 1, 2005, at Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro

Member Scientific Societies

1. Botanical Society of Pakistan
2. Pakistan Biological Safety Association (Lifetime Member)
3. American Society of Microbiology

Oral Presentation

1. The screening for culture conditions of Xylanase production by white-rot fungus *Pleurotus eryngii*", 4th International Symposium on Biotechnology, and 1st Pakistan-China-Iran International Conference on Biotechnology Bioengineering-Biophysical Chemistry (ICBBBC'07) November 4 – 8, 2007 at Institute of Biotechnology and Genetic Engineering, University of Sindh, Jamshoro.
2. Production of Xylanase by *Pleurotus eryngii* & *Flammulina velutipes* grown on different carbon sources under submerged fermentation" 5th International Symposium on Biotechnology (IBS-2009) October 4-7,2009 at Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro.
3. Characterization of crude Xylanase produced by edible mushroom *Pleurotus eryngii*. 7th Asia-Pacific Biotech Congress July 13-15, 2015 Beijing, China. <http://www.biotechnologycongress.com/asia-pacific/speaker/2015/simair-a-alfat-donghua-universityshanghai-china>

Book chapter published

1. **Simair, Altaf Ahmed, and Sippy Pirah Simair.** "Status and Recent Progress in Determining the Genetic Diversity and Phylogeny of Cotton Crops." In: Wang, H., Memon, H. (eds) Cotton Science and Processing Technology. (2020): 15-37. https://link.springer.com/chapter/10.1007/978-981-15-9169-3_2
2. **Simair, Sippi Pirrah, Nuzhat Baladi, Hanur Meku Yesuf, Simair, Altaf Ahmed.** (2023). Emerging market trends: The cultural designs printed with digital printing technology: Overview of Ajrak design. In: Wang, H., Memon, H. (eds) Cotton Science and Processing Technology. <https://doi.org/10.1016/C2022-0-01196-X>
3. **Hanur Meku Yesuf, Qin Xiaohong, Abdul Khaliq Jhatial, Pardeep Kumar Gianchandani, Amna Siddique, Altaf Ahmed Simair.** (2023). Digital Printing Technology and Ink Jet Mechanisms. In: Wang, H., Memon, H. (eds) Cotton Science and Processing Technology. <https://doi.org/10.1016/B978-0-443-15414-0.00005-4>

Research Articles Published

1. **Bioprocess optimization for pectinase production in a submerged cultivation system using various filamentous fungi.** Ghulam Sughra Mangrio, Altaf Ahmed Simair, Nadia Mangrio, Sippi Pirah, Asma Asghar, Bharat Kumar, Muhammad Umar Dahot. Journal of Applied Research in Plant Sciences, in Vol. 4 No. 1 (2023).
2. Effect of planting and bud placement position on agronomical and physiological traits of sugarcane (*Saccharum officinarum* L.). Mangrio N, Mari N, Mangrio GS, Soomro ZA, **Simair AA**, Kumar B. SABRAO J. Breed. Genet. 54(2): 437-446. (2022) <http://doi.org/10.54910/sabrao2022.54.2.19> Impact factor (1.414)

3. "Nutrient Media Optimization for Date Palm Micropropagation (Phoenix Dactylifera L.)". Mangrio, Ghulam Sughra, **Altaf Ahmed Simair**, Shumiala Tabassum, Bharat Kumar, and Nadia Mangrio. *Pakistan Journal of Biochemistry and Biotechnology* 2 (2):87-96. (2021) <https://doi.org/10.52700/pjbb.v2i2.48>.
4. Evaluation Assay of Lactic Acid Bacteria in Commercial Yogurt Consumed in Pakistan. Abdul Sami Dahri, Asim Patrick, Nasirudin Shaikh, Jamaluddin Mangi, Asif Ali Bhatti, and **Altaf Ahmed Simair**. *Pak. J. Biotechnol.* Vol. 17 (3) 149-153 (2020)
5. Intein-Mediated Recombinant Expression of Monomeric B22Asp desB30 insulin. Ting Chen, Minmin Zhang, Helong Hao, Shunyi He, Yunlong Zhang, **Altaf A. Simair**, Geoffery W. Siegel and Changrui Lu, *B.M.C. Biotechnology* 20, 3 (2020) <https://doi.org/10.1186/s12896-020-0598-3> **Impact factor** (3.25)
6. **M. A Shaheen, W. Xiao, M. Saleem, Altaf Simair, and Changrui Lu. Synthesis and Antibacterial Evaluation of Cu (II), Co (II) and Mn (II) Complexes with Schiff Bases Derived from 5-Aminosalicylic acid and o-Vanillin. Russian Journal of General Chemistry 2019,89(8):1691-1695. Impact factor (0.779)**
7. HU Wen-wen, **Altaf Ahmed Simair**, CHEN Ting, ZHANG Yun-long and LU Chang-rui. Recombinant Expression, Purification of a Human CBX7 Functional Domain. *Life Science Research*, 2019, 23 (02): 92-99.
8. YANG Zhuo-ru, ZHANG Min-min, C.A.I. Ru-jie, ZHANG Han-xiao, GUAN Jun-hao, **Altaf Ahmed Simair** and LU Chang-rui. The X-ray small angle scattering analysis of the CR4/5 domain of human telomerase R.N.A., *Journal of Biology* 2018, 35(04):97-99.
9. Kanwal, Fariha, Ting Chen, Yunlong Zhang, **Altaf Simair**, and Changrui Lu. "A Modified In Vitro Transcription Approach to Improve R.N.A. Synthesis and Ribozyme Cleavage Efficiency." *Molecular biotechnology* (2019): 1-8. **Impact factor** (2.860)
10. Kanwal, Fariha, Ting Chen, Yunlon Zhang, **Altaf Simair**, Cai Rujie, Xinhang Guo, Xiaolong Wei, Geoffrey Siegel, and Changrui Lu. "Large-scale in vitro transcription, R.N.A. purification and chemical probing analysis." *Cellular Physiology and Biochemistry* 48, no. 5 (2018): 1915-1927. **Impact factor** (5.5)
11. Abro, Zamir Ahmed, Nanliang Chen, Zhang Yifan, Hong Cheng-Yu, Abdul Malik Rehan Abassi, **Altaf Ahmed Simair**, Rafique Ahmed, and Azmat Hussain. "Investigation on Thermal Comfort Characteristics of Regenerated Bamboo and Cotton Woven Structured Fabrics." *Autex Research Journal* 18, no. 4 (2018): 323-329. **Impact factor** (1.944)
12. **Simair, Altaf Ahmed**, Abdul Sattar Qureshi, Sippy Pirah Simair, Imrana Khushk,

Sergey P. Klykov, Chaudhry Haider Ali, and Changrui Lu. "An integrated bioprocess for xylanase production from agriculture waste under open non-sterilized conditions: Biofabrication as fermentation tool." **Journal of cleaner production** 193 (2018): 194-205. **Impact factor** (11.072)

13. Production, Purification and Partial Characterization of Organo-Solvent Tolerant Protease from Newly Isolated Bacillus sp. BBXS-2. Abdul Sattar Qureshi1, **Altaf Ahmed Simair**, Chaudhry Haider Ali, Imrana Khushk, Jawaid Ahmed Khokhar, Ayyaz Ahmad, Muhammad Danish and Changrui Lu. **Fermentation Technology** 2018, 7(1): 151. DOI:10.4172/2167-7972.1000151
14. Fruit Waste to Energy through Open Fermentation. Abdul Sattar Qureshi, Imrana Khushk, Salman Raza Naqvi, **Altaf Ahmed Simair**, Chaudhry Haider Ali, Muhammad Naqvi, Muhammad Danish, Ayyaz Ahmed, Hamid Majeed, Abdul Nabi Mir Jatt, Mohammad Rehan and Abdul-Sattar Nizami, **Energy Procedia**, Volume 142, December 2017, 904–909 **Impact factor** (2.63)
15. Molecular Cloning and In Silico Analysis of hIL-6 Gene from Pakistani Dengue Hemorrhagic Fever Patients, Fariha Kanwal, **Altaf Ahmed Simair**, Ting Chen, Yun Long Zhang, Ishtiaq Qadri, Changrui Lu, **M.O.J. Immunol** 5(5): 00170. DOI: 10.15406/moji.2017.05.00170
16. **Simair, Altaf**, Imrana Khushk, Abdul Qureshi, Muhammad Bhutto, Haider Chaudhry, Khalil Ansari, and Changrui Lu. "Amylase Production from Thermophilic Bacillus sp. BCC 021-50 Isolated from a Marine Environment." **Fermentation** 3, no. 2 (2017): 25. **Impact factor** (5.123)
17. Impact of grazing on plant biodiversity of desert area of District Khairpur, Sindh, Pakistan. Khalil Ahmed Ansari, Abdul Rahim Malik, Abdul Razak Mahar, **Altaf Ahmed Simair**, and Ameer Ahmed Mirbahar, **The Journal of Animal and Plant Sciences (JAPS)** 27(6): 1931-1940 December (2017) **Impact factor** (0.61)
18. Study of nutrient media components and cultivation conditions of *Bacillus licheniformis* ABCC-02-50 for protease production using molasses as energy source. Imrana Khushk, Safia Bano, Abdul Sattar Qureshi, Muhammad Aqeel Bhutto, **Altaf Ahmed Simair** and Abdul Nabi Jatt, **International Journal of Research**. 4(06): 552-562 May (2017)
19. Prediction of the Structure of Full-length Human Telomerase R.N.A. with SHAPE (Selective 2'-hydroxyl Acylation Analyzed by Primer Extension) Xiaoqi QI, Yunlong ZHANG, Ting CHEN, **Altaf Ahmed SIMAIR**, Minmin ZHANG, Zhuoru YANG and Changrui LU, **Agricultural Biotechnology**, 2017, 6(01): 55-57

20. Optimization of R.N.A. Secondary Structure Prediction with SHAPE (Selective 2' - hydroxyl Acylation Analyzed by Primer Extension) Jun ZHENG, Rujie C.A.I., **Altat SIMAIR**, Ting CHEN, Yunlong ZHANG, and Changrui LU, **Agricultural Biotechnology**, 2017, 6(01): 52-54
21. Characterization of crude proteases of Bacillus subtilis EFRL 01. Abdul Sattar Qureshi, Imrana Khushk, Yusuf Chisti, Muhammad Aqeel Bhutto, **Altat Ahmed Simair** and Muhammad Umar Dahot, **International Journal of Scientific and Engineering Research**. 8(4) April (2017)
22. Production and partial characterization of α -amylase enzyme from Bacillus sp B.C.C. 01-50 and potential applications. **Altat Ahmed Simair**, Abdul Sattar Qureshi, Imrana Khushk, Safia Bano, Muhammad Aqeel Bhutto, Ghulam Sughra Mangrio, Haider Ali Chaudhry, Changrui Lu, **BioMed Research International**. Volume 2017, Article ID 9173040, 9 pages <https://doi.org/10.1155/2017/9173040> **Impact factor** (3.246)
23. **Characterization of crude xylanases produced by edible mushroom Pleurotus eryngii. Simair A. Altat, Mangrio G. Sughra, Thebo K. Nasreen, Dahot M. Umar, Mangrio, M. Sher, Khaskheli M. Noor-e-Saba, Raja K. Fariha and Changrui L. J Bioprocess Biotech 2016, 6:2 <http://dx.doi.org/10.4172/2155-9821.1000268>**
24. Antifungal potential and antioxidant efficacy in the shell extract of Cocos nucifera (L.) (Arecaceae) against pathogenic dermal mycosis. Nasreen Khalid Thebo, **Altat Ahmed Simair**, Ghulam Sughra Mangrio, Aijaz Ali Bhutto, Wazir Ali Sheikh and Changrui Lu. **Medicines** 3, no. 2 (2016): 12. doi:10.3390/medicines3020012 (PUBMED)
25. Impact of Climatic Behavior on Cotton Fibre Traits. Muhammad Ilyas Sarwar, Azmat Hussain, Danish Iqbal, Zamir Ahmed Abro, **Altat Ahmed Simair**, Khalil Ahmed Ansari **International Journal of Research**. 3(13) September (2016)
26. Clinical study of the Prunus dulcis (Almond) shell extract on Tinea capitis infection. Nasreen Thebo, **Altat Simair**, Wazir Sheikh, A.R Abbasi, A. Jabbar Laghari, M. Hassan Nizamani. **Natural Products Chemistry & Research** vol. 2(3) April (2014) ISSN: 2329-6836 NPCR, an open-access journal <http://dx.doi.org/10.4172/2329-6836.1000131>
27. Estimation of gene action for fibre traits in upland cotton. Zahoor Ahmed Soomro, **Altat Ahmed Simair**, Ghulam Sughra Mangrio, Naqib-Ullah Khan and Saeed Hyder Ghaloo. **International Journal of Scientific and Engineering Research**. 6(1) January (2015) <https://doi.org/10.14299/ijser.2015.01.021>
28. Determination of fatty acids and elements from Coconut (Cocos nucifera) shell. Nasreen K. Thebo, **Altat A. Simair**, Wazir A. Sheikh, Sher M. Mangrio, Pirkash L Nagni, Sughra G. Mangrio and Hassan M. Nizamani. **Pak. J. Biotechnol.** 11 (1) 33 – 40 January (2014) ISSN PRINT 1812-1837 ISSN ONLINE 2312-7791

29. Evaluation and selection of bread wheat genotypes grown under different environments. Soomro A. Zahoor, **Simair A. Altaf**, Mangrio G. Sughra and Tunio H. Tanveer. **Int. Biotechnol. Color J.** 4(1): 8-14 February (2014)
30. In Vitro Regenerability of different Sugarcane (*Saccharum officinarum* L.) varieties through Shoot tip culture. Mangrio G. Sughra, **Simair A. Altaf**, Rind M. Rafique, Mangrio S. Muhammad, Shereen N. Rind Balouch and Dahot M. Umar. **Pak. J. Biotechnol.** Vol. 11(1) 13-23 January (2014) ISSN PRINT 1812-1837 ISSN ONLINE 2312-7791
31. Comparison of different doses of Plant Growth Hormones on Callus induction and Regeneration in Sugarcane. **Simair A. Altaf**, Mangrio G. Sughra, Wain M. Shahbaz, Thebo K. Nasreen, Mangrio Sher M. and Dahot M. Umar. **Pak. J. Biotechnol.** 10 (1) 21-25 January (2013) ISSN1812-1837
32. The effect of Sugar and different Growth Regulators on the Tuberization of Potato (*Solanum tuberosum* L.) **Simair A. Altaf**, Mangrio G. Sughra, Rajpar A. Suhail, Mangrio S. Muhammad and Dahot M. Umar. **Sindh Uni. Res. Jour.** (Sci. Ser.) Vol. 45 (2) 429-432 July (2013)
33. Use of molasses as a carbon source for the growth of Fungi and production of pectinase Mangrio G. Sughra, Dahot, M. Umar and **Simair, A. Ahmed.** **Pak. J. Biotechnol.** 10 (2) 63–73 June (2013) ISSN1812-1837
34. Production of Xylanase Enzyme by *Pleurotus eryngii* and *Flammulina velutipes*. Grown on Different Carbon Sources under Submerged Fermentation. **Simair A. Altaf**, Dahot M. Umar and Mangrio S. Muhammad. **World Applied Sciences Journal** 8 (Special Issue of Biotechnology & Genetic Engineering): 47-49 (2010) ISSN 1818-4952 © IDOSI Publications
35. Enhancing Effect of Amino Acids and Vitamins on Xylanase Production by *Pleurotus Eryngii* through Submerged Fermentation. **Altaf A. Simair**, M. U. Dahot, G. Sughra Mangrio, S. M. Mangrio, J. H. Xu and J. J. Zhong. **Pak. J. Biotechnol.** 7 (1-2) 123-126 June (2010) ISSN1812-1837
36. Growth and Yield Response of Zea Maize to Different Treatments of Biofertilizers. Mangrio G. Sughra, **Altaf A. Simair**, M. Umar Dahot and A. Jurio Khaskheli. **Pak. J. Biotechnol.** Vol. 7(1-2) 109- 115 June (2010) ISSN1812-1837
37. Screening of Wheat Genotypes for Water Stress Tolerance. Mahboob Ali Sial, M. Umar Dahot, S.M. Mangrio, M.A. Arain, Khalil A. Laghari and Altaf A. Simair. **Pak. J. Biotechnol.** 7 (1-2) 137 – 143 June (2010) ISSN1812-1837
38. Production of Xylanase by *Flammulina velutipes* grown on different carbon sources, M.Umar Dahot, **Altaf Ahmed Simair** and S.M. Mangrio. Proceedings of the 17th Congress of the International Society for Mushroom science, Cape Town, South Africa, 20-24-page no. 833-841 May (2008)

Papers submitted for publication

1. Fermentation of Xylanase obtained by enzymatic saccharification of pretreated agricultural waste using brown-rot fungus *Flammulina velutipes*, **Altaf Ahmed Simair**, Abdul Sattar Qureshi, Sippy Pirah Simair, Ghulam Sughra Mangrio, Fariha Kanwal Raja, Changrui Lu, Sher Muhammad Mangrio, Muhammad Umar Dahot. **Bioresource Technology** (UNDER REVIEW)
2. Prevalence of vitamin D deficiency and its association with the progression of liver diseases in hepatitis B virus (HBV) and hepatitis C virus (HCV) infections. Farhatullah Kandhro, Muhammad Umar Dahot, Syed Habib Ahmed Naqvi, Ikram Uddin Ujjan, Nisar Ahmed Khokhar, Nasiruddin Shaikh, and Altaf Ahmed Simair (Medicina Clínica-Journal-Elsevier) (under Review)
3. Studies on the Elemental composition and antifungal potential of shell extract (*Arachis hypogaea* L) against dermal mycosis, Nasreen K. Thebo, **Altaf A. Simair**, Wazir A. Sheikh and Sher M. Manghrio. **Journal of Advanced Chemical Engineering** (Submitted)
4. Chemical Composition and Antioxidant Activity of the Roots Oils of *Indigofera heterantha*, Muhammad Aurang Zeb, Muhammad Sajid, Taj Ur Rahman, Altaf Ahmed Simair

Poster Presentation

1. Xylanase production from *Pleurotus eryngii* with alternate carbon and nitrogen sources, in 3rd International Symposium on Biotechnology, held on December 15-18, 2005, at the Institute of Biotechnology & Genetic Engineering, University of Sindh, Jamshoro.
2. Role of the chromobox protein CBX7 in carcinogenesis. International symposium on genetics and human phenomics was held on May 11-13, 2017, organized by Fudan University, Shanghai, China.
3. An elevated human IL-6 expression profile through Dengue virus infection: cloning and sequence analysis of its gene for therapeutics, International Conference on Medical Textiles & International Forum on Biomedical Textile Materials, Donghua University, Songjiang Campus, Shanghai, China Wednesday-Friday May 17-19, 2017.

Papers under preparation

1. Xylanase production by white-rot fungus *Pleurotus eryngii* grown on optimized culture conditions. Simair. A. Altaf, Dahot M. Umar, Mangrio S. Muhammad and Jian Jiang Zong.
2. Coproduction of pectinase and lipase from mutant *Penicillium expansum* CMI 39761 under open fermentation conditions using fruit waste as energy source, Abdul Sattar Qureshi, Imrana Khushk, Altaf Ahmed Simair, Chaudhry Haider Ali, Muhammad Naqvi, Muhammad Danish, Ayyaz Ahmed, Hamid Majeed and Abdul Nabi Mir Jatt.

Abstract Published

1. Production of Xylanase by *Flammulina velutipes* grown on different carbon sources, M.Umar Dahot, Altaf Ahmed Simair and S.M. Mangrio, International Journal of medicinal mushrooms
2. Xylanase production by white-rot fungus *Pleurotus eryngii* grown on optimized culture conditions, Simair. A. Altaf, Dahot M. Umar, Mangrio S. Muhammad and Jian Jiang Zong. Journal of Biotechnology 136S (2008) S292.
3. Characterization of crude xylanases produced by edible mushroom *Pleurotus eryngii*. Altaf Simair, Muhammad Umar Dahot, S.M. Mangrio and Jian Jiang Zong, *J. Iran. Chem. Soc.*, Vol. 6, Suppl., November 2009, pp. S230-S237.
4. Role of the chromo box protein CBX7 in carcinogenesis, Simair, Altaf Ahmed and Lu, Changrui, 2015. Proceedings of the International Workshop on Molecular Biology Techniques Related to Infectious/Genetic Diseases & Human Identification, Molecular Medicine Unit, Faculty of Medicine, University of Kelaniya, Sri Lanka. <http://repository.kln.ac.lk/handle/123456789/8788>

Techniques

- Gel electrophoresis: Agarose, PAGE
- Gel Chromatography
- Spectrophotometry
- Protein purification and kinetics
- Tissue culture
- T.A. cloning of PCR products and constructs.
- RNAi based vector construction.
- Agrobacterium-mediated transformation method.
- Biolistic gun mediated Genetic Transformation (*in-vitro* & *in-vivo*) method.
- Analysis of transgene copy numbers, expression, and its segregation
- D.N.A. - PCR based techniques
- Southern blot analysis: Radioactive/non-radioactive probing
- Protein - Western analysis: Radioactively labeled probing; HPLC and S.D.S-PAGE

Computer Skills

- Microsoft Office, Statistical packages for analysis of data (CoStat-American Statistics Software)
- Gel documentation and gel analysis.
- Genetic data analysis via R.A.P. Distance, Phylip 3.5 and other routine programs.
- Application of NCBI database for characterization of non-homologous D.N.A.
- Skills in using the programs Clustal X and Treeview, D.N.A. star (Edit sequence, Seq man, Gene, Map draw, Meg Align, Primer Select).
- pDraw32 1.1.101 ACOCLONE software (Map designing and orientation, used for restriction analysis, pen reading frames finding)
- Proficient in M.S.- Word, PowerPoint, and M.S.- Excel.

Referees

Muhammad Umar Dahot, (Ph.D.)

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Changrui Lu, (Ph.D.)

Professor & Deputy Dean, Director
of Research Laboratories, Principal
Investigator,
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