

CURRICULUM VITAE

SYED GHULAM MUSHARRAF

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Academics:	Post Doctoral Fellow	2005-2006
	Prof. Dr. Gunther Bonn Institute of Analytical and Radiochemistry University of Innsbruck Austria	
	Ph.D. (Organic Chemistry)	2004
	H. E. J. Research Institute of Chemistry University of Karachi, Karachi, Pakistan	
	Thesis Title: "Microbial Transformation of Bioactive Cyclic Natural Products."	
	M.Sc. (Organic Chemistry) (1st Division)	1998
	University of Karachi, Karachi, Pakistan	
	Thesis Title: "Glibenclamide and Cephadrine Metal Interactions."	
	B.Sc.Hons. (Chemistry, Biochemistry, Botany) (1st Division)	1997
	University of Karachi, Karachi, Pakistan	
	H. S. C. (Chemistry, Biology, Physics) (69%, B-Grade)	1994
	Board of Intermediate Education of Karachi.	
	S. S. C. (Chemistry, Biology, Physics, Math) (83%, A-One-Grade)	1991
	Board of Intermediate Education of Karachi.	

AREA OF INTEREST:

- 1- Utilization of modern mass spectrometric approaches as a powerful analytical tool for the qualitative and quantitative analysis of; metabolomics in biological system, diseased based biomarkers, oil contents in algae for biodiesel production, forensic compounds, and pesticides in agriculture products. In addition to that, use of MS based hyphenated techniques such as LC-MS-MS and GC-MS as a *High-through Put* approach for dereplication of plant extracts and oils.
- 2- Biotransformational studies of bioactive compounds with microbes and plant cell cultures and compare biological and toxicological profiles of their metabolites.

AWARD AND HONOUR:

- ❖ Austrian *OAD* Postdoctoral Fellow ship (2005-2006).
- ❖ 3rd Prize of Dr Zafar Hussain Zaidi on Poster presentation entitled Microbial Transformation of Bioactive Natural Products: 9th International Symposium on National Product Chemistry (Jan. 10-13, 2004, Karachi, Pakistan).
- ❖ Research Fellowship Awarded by International Center for Chemical and Biological Science, H.E.J. Research Institute of Chemistry, University of Karachi Fellowship of (1999-2004).

EXPERIENCE

Assistant Professor 1st April 2007-continue
 H.E.J. Research Institute of Chemistry
 International Center for Chemical Sciences
 University of Karachi

Research Officer Jan 2006-March 2007
 H.E.J. Research Institute of Chemistry
 International Center for Chemical Sciences
 University of Karachi

Post Doctorate Research Fellow (OAD) Feb 2005-Jan2006
 Institute of Analytical and Radiochemistry
 University of Innsbruck
 Austria

Investigation of Protein and Peptides through modern mass spectrometry techniques in Sinupret (a product of BIONORICA Company)

Research fellow March 1999-Feb2005
 H.E.J. Research Institute of Chemistry
 International Center for Chemical Sciences
 University of Karachi

“Microbial Transformation of Bioactive Cyclic Natural Products”

Junior Research Officer Aug 2002-Dec 2003
 Industrial Analytical Center
 H.E.J. Research Institute of Chemistry
 International Center for Chemical Sciences
 University of Karachi

Research Student Jan 1998-Dec 1998
 Department of Chemistry
 University of Karachi, Karachi-75270, Pakistan

Study On Drug-Metal interactions of .Glibenclamide and Gliclazide

CONFERENCE AND WORKSHOP ATTENDED:

- ❖ Research Protocol Development Workshop (8-10, March, 2007).
- ❖ 7th International and 17th National Chemistry Conference (26-28 Feb., 2007, DI Khan, Pakistan).
- ❖ 1st International Symposium and Workshop-cum-Training Course on Molecular Medicine and Drug Research (16-30, Jan., 2007 Karachi-Islamabad).
- ❖ 1st International Workshop/Seminar on Global Recognition of Patent System (13-14, Dec., 2006).
- ❖ “Workshop on New Instrumentation and Applications of Mass Spectrometry” (7-9 Aug., 2006, Karachi).
- ❖ Federation of Asian Chemical Society Symposium Japan and EXCO meeting (29-30, March, 2006).
- ❖ 3rd International Symposium of the Austrian Proteomics Platform (16-19, Jan., 2006, Tyrol, Austria)
- ❖ Pak-China Bi-national Workshop on The Pharmacology and Standardizations of Herbal Medicines (22-27, Oct., 2004, Karachi, Pakistan).
- ❖ 9th International Symposium on Natural Product Chemistry (10-13, Jan., 2004, Karachi, Pakistan).
- ❖ Work shop on the development of Medicine from Plants (8-12, Sep., 2003).
- ❖ 7th Eurasia Conference on Chemical Sciences (09-12, March, 2002, Karachi, Pakistan).
- ❖ 2nd International and 12th National Chemistry Conference (4-6, Feb., 2002 Jamshoro, Pakistan).
- ❖ Pakistan Bangladesh Binational Conference on Natural Product Chemistry (24-26, Sep., 2002)
- ❖ 3rd International and 13th National Chemistry Conference.(28-31Dec., 2002)
- ❖ Work shop on Animal cell culture (December 2002).
- ❖ 8th International Symposium on Natural Product Chemistry (18-22, Jan., 2000, Karachi, Pakistan)

ORGANIZATION OF WORKSHOP:

- ❖ 1st International Symposium and Workshop-Cum-Training Course on Molecular Medicine and Drug Research at the Punjwani Center for Molecular Biology and Drug Designing (PCMD) (16-30, Jan., 2007 Karachi-Islamabad).
- ❖ Organizing secretary of “Workshop on New Instrumentation and Applications of Mass Spectrometry” at the H.E.J. Research Institute of Chemistry, International Center for Chemical Sciences, University of Karachi, (7-9 August, Karachi, Pakistan).
- ❖ “First Pak-France Binational Workshop on Natural Product Chemistry” at the H.E.J. Research Institute of Chemistry, International Center for Chemical Sciences, (Jan. 14-15, 2004, Karachi, Pakistan).

INTERNATIONAL TRAINING:

- ❖ IDB-COMSTECH-INTROM-IMR Workshop on Herbal Standardization. 16th –20th February, 2004, “Phytochemical Analysis and Determination of Markers in Medicinal Plants” (Herbal Medicine Research Center, Institute for Medical Research, Kuala Lumpur, Malaysia).
- ❖ IDB-COMSTECH-INTROM-IMR Workshop on Herbal Medicine. “Medical Plant Screening for Anti-Malaria” 1st–6th April, 2002. (Herbal Medicine Research Center, Institute for Medical Research, Kuala Lumpur, Malaysia)

INDUSTRIAL EXPOSURE:

- ❖ Industrial Training in Quality Assurance Department of Multinational Company, Wyeth Pakistan Limited, (1st Oct.-1st Nov.2003)

LIST OF PUBLICATIONS:

1-Patents

1. “Novel hydroxylated derivatives of (-) 3,6,6,9 α -tetramethylperhydronaphtho [2,1-b] furan as perfuming agents derived from a fungal fermentation process” Atta-ur-Rahman, Choudhary, M. I., **Musharraf, S. Ghulam**. “US Patent 2006/0223883 A1.

2-Chapter in Books

2. “Microbial Transformation of Natural Products-A Tool for the Synthesis of Novel Analogues of Bioactive Substances” Atta-ur-Rahman, Choudhary, M. I., **Musharraf, S. Ghulam**. “Frontiers in Natural Product Chemistry”, Bentham Science Publishers, p. 133 (15), Vol. 1, (2005).

3-Research Publications

3. Biotransformation of (-)-Ambrox by Cell Suspension Cultures of *Actinidia deliciosa* Asma Nasib, **Syed Ghulam Musharraf**, Sajjad Hussain, Saifullah Khan, Shazia Anjum, Shamsheer Ali, Atta-ur-Rahman, and M. Iqbal Choudhary*, *JNP*, **69**, 957–959 (2006).
4. Hydroxylation of the Sesterterpene Leucosceptrine by the fungus *Rhizopus stolonifer*, M. I. Choudhary, Rosa Ranjit, Atta-ur-Rahman, Krishna Prasad Devkota, **Syed Ghulam Musharraf**, Tirtha Maiya Shrestha, *Phytochemistry*, **67**, 439–443 (2006).
5. Biotransformation of (–)-Caryophyllene Oxide by Cell Suspension Culture of *Catharanthus roseus*, M. I. Choudhary, Z. A. Siddiqui, Saifullah Khan, Saifullah, **Syed Ghulam Musharraf** and Atta-ur-Rahman, *Z. Naturforsch.*, **59b**, 197 (2006).
6. Microbial Transformation of Mestranol, M. I. Choudhary, **S. G. Musharraf**, Z. A. Siddiqui, N. Tameen, R. A. Ali and Atta-ur-Rahman, *Chem. Pharm. Bull.*, **53(8)**, 1011 (2005).

7. Microbial Transformation of Prednisone, M. I. Choudhary, Z. A. A. Siddiqui, **S. G. Musharraf**, A. Yasin and Atta-ur-Rahman, *Nat. Prod. Res.*, **19**, 311, (2005).
8. Microbial Transformation of (-)-Isolongifolol and butyrylcholinesterase inhibitory activity of transformed products, M. I. Choudhary, **S. G. Musharraf**, S. A. Nawaz, S. Anjum, M. Pervez Hoong-Kun Fun and Atta-ur-Rahman, *Bio. Org. and Med. Chem.*, **13**, 1939 (2005).
9. Microbial Transformation of (-)-Ambrox and Sclareolide, M. I. Choudhary, **S. G. Musharraf**, A. Sami and Atta-ur-Rahman, *Helv. Chim. Acta.*, **87**, 3450 (2004).
10. Isolation of Bioactive Compounds from *Aspergillus terreus*, M. I. Choudhary, **S. G. Musharraf**, T. Makhmoor, F. Shaheen, S. Ali and Atta-ur-Rahman, *Z. Naturforsch.*, **59b**, 324 (2004).
11. Microbial Transformation of Antifertility Agents, Norethisterone and 17 α -Ethinylestradiol, M. I. Choudhary, **S. G. Musharraf**, R. A. Ali, M. Atif and Atta-ur-Rahman, *Z. Naturforsch.*, **59b**, 323 (2004).
12. Microbial Transformation of (+)-Isolongifolen-4-one, M. I. Choudhary, **S. G. Musharraf**, M. T. H. Khan, D. Abdelrahman, M. Pervaz, F. Shaheen and Atta-ur-Rahman, *Helv. Chim. Acta.*, **86**, 3450 (2003).
13. Microbial Transformation of Cortisol and Propyl Endopeptidase Activity of Transformed Products, M. I. Choudhary, S. Sultan, M. Yaqoob, **S. G. Musharraf**, A. Yasin, F. Shaheen and Atta-ur-Rahman, *Nat. Prod. Res.*, **17**, 389 (2003).
14. 17-Ethynyl-3,17 α -dimethoxy-5-estra-1,3,5(10)-triene, M. I. Choudhary, **S. G. Musharraf**, S. Anjum, A. A. Rahman, Hoong-Kun Fun and Atta-ur-Rahman, *Acta Cryst. E.*, **59**, 1745 (2003).
15. Microbial Transformation of Epiandrosterone, M. I. Choudhary, S. A. A. Shah, **S. G. Musharraf**, F. Shaheen and Atta-ur-Rahman, *Nat. Prod. Res.*, **17**, 215 (2003).
16. Microbial Transformation of (+)-Adrenosterone, **S. G. Musharraf**, Atta-ur-Rahman, M. I. Choudhary and S. Sultan, *Nat. Prod. Lett.*, **16**, 345 (2002).

17. Microbial Transformation of (+)-Androsta-1,4-dien-3,17-dione, M. I. Choudhary, **S. G. Musharraf**, F. Shaheen and Atta-ur-Rahman, *Nat. Prod. Lett.*, **16**, 417 (2002).

4-Conference Proceedings

a)-Oral Presentation

18. **S. Ghulam Musharraf**, M. I. Choudhary and Atta-ur-Rahman, "Ethics in Research", Research Protocol Development Workshop, 8-10, March, 2007.
19. **S. Ghulam Musharraf**, M. I. Choudhary and Atta-ur-Rahman, "Biotransformation of Bioactive Natural Product" 7th International and 17th National Chemistry Conference", 26-28 Feb., 2007, D. I. Khan, Pakistan.
20. M. Iqbal Choudhary, Zafar Ali Siddiqui, Atta-ur-Rahman, and **Syed Ghulam Musharraf**, "Novel Methods for Bioconversion of Bioactive Natural Products" Federation of Asian Chemical Society Symposium and EXCO meeting, March 29-30, 2006.
21. **S. G. Musharraf**, M. I. Choudhary and Atta-ur-Rahman, "Microbial Transformation of Steroids", 2nd International and 12th National Chemistry Conference, Karachi, Pakistan, February 4-6, 2001.
22. **S. G. Musharraf**, M. I. Choudhary and Atta-ur-Rahman, "Microbial Transformation of Ambrox and sclareolide": 3rd International and 13th National Chemistry Conference, Karachi, Pakistan, December 28-31, 2002.
23. **S. G. Musharraf**, M. I. Choudhary and Atta-ur-Rahman, "Use of Analytical Instruments in the Standardization of Herbal Extracts": Pak-China Bi-national Workshop on The Pharmacology and Standardization of Herbal Medicines Karachi, Pakistan, Oct. 22-27, 2004.

b)-Poster Presentations

24. **S. G. Musharraf**, M. I. Choudhary and Atta-ur-Rahman, Microbial Transformation of Bioactive Natural Products: 9th International Symposium on National Product Chemistry, Karachi, Pakistan, Jan. 10-13, 2004 (**Award Wining Poster**).

25. S. Adnan Ali Shah, M. I. Choudhary and Atta-ur-Rahman, **S. G. Musharraf**, F. Shaheen, "Solid Phase Hydroxylation of Steroids by *Aspergillus niger*, *Fusarium linni* and Plant Pathogen *Rhizopus stolonifer*", 9th International Symposium on National Product Chemistry, Karachi, Pakistan, Jan. 10-13, 2004.
26. Z. A. Siddiqui, S. M. I. Choudhary, **S. G. Musharraf** and M. Atif, "Fungal Transformation of Diosgenin", 9th International Symposium on National Product Chemistry, Karachi, Pakistan, Jan. 10-13, 2004.
27. **S. G. Musharraf**, M. I. Choudhary, F. Shaheen and Masood Pervez, "Microbial Transformation of Isolongifolen-9-one", 7th Eurasia Conference on Chemical Sciences, Karachi, Pakistan, March 9-12, 2002.
28. **S. G. Musharraf**, M. I. Choudhary and Atta-ur-Rahman, "Microbial Transformation of Antifertility Agents", Ethiestrone and Norethiesterone, Pakistan Bangladesh Bi-National Conference, Karachi, Pakistan, September 24-26, 2002.