

DR. SYED GHULAM MUSHARRAF

ASSOCIATE PROFESSOR

H.E.J. RESEARCH INSTITUTE OF CHEMISTRY,

DR. PANJWANI CENTER FOR MOLECULAR MEDICINE AND DRUG

RESEARCH,

INTERNATIONAL CENTER FOR CHEMICAL AND BIOLOGICAL SCIENCES,

UNIVERSITY OF KARACHI, KARACHI-75270, PAKISTAN.

CURRICULUM VITAE

PERSONAL INFORMATIONS:

Name: Syed Ghulam Musharraf
Father Name: Syed Ghulam Rabbani
Date of Birth 14th August, 1977
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H.E.J. Research Institute of Chemistry,
Dr. Panjwani Center for Molecular
Medicine and Drug Research,
International Center for Chemical and
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University of Karachi,
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CURRENT STATUS:

Associate Professor

H.E.J. Research Institute of Chemistry,
Dr. Panjwani Center for Molecular Medicine and Drug Research,
International Center for Chemical and Biological Sciences (ICCBS),
University of Karachi,
Karachi-75270, Pakistan.

ACADEMICS:

Post Doctoral Fellow (2005-2006)

Under the supervision of **Prof. Dr. Gunther Bonn**
Institute of Analytical and Radiochemistry
University of Innsbruck, Innsbruck
Austria

Ph. D. (Organic Chemistry, 2004)

Under the supervision of **Prof. Dr. M. Iqbal Choudhary H.I., S.I., T.I.** (Director, ICCBS)
H. E. J. Research Institute of Chemistry, ICCBS
University of Karachi, Karachi 75270, Pakistan
Thesis Title: "Microbial Transformation of

Bioactive Cyclic Natural Products."

M.Sc. (Organic Chemistry, 1st Division, 1998)

Department of Chemistry

University of Karachi,

Karachi-75270, Pakistan

Thesis Title: "Glibenclamide and Cephradine

Metal Interactions."

B.Sc. Hons. (1st Division, 1997)

Department of Chemistry

University of Karachi,

Karachi-75270, Pakistan

AREA OF INTEREST:

Ø **Biological mass spectrometry:**

-Utilization of modern mass spectrometric approaches in addition with others fractionated tools for the searching of serological proteomics and metabolomics biomarkers in lungs, oral and breast cancers patients.

Ø **Organic mass spectrometry:**

-Development of protonated /deprotonated fragmentation pathways, gas-phase reactions studies, and structure-fragmentation relationship (SFR) studies of pharmacological important classes of natural products.

-Oil screening and optimization in Pakistani micro algae for biodiesel production.

-New MALDI matrix development for the analysis of metabolites in biological fluids.

-Ultra-fast HPLC, TLC-Densitometric and LC-MS method development for the marker compounds analysis in pharmaceutical products, agricultural products and commercially important plant extracts.

-Metabolomic profiling of Pakistani rice and mangoes by modern separation techniques including LC-MS-MS.

AWARD AND HONOUR:

Ø Atta-ur-Rahman Gold medal award in 2013 from Pakistan Academy of Science.

Ø Categorized under "A Category Scientist" by Pakistan Council for Science and Technology (PCST), Research Productivity allowance (RPA) 2014

Ø Selected as an a Member of Pakistan Academy of Science in 2013.

Ø Recipient of Erasmus Mundas Scholarship in 2013

Ø Selected as an Associate Young Scientist of the Pakistan in 2012 from Pakistan Academy of Science.

Ø Recipient of Cash Award of Research Productivity allowance (RPA) 2010-2011.

- Ø Selected participants for Afro-Asia workshop in chemistry 2011 conducted by JNCASR (India) and funded by TWAS.
- Ø Selected participants for ASDC course on mass spectrometry in 2011 conducted by VERIFIN (Finland) and funded by OPCW.
- Ø Selected participants for CW-LSE 11 course on mass spectrometry in 2010 conducted by VERIFIN and funded by OPCW.
- Ø Recipient of Cash Award of Research Productivity allowance (RPA) 2008-2009.
- Ø XVIIIth Star Awards 2007 on national level under the auspices of South Asia Publication and awarded.
 - (i). A Gold-Plated Trophy
 - (ii). A Certificate of Excellence
- Ø Recipient of Cash Award of Research Productivity allowance (RPA) 2007.
- Ø Austrian OAD Postdoctoral Fellow ship (2005-2006).
- Ø 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).
- Ø 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).

RESEARCH GRANT WON:

Title of Project	(Rupees)	Funding Agency	Year
Mass Spectrometric Analysis of Proteins/ Peptides Associated with Top-7 Abundant Proteins of Plasma in Smoker, Non-smoker, COPD and Lung Cancer Patients: An Unambiguous Finding of Serological Biomarkers (<i>Running</i>).	Rs. 22,0000/-	HEC	2013
Electrospray-Tandem Mass Spectrometric Studies on Steroidal Alkaloids of Buxus Species for Structure Fragmentation Relationship Development–Rapid Dereplication for Unambiguous Identification of Medicinally Important Steroids (<i>Completed</i>).	Rs. 677000/-	OPCW	2012
Method Development and ICH Validation for Quantitative Determination of Mesterolone, WADA Prohibited Anabolic Steroid, in Human Urine by Multiple Reaction Monitoring (MRM) Mass Spectrometric Approach (<i>Under Progress</i>)	Rs. 505931/-	PAS	2012
Metabolomics Profiling of Pakistani Healthy Persons, Smokers, and Lung Cancer Patients	Rs. 162,000/-	PSF	2012

by Modern Mass Spectrometric Tools for the Identification of Biomarker Compounds (Completed).

Biodiesel Production from Algae: High-through Put Screening of Oil Contents in Pakistani Algae through Modern Mass Spectrometric Techniques (Completed)	Rs. 4, 262,862/-	HEC	2007
Spare parts grant	Rs. 0.92 million	HEC	2009
Spare parts grant	Rs. 0.57 million	HEC	2011

HONORARY APPOINTMENTS:

- Ø Member of Editorial Board of an international Journal, "Journal of Natural Pharmaceuticals" since 2009.
- Ø Reviewer of "Journal of Combinatorial Chemistry" (USA), ACS publishers, since 2009.
- Ø Reviewer of "Journal of Molecular Catalysis B: Enzymatic" (UK), Elsevier publishers, since 2011
- Ø Reviewer of "International Journal of mass spectrometry" (USA), ACS publishers, since 2011.
- Ø Reviewer of "Rapid Communications in mass spectrometry", John Wiley & Sons, since 2013.
- Ø Reviewer of "Nature Communication", Nature Group, since 2013.

PROFESSIONAL SOCIETY MEMBERSHIP:

- Life member of Chemical Society of Pakistan since 2006

EXPERIENCE:

Visiting Scientist SILS, University of Amsterdam, Netherland for proteins quantification using FTMS	1-30 September. 2013
Visiting Scientist The Wistar Institute 3601 Spruce Street Philadelphia, PA 19104, USA <i>Mass Spectrometric Proteomic Profiling of SCID Mice Plasma</i>	January-June. 2008
Associate Professor H.E.J. Research Institute of Chemistry International Center for Chemical Sciences University of Karachi	March 2013-present
Assistant Professor	April 2007-Feb. 2013

H.E.J. Research Institute of Chemistry
International Center for Chemical Sciences
University of Karachi

Research Officer

H.E.J. Research Institute of Chemistry
International Center for Chemical Sciences
University of Karachi

Jan. 2006-March
2007

Post Doctorate Research Fellow (OAD)

Institute of Analytical and Radiochemistry
University of Innsbruck
Austria

Feb 2005-Jan. 2006

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

Research fellow

H.E.J. Research Institute of Chemistry
International Center for Chemical Sciences
University of Karachi

March 1999-Feb.
2005

"Microbial Transformation of Bioactive Cyclic Natural Products"

Quality Control Analyst

Industrial Training in Quality Assurance Department of
Multinational Company, Wyeth Pakistan Limited.

Oct.-Nov. 2003

Junior Research Officer

Industrial Analytical Center
H.E.J. Research Institute of Chemistry
International Center for Chemical Sciences
University of Karachi

Aug 2002-Dec. 2003

Research Student

Department of Chemistry
University of Karachi, Karachi-75270, Pakistan

Jan 1998-Dec. 2004

*Study on Drug-Metal interactions of .Glibenclamide and
Gliclazide*

REGISTERED M. PHIL./PH. D. STUDENTS (FROM 2008):

S. No.	Name	Synopsis Title	Student Status
1.	Mr. Muhammad Arif Ahmed	Microalgal oil screening for Biodiesel production by mass spectrometric techniques.	Ph.D.

2.	Mr. Naveed Iqbal	Phytochemistry investigation of <i>Sarcococca</i> alkaloids and chromatographic method development for guggulsterone quantification in <i>Commiphora mukul</i> .	Ph.D.
3.	Mr. Muhammad Shoaib (As a co-supervisor)	In progress	Ph. D.
4.	Mr. Jalal-ud-din	Metabolite profiling of aromatic constituents of Pakistani mango varieties by modern mass spectrometric methods.	Ph.D.
5.	Mr. M. Irfan Akram	Metabolite profiling of aromatic constituents of Pakistani rice by modern mass spectrometric methods.	Ph.D.
6.	Mr. Arslan Ali	Mass spectrometric finger printing of Withanolides for screening of these compounds in <i>Withania</i> species.	Ph.D.
7.	Miss. Amna Jabbar Siddiqui	Mass spectroscopic investigation of acute myeloid leukemia and acute lymphoblastic leukemia for a pattern-based metabolite profiling of human serum.	Ph.D.
8.	Miss. Najia Shahid	New matrix development for the matrix assisted laser desorption ionization (MALDI) from natural or synthetic origin for the analysis of metabolite.	Ph.D.
9.	Mr. Qamar-ul-Arfeen	Development of efficient methods for the quantification of steroidal drugs and their degraded products.	Ph.D.
10.	Miss. Nayab Kanwal	Chemical fingerprinting and the standardization of some medicinal plants.	Ph.D.
11.	Miss. Shumaila Mazhar	Metabolite profiling of Pakistani healthy persons, smokers and lung cancer patients by modern mass spectrometric tool for the identification of biomarker compounds.	Ph.D.
12.	Miss. Mahwish Saleem	Mass spectrometric studies of albumin associated proteins and peptides in lung cancer patients.	M.S.
13.	Mr. Yaseen Mohammad	Biotransformational studies on steroidal and terpenoidal natural products.	M. S.

	<i>(As a co-supervisor)</i>		
14.	Mr. M. Salman Bhatti	In Progress	M. S.
15.	Miss. Aisha Khalid	In Progress	M. S.
16.	Mr. Syed Kashif Raza	In Progress	M. S.
17.	Mr. Farman Ali	In Progress	M. S.
18.	Miss. Ayesha Iqbal	In Progress	M. S.
19.	Miss. Zareena Bibi	In Progress	M. S.
20.	Miss. Syeda Ambreen Fatima	In Progress	M. S.

M.PHIL./ PH. D. THESIS SUPERVISED

S.No.	Name	Thesis Title	Student Status
1	Ms. Madiha Goher	Electrospray Tandem mass Spectrometric (ESI-MS/MS) analysis of pharmacologically important terpenes and its related compounds for the development of diagnostic fragments and their pathways.	Ph. D. (Thesis submitted, 2014)
2	Mr. Umair Gulzar	Chromatographic method development and validation for the simultaneous analysis of anabolic steroids, Testosterone and its ester derivatives	M. S. (Awarded, 2013)
3	Ms. Urooj Fatima (As a co-supervisor)	Drug Degradation Investigation of Corticosteroid in Presence of Antibiotic.	Ph. D. (Thesis submitted, 2013)
4	Ms. Naghma Hashmi	Application of modern mass spectrometric approaches for the identification of markers in the blood sample of lung cancer patient.	Ph. D. (Awarded, 2012)
5	Ms. Iffat Azeem	Toxic effects of POPs including Organochlorine pesticides on selected Aquatic and Terrestrial Organisms	M.Phil. (Awarded 2012)

6	Ms. Aisha Bibi	Method development for the analysis of low molecular weight compounds and peptides by matrix assisted laser desorption /ionization (MALDI) technique	M.Phil. (Awarded 2012)
7	Mr. Muhammad Shoaib	Method development and validation for nicotine analysis in various tobacco formulations	M.Phil. (Awarded, 2009, co-supervisor)

M. Sc. THESIS SUPERVISED (from Department of Chemistry, Karachi University):

1	Mr. Arslan Ali	Development of Fragmentation Pattern of Some Bioactive Compounds	M. Sc. (2008)
2	Miss Mehjabeen Tabassum	Oil Determination in Various Algal Species of Pakistan	B. S. (2010)
3	Miss Mafia waheed	Quantitative Analysis of Stress Degraded Nicotine by HPTLC	B. S. (2010)
4	Mr. Mian Mohammed Zia	Stress Degradation of Nicotine by Densitometric HPTLC	B. S. (2010)
5	Miss Komal Shamim	Mass Spectrometric Characterization of Algal Oil	B. S. (2010)
6	Mr. Muhammad Atif Jalib	Microbial Transformation of Nicotine and Spectral Analysis of Products	B.S. (2010)
7	Haris Ahmed	Stress degradation studies and stability-indicating TLC-densitometric method of mesterolone in its pharmaceutical formulations	M.Sc (2012)
8	Wardah Mazhar	Stress degradation studies and stability-indicating TLC-densitometric method of stanozolol in its pharmaceutical formulations	M.Sc (2012)
9	Aliya Khatoon	Stress Degradation Studies and Stability indicating TLC- densitometric method of Methyl Testosterone in its Pharmaceutical Formulations	M.Sc (2012)

CONFERENCE AND WORKSHOP ATTENDED (NATIONAL /INTERNATIONAL):

2013

- Ø 14th Asian Symposium on Medicinal Plants, Spices and Other Natural Products, 09-12 December, 2013, HEJRIC, ICCBS, Karachi, Pakistan.
- Ø KDU international Research Symposium, 22-23 August 2013 at General Sir John Kotelawala Defence University, Srilanka
- Ø ASEA-UNINET Plenary Meeting, 17 to 22 February, 2012 at University Putra Malaysia, Kola Lumpur, Malaysia.

2012

- Ø International & 24th National Chemistry Conference, October 28-30, 2013 at Institute of Chemical Society Bahauddin Zakariya University Multan, Pakistan.
- Ø 4th International Symposium-cum-Training course on Molecular Medicine and Drug Research, January 7-10, 2013 at ICCBS, Karachi, Pakistan.
- Ø 11^h International & 23rd National Chemistry Conference, 15-17th October, 2012, University of Peshawar, Peshawar, Pakistan.
- Ø Workshop on Contract Negotiations with Donors from 5 June, 2013 at Sustainable Development Policy Institute, Islamabad.
- Ø 13th International Symposium on Natural Products Chemistry, 22-25th September, 2012, Karachi, Pakistan.
- Ø BioCon2012-Biochemistry in the Post Genomics Era, 9-12 July 2012, Department of Biochemistry, Karachi University.
- Ø Training course on "Innovation and Future Studies for Sustainable Development", March 5-9, 2012, COMSTECH, Islamabad
- Ø IUPAC sponsored International Conference on Agrochemicals, February 15-18, 2012, New Delhi, India
- Ø National Sciences Conference, Roadmap of Cutting Edge Technologies, 10th-12th January 2012, PMAS-Arid Agriculture University, Rawalpindi-Pakistan.
- Ø ANRAP-IFFASA workshop on Natural products for Diabetes, 31st Dec. 2011-3rd January 2012, Dhaka, Bangladesh.

2011

- Ø The 1st Annual Conference of Middle-Eastern Association for Cancer Research (MEACR), 27th-29th December 2011, Tanta University, Egypt.
- Ø 10th Shaukat Khanum Memorial Cancer Symposium, 18-20th November, 2011 Lahore, Pakistan".
- Ø 10th International and 22nd National Chemistry Conference" held on 21st-23rd November, 2011 at Agriculture University, Faisalabad.
- Ø 3rd Chemistry Conference 2011 on Recent Trends in Chemistry, October 17-19, 2011 Organized by Chemistry Division, PINSTECH, Islamabad, Pakistan.
- Ø Improving Capacities of Research and Identification of Marketable Science and Technology Research Graha Widya Bhakti, 10 -13 October 2011, Serpong – Indonesia.

	<ul style="list-style-type: none">Ø Afro-Asia workshop on Advance topics in Chemistry 2011 conducted by JNCASR June 3-17, Bangalore (India), funded by TWAS.Ø Training course on "Intellectual Property Rights and Innovation Policy" (6 - 10 June, 2011) conducted by COMSTECH, Islamabad, Pakistan.Ø 9th International and 21st National Chemistry Conference (15-17 March, 2011, Karachi, Pakistan).Ø Special course on "Analytical Skill Development Course" at the Institute for Verification of the Chemical Weapons Convention (VERIFIN), Helsinki Finland, organized and funded by OPCW, 07-21 January 2011.Ø 3rd International Symposium-cum-Training Course on Molecular Medicine and Drug Research (MMDR-3). January 03-06, 2011.
2010	<ul style="list-style-type: none">Ø Special course on "The Enhancement of Laboratory Skills in Using Liquid Chromatography-Mass Spectrometry to Analyze Chemicals Related to the Chemical Weapons Convention (CW-LSE)", Institute for Verification of the Chemical Weapons Convention (VERIFIN), Helsinki Finland, organized and funded by OPCW, 10-21 May 2010.Ø 8th International and 20th National Chemistry Conference (15-17 Feb., 2010, Islamabad, Pakistan).
2009	<ul style="list-style-type: none">Ø 2nd International Symposium on Molecular Medicine and Drug Research, January 12-15, 2009, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.
2008	<ul style="list-style-type: none">Ø 11th International Symposium of Natural Product Chemistry, Oct. 29–Nov. 01, 2008, (Karachi, Pakistan).Ø 58th ASMS Conference on Mass Spectrometry, Denver, USA (5-7 June, 2008)
2007	<ul style="list-style-type: none">Ø Research Protocol Development Workshop (8-10, March, 2007).Ø 7th International and 17th National Chemistry Conference (26-28 Feb., 2007, DI Khan, Pakistan).Ø 1st International Symposium and Workshop-cum-Training Course on Molecular Medicine and Drug Research (16-30, Jan., 2007 Karachi-Islamabad).
20	<ul style="list-style-type: none">Ø 1st International Workshop/Seminar on Global Recognition of Patent System (13-14, Dec., 2006).

	<ul style="list-style-type: none">Ø "Workshop on New Instrumentation and Applications of Mass Spectrometry" (7-9 Aug., 2006, Karachi).Ø Federation of Asian Chemical Society Symposium Japan and EXCO meeting (29-30, March, 2006).Ø 3rd International Symposium of the Austrian Proteomics Platform (16-19, Jan., 2006, Tyrol, Austria)
2004	<ul style="list-style-type: none">Ø 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).Ø Pak-China Bi-national Workshop on The Pharmacology and Standardizations of Herbal Medicines (22-27, Oct., 2004, Karachi, Pakistan).Ø 9th International Symposium on Natural Product Chemistry (10-13, Jan., 2004, Karachi, Pakistan).
2003	<ul style="list-style-type: none">Ø Work shop on the development of Medicine from Plants (8-12, Sep., 2003 Karachi, Pakistan).
2002	<ul style="list-style-type: none">Ø 7th Eurasia Conference on Chemical Sciences (09-12, March, 2002, Karachi, Pakistan).Ø 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).Ø 2nd International and 12th National Chemistry Conference (4-6, Feb., 2002 Jamshoro, Pakistan).Ø Pakistan Bangladesh Binational Conference on Natural Product Chemistry (24-26, Sep., 2002).Ø 3rd International and 13th National Chemistry Conference.(28-31Dec., 2002).Ø Work shop on Animal cell culture (December 2002).
2000	<ul style="list-style-type: none">Ø 8th International Symposium on Natural Product Chemistry (18-22, Jan., 2000, Karachi, Pakistan)

CONFERENCE /WORKSHOPS ORGANIZED:

(A)- Mass Spectrometry Workshop (as an Organizing Sectary):

- 1 A Two-days workshop entitled "Training Course cum Workshop on Application of Modern Mass Spectrometry for Natural Products-based Drug Development" at HEJ Research Institute of Chemistry, ICCBS, University of Karachi, November 26-27, 2010.
- 2 Organizing Sectary 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, 2006, Karachi, Pakistan).

(B)-Others (as an active organizing member):

- 1 As a Technical Coordinator in 14th Asian Symposium on Medicinal Plants, Spices and Other Natural Products, HEJRIC, ICCBS from 09-12 December, 2013 at ICCBS, Karachi, Pakistan.
- 2 As a Technical Coordinator in 13th International Symposium on Natural Products Chemistry at the H.E.J. Research Institute of Chemistry, International Center for Chemical Sciences, University of Karachi (22-25th September, 2012, Karachi, Pakistan).
- 3 3rd International Symposium-cum-Training Course on Molecular Medicine and Drug Research (MMDR-3). January 03-06, 2011.
- 4 11th International Symposium of Natural Product Chemistry", at the H.E.J. Research Institute of Chemistry, International Center for Chemical Sciences, University of Karachi, (Oct. 29–Nov. 01, 2008, Karachi, Pakistan).
- 5 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).
- 6 Active Organizing Member of "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).

MISCELLANEOUS INSTITUTIONAL RESPONSIBILITIES:

- 1 In-Charge Academic Coordination of ICCBS, University of Karachi
- 2 In-Charge Mass Spectrometric Section of ICCBS, University of Karachi
- 3 In-Charge HPLC Section of ICCBS, University of Karachi
- 4 In-Charge Maintenance of ICCBS, University of Karachi

LIST OF PUBLICATIONS:

(A) Research Publications

S. No.	Name of Author	Complete Name of Journal	Title of the Publication	Vol. No. & Page No.	Year Published	Impact Factor
1.	Syed Ghulam Musharraf , A. Ali, M.I. Choudhary, Atta-Ur-Rahman	Journal of american chemical society of mass spectrometry	Probing of Metabolites in Finely Powdered Plant Material by Direct Laser Desorption Ionization Mass Spectrometry,	25 (4), 530-537	2014	3.59
2.	H. Ali, N. Kabir, A. Muhammad, M.R. Shah, Syed Ghulam Musharraf , N. Iqbal, S. Nadeem	Phytomedicine	Hautriwaic acid as one of the hepatoprotective constituent of Dodonaea viscosa	21(2), 131-40	2014	2.97
3.	Syed Ghulam Musharraf , S. Mazhar, A. J. Siddiqui, M.I. Choudhary, Atta-ur-Rahman	Analytica Chimica Acta	Metabolite profiling of human plasma by different extraction methods through gas chromatography– mass spectrometry—An objective comparison.	804, 180-189	2013	4.58
4.	B. Fatima, N.U. Haq, F. Jabeen, S. Majeed, M.N. Ashiq, Syed Ghulam	Analyst	Ceria-based nanocomposites for the enrichment and identification of phosphopeptides	7;138(17), 5059-67	2013	4.35

	Musharraf, M.A. Shad , G. Xu					
5.	Syed Ghulam Musharraf , Q.U. Arfeen, W. Mazhar, N. Kanwal	Chemistry Central Journal	A validated stability-indicating TLC- densitometric method for the determination of stanozolol in pharmaceutical formulations	7:142	2013	1.31
6.	M.I. Choudhary, M.Y. Mohammad, S.G. Musharraf , and Atta-ur- Rahman,	Jordan Journal of Pharmaceutical Sciences	Epoxidation of ferutinin by different fungi and antibacterial activity of its metabolite	6(1), 23-29	2013	0.00
7.	M.Y. Mohammad, Syed Ghulam Musharraf , M. I. Choudhary	Biocatalysis and Biotransformation	Biotransformation of mestanolone and 17-methyl-1-testosterone by Rhizopus stolonifer,	31 (4), 153-159,	2013	0.89
8.	M.I. Choudhary, M.Y. Mohammad, Syed Ghulam Musharraf , I. Onajobi, A. Mohammada, I. Anis, M.R. Shah, Atta- ur-Rahman,	Phytochemistry	Biotransformation of clerodane diterpenoids by Rhizopus stolonifer and antibacterial activity of resulting metabolites	90, 56-61	2013	3.2
9.	Syed Ghulam Musharraf , A. Bibi, N. Shahid, M. N.U. Haq, N. Ambreen, M. Khan, K. Khan, M.I. Choudhary, Atta-ur-	Chemistry Central Journal	Benzimidazole, coumrindione and flavone derivatives as alternate UV laser desorption ionization (LDI) matrices for peptides analysis	7:77	2013	1.31

	Rahman,					
10.	Syed Ghulam Musharraf , Nayab Kanwal, Qamar ul Arfeen	Chemistry Central Journal	Stress degradation studies and stability-indicating tlc-densitometric method of glycyrrhetic acid	7:9, doi:10.118 6/1752- 153X-7-9	2013	3.281
11.	Syed Ghulam Musharraf , Muhammad Shoaib, Dileep Kumar, Muhammad Najam-ul-Haq	Journal of planar chromatography	Effective Separation and Simultaneous Quantification of Permethrin Isomers in Household Products by Validated TLC- Densitometric Method	26(1), 14- 20	2013	0.767
12.	Syed Ghulam Musharraf , Arslan Ali, Naik Tameem Khan, Maria Yousuf, Muhammad Iqbal Choudhary and Atta-ur- Rahman	Steroids	Tandem Mass Spectrometry approach for the investigation of the steroidal metabolism: Structure- Fragmentation Relationship (SFR) in Anabolic Steroids and their Metabolites by ESI-MS/MS analysis	78(2), 171- 181	2013	2.829
13.	Syed Ghulam Musharraf , Madiha Goher, Salma Shahnaz, M. Iqbal Choudhary, and Atta-ur- Rahman	Rapid Communications in Mass Spectrometry	Structure-Fragmentation Relationship and Rapid Dereplication of <i>Buxus</i> Steroidal Alkaloids by Electrospray Ionization-Quadropole Time-of-Flight Mass Spectrometry	27, 169- 178	2013	2.79
14.	Jabeen, F.; Hussain, D.; Fatima, B.; Musharraf, S. G. ; Huck, C. W.; Bonn, G. K.; Najam-ul-Haq	Analytical Chemistry	Silica-Lanthanum Oxide - Pioneer Composite of Rare Earth Metal Oxide in Selective Phosphopeptides Enrichment	84(23), 10180-5	2012	5.856
15.	Syed Ghulam Musharraf , Muhammad Arif Ahmed,	Chemistry Central Journal	Biodiesel production from microalgal isolates of southern Pakistan and	6:149, doi:10.118	2012	3.281

	Noureen Zehra, Noor-ul-kabeer, M. Iqbal Choudhary and Atta-ur-Rehman		quantification of FAMES by GC-MS/MS analysis	6/1752-153X-6-149		
16.	Syed Ghulam Musharraf , Aisha Bibi, Najia Shahid, Muhammad Naja m-ul-Haq, Momin Khan, Muhammad Taha, Uzma Rasool Mughal, Khalid Mohammed Khan	Am. J. Anal. Chem	Acylhydrazide and Isatin Schiff Bases as Alternate UV-Laser Desorption Ionization (LDI) Matrices for Low Molecular Weight (LMW) Peptides Analysis	3, 779-789	2012	-
17.	Farzana Shaheen, Tania S. Rizvi, Syed G. Musharraf , A. Ganesan, Kai Xiao, Jared B. Townsend, Kit S. Lam, and M. Iqbal Choudhary	Journal of Natural Products	Solid-phase Total Synthesis of Cherimolacyclopeptide E and Discovery of More Potent Analogues by Alanine Screening	75(11), 1882-1887	2012	3.128
18.	Syed Ghulam Musharraf , Madiha Goher, Amjad Hussain, and M Iqbal Choudhary	Chemistry Central Journal	Electrospray tandem mass spectrometric analysis of a dimeric conjugate, salvialerifone and related compounds	6:120, doi:10.1186/1752-153X-6-120	2012	3.281
19.	Syed Ghulam Musharraf , Jalaluddin, Muniza Akhter, Masood Parvez, Saifullah, Sadia Khan, Sammer Yousaf, Saifullah Khan and Muhammad Iqbal Choudhary	Journal of Molecular Catalysis B: Enzymatic	Biotransformation of an antimalarial drug, artemether by plant and fungal cell cultures	82, 80-85	2012	2.735
20.	Najam-ul-Haq, M., Jabeen,	Analytica Chimica	Versatile nanocomposites in	747, 7-18	2012	4.555

	F., Hussain, D., Saeed, A., Musharraf, S.G. , Huck, C.W., Bonn, G.K.	Acta	phosphoproteomics.			
21.	Musharraf, S.G. , Shoaib, M., Haq, M.N.	Chemistry Central Journal	Validated TLC-densitometry method for the simultaneous analysis of pyrethroid insecticides in agricultural and domestic products.	6(1), 93, doi:10.1186/1752-153X-6-93	2012	3.281
22.	Musharraf, S.G. , Naz, S., Najeeb, A., Khan, S., Choudhary, M.I.	Chemistry Central Journal	Biotransformation of perfumery terpenoids, (-)-ambrox ^(R) by a fungal culture <i>Macrophomina phaseolina</i> and a plant cell suspension culture of <i>Peganum harmala</i> .	6, 82, doi:10.1186/1752-153X-6-82	2012	3.281
23.	Musharraf, S.G. , Ul Arfeen, Q., Shoaib, M.	Journal of Planar Chromatography	Development and validation of TLC-densitometric method for the quantification of a steroidal drug, danazol in its pharmaceutical formulations.	25 (4) , 331-337	2012	0.767
24.	Syed Ghulam Musharraf , Muhammad Shoaib, Amna Jabbar Siddiqui, Aftab Ahmed and M. Iqbal Choudhary	Chemistry Central Journal	Quantitative analysis of some important metals and metalloids in tobacco products by inductively coupled plasma-mass spectrometry (ICP-MS)	6, 56, doi:10.1186/1752-153X-6-56	2012	3.281
25.	Musharraf, S.G. , Gulzar, U.	Chemistry Central Journal	Effective separation and simultaneous analysis of anabolic androgenic steroids (AAS) in their pharmaceutical formulations by a validated TLC-densitometry method	6, 54, doi:10.1186/1752-153X-6-54	2012	3.281
26.	Musharraf, S.G. , Hashmi,	Biomarkers	Comparison of plasma from healthy	17 (3),	2012	2.45

	N., Choudhary, M.I., Rizvi, N., Usman, A., Atta-Ur-Rahman		nonsmokers, smokers, and lung cancer patients: Pattern-based differentiation profiling of low molecular weight proteins and peptides by magnetic bead technology with MALDI-TOF MS	223-230		
27.	Orhan, I.E., ener, B., Musharraf, S.G.	Experimental and Toxicologic Pathology	Antioxidant and hepatoprotective activity appraisal of four selected <i>Fumaria</i> species and their total phenol and flavonoid quantities	64 (3) , 205-209	2012	2.781
28.	Musharraf, S.G. , Fatima, U., Sultana, R.	Chemistry Central Journal	Stress degradation studies and development of stability-indicating TLC-densitometry method for determination of prednisolone acetate and chloramphenicol in their individual and combined pharmaceutical formulations	6 (1) , 7	2012	3.281
29.	Musharraf, S.G. , Goher, M., Wafo, P., Kamdem, R.S.T.	International Journal of Mass Spectrometry	Electrospray tandem mass spectrometric analysis of duboscic acid, exploring the structural features of a new class of triterpenoids, dubosane	310 , 77-80	2012	2.549
30.	Musharraf, S.G. , Goher, M., Ali, A., Adhikari, A.,Choudhary, M.I., Atta-Ur-Rahman	Steroids	Rapid characterization and identification of steroidal alkaloids in <i>Sarcococca coriacea</i> using liquid chromatography coupled with electrospray ionization quadropole time-of-flight mass spectrometry	77 (1-2) , 138-148	2012	2.829
31.	Syed Ghulam Musharraf,	Journal of Liquid	Screening of E- and Z-	34(18),	2011	0.706

	Naveed Iqbal, Muhammad Arif Ahmed, Shumiala Mazhar	Chromatography & Related Technologies	Guggulsterones in the Gum-Resin Exudates of Some Common Plants and Method Validation in Raw, Extracted and Pharmaceutical Formulations of <i>Commiphora mukul</i> by HPLC	2103-2117.		
32.	Yousuf S., S. G., Musharraf , Khan N., Adhikari A. and Choudhary M. I.	Acta Crystallographica Section E	3 -Dimethylamino-20-methylacetylaminopregn-5-ene	Section E, E67, 02918, 2011.	2011	0.347
33.	B. Daniel, E. Innocent, Z.H. Mbwambo, S.G. Musharraf	International Journal of Pharma and Bio Sciences	Comparison of mosquito larvicidal activity of <i>Annona squamosa</i> leaves growing in different eco-zones in Tanzania	2(4), 566-572	2011	0.47
34.	Syed Ghulam Musharraf , Muhammad Shoaib, and Najam-ul-Haq	Journal of Planar Chromatography & related technology	TLC-Densitometric Method Development and Validation for the Quantification of Nicotine in Tobacco Smoked, Sniffing, Dipping, and Chewing Products	24 (5), 381-387.	2011	0.767
35.	Syed Ghulam Musharraf , Naveed Iqbal, Umair Gulzar, Azhar Ali, Muhammad Iqbal Choudhary and Atta-ur-Rahman	Journal of Pharmaceutical and Biomedical Analysis	Effective Separation and Quantitative Analysis of E- and Z-Guggulsterones in <i>Commiphora mukul</i> Resin, Guggulipid and their Pharmaceutical Products by High Performance Thin-Layer Chromatography-Densitometric Method	56 (2), 240-245.	2011	2.967
36.	Syed Ghulam Musharraf , Asma Najeeb, Sumaira Hareem and Muhammad	Biocatalysis and Biotransformation	Biocatalysis of 5 -hydroxycaryophylla-4(12), 8(13)-diene with <i>Cunninghamella elegans</i>	29 (4). 141-146	2011	0.905

	Iqbal Choudhary		and <i>Rhizopus stolonifer</i> .			
37.	Saleem Jan, Ahmed Abbaskhan, Syed Ghulam Musharraf , Samina A. Sattar, Samreen, Saud I. Resayes, Zeid A. Al Ottman, Abdullah M. Al-Majid, Atta-ur-Rahman and M. Iqbal Choudhary	Planta Medica	Three New Cycloartane Triterpenoids from <i>Astragalus bicuspidis</i> .	77, 1829-1834.	2011	2.153
38.	Syed Ghulam Musharraf , Arslan Ali, Rahat Azher Ali, Sammer Yousuf, Atta-ur-Rahman and M. Iqbal Choudhary	Rapid Commun. Mass Spectrom.	Analysis and development of structure-fragmentation relationships in withanolides using an electrospray ionization quadropole time-of-flight tandem mass spectrometry hybrid instrument	25, 104–114	2011	2.79
39.	Syed Ghulam Musharraf , Asma Najeeb, Rahat Azher Ali, Abida Amir Ali and Muhammad Iqbal Choudhary	Journal of food and Agriculture Chemistry	Metabolites of Fungistatic Agent, 2 β -Methoxyclovan-9 α -ol by <i>Macrophomina phaseolina</i> .	59 (7), 3234-3238	2011	2.823
40.	S. Yousuf, S. G. Musharraf , I. Khan, Samiullah and Hoong-Kun Fun	Acta Crystallographica Section E	Absolute Configuration of (2S)-4-(4-hydroxyphenyl) butan-2-ol	E67, o952	2011	0.34
41.	Syed Ghulam Musharraf , Muhammad Arif Ahmed, Rahat Azher Ali and	Biocatalysis and Biotransformation	Hydroxylation of (+)-menthol by <i>Macrophomina phaseolina</i> .	29 (2-3), 77–82.	2011	0.905

	Muhammad Iqbal Choudhary					
42.	A. Iqbal, M. K. Azim, N. Hashmi, S. Abid Ali and S.G. Musharraf	Protein & Peptide Letters	Structural Characterization of Metalloprotease Vibriolysin of Cholera Pathogen <i>Vibrio cholerae</i> .	18, 287-294	2011	1.942
43.	Syed Ghulam Musharraf , Asma Najeeb, Sadia Khan, Masood Pervez, Rahat Azher Ali and M. Iqbal Choudhary.	Journal of Molecular Catalysis B	Microbial Transformation of 5 - Hydroxycaryophylla-4(12), 8(13)-diene with <i>Macrophomina phaseolina</i> .	66, 156.	2010	2.735
44.	M. Iqbal Choudhary, Mohammad Yasin Mohammad, Syed Ghulam Musharraf , Masood Parvez, Amal Al-Aboudi, Atta-ur-Rahman.	Steroids	New oxandrolone derivatives by biotransformation using <i>Rhizopus stolonifer</i> .	74 (13-14), 1040	2009	2.829
45.	Choudhary MI, Begum A, Abbaskhan A, Musharraf SG , Ejaz A; Atta-ur-Rahman.	Chemistry and Biodiversity	Two New Antioxidant Phenylpropanoids from <i>Lindelofia stylosa</i> .	5 (12), 2676	2008	1.804
46.	Choudhary MI; Azizuddin, Jalil S, Musharraf SG ; Atta-ur-Rahman	Chemistry and Biodiversity..	Fungal transformation of dydrogesterone and inhibitory effect of its metabolites on the respiratory burst in human neutrophils.	5(2) 324	2008	1.804
47.	Al-Aboudi A, Mohammad MY, Musharraf SG , Choudhary M.I., Atta-ur-Rahman.	Nat Prod Res.	Microbial transformation of testosterone by <i>Rhizopus stolonifer</i> and <i>Fusarium lini</i> .	22(17), 1498	2008	1.009

48.	Choudhary MI, Jan S, Abbaskhan A, Musharraf SG , Samreen, Sattar SA, Atta-ur-Rahman.	J Nat Prod.	Cycloartane triterpenoids from <i>Astragalus bicuspidis</i> .	71(9),1557	2008	3.128
49.	Ali L, Musharraf SG , Shaheen F.	Journal of Natural Product.	Solid-phase total synthesis of cyclic decapeptide phakellistatin 12.	71(6) 1059	2008	3.128
50.	Choudhary MI, Naheed N, Abbaskhan A, Musharraf SG , Siddiqui H, Atta-Ur-Rahman.	Phytochemistry,	Phenolic and other constituents of fresh water fern <i>Salvinia molesta</i> .	69(4)1018-23	2008	3.351
51.	Muhammad Iqbal Choudhary., Naik T. Khan, Syed G. Musharraf , Shazia Anjum, Atta-ur-Rahman.	Steroids.	Biotransformation of adrenosterone by filamentous fungus, <i>Cunninghamella elegans</i> .	72(14), 1018	2007	2.829
52.	Asma Nasib, Syed Ghulam Musharraf , Sajjad Hussain, Saifullah Khan, Shazia Anjum, Shamsheer Ali, Atta-ur-Rahman, and M. Iqbal Choudhary.	Journal of Natural Product	Biotransformation of (-)-Ambrox by Cell Suspension Cultures of <i>Actinidia deliciosa</i> .	69, 957	2006	3.128
53.	M. I. Choudhary, Z. A. Siddiqui, Saifullah Khan, Saifullah, Syed Ghulam Musharraf and Atta-ur-Rahman.	Z. Naturforsch.,	Biotransformation of (-)-Caryophyllene Oxide by Cell Suspension Culture of <i>Catharanthus roseus</i> .	61b,197	2006	0.864

54.	M. I. Choudhary, Rosa Ranjit, Atta-ur-Rahman, Krishna Prasad Devkota, Syed Ghulam Musharraf , Tirtha Maiya Shresth.	Phytochemistry	Hydroxylation of the Sesterterpene Leucosceptrine by the fungus <i>Rhizopus stolonifer</i> .	67, 439	2006	3.351
55.	M. I. Choudhary, Z. A. A. Siddiqui, S. G. Musharraf , A. Yasin and Atta-ur-Rahman.	Nat. Prod. Res.,	Microbial Transformation of Prednisone by <i>Cunninghamella elegans</i> .	19, 311	2005	1.009
56.	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.	Microbial Transformation of (-)-Isolongifolol and butyrylcholinesterase inhibitory activity of transformed products.	13,1939	2005	2.921
57.	M. I. Choudhary, S. G. Musharraf , Z. A. Siddiqui, N. Tameen, R. A. Ali and Atta-ur-Rahman.	Chem. Pharm. Bull.,	Microbial transformation of mestranol by <i>Cunninghamella elegans</i>	53(8) 1011	2005	1.592
58.	M. I. Choudhary, S. G. Musharraf , A. Sami and Atta-ur-Rahman.	Helv. Chim. Acta.,	Microbial Transformation of (-)-Ambrox and Sclareolide.	87, 3450	2004	1.478
59.	M. I. Choudhary, S. G. Musharraf , R. A. Ali, M. Atif and Atta-ur-Rahman.	Z. Naturforsch.,	Microbial Transformation of Antifertility Agents, Norethisterone and 17 α -Ethinylestradiol.	59b, 317	2004	0.864
60.	M. I. Choudhary, S. G. Musharraf , T. Makhmoor,	Z. Naturforsch.,	Isolation of Bioactive Compounds from <i>Aspergillus terreus</i> .	59b, 324	2004	0.864

	F. Shaheen, S. Ali and Atta-ur-Rahman.					
61.	M. I. Choudhary, S. Sultan, M. Yaqoob, S. G. Musharraf , A. Yasin, F. Shaheen and Atta-ur-Rahman.	Nat. Prod. Res.,	Microbial Transformation of Cortisol and Propyl Endopeptidase Activity of Transformed Products,	17(6), 389.	2003	1.009
62.	M. I. Choudhary, S. G. Musharraf , M. T. H. Khan, D. Abdelrahman, M. Pervaz, F. Shaheen and Atta-ur-Rahman.	Helv. Chim. Acta	Microbial Transformation of (+)-Isolongifolen-4-one.	86(10), 3450.	2003	1.478
63.	M. I. Choudhary, S. G. Musharraf , S. Anjum, A. A. Rahman, Hoong-Kun Fun and Atta-ur-Rahman.	Acta Cryst. E.	17-Ethynyl-3,17á-dimethoxy-5-estra-1,3,5(10)-triene,	59, 1745.	2003	0.347
64.	M. I. Choudhary, S. A. A. Shah, S. G. Musharraf , F. Shaheen and Atta-ur-Rahman.	Nat. Prod. Res.,	Microbial Transformation of Epiandrosterone,	17(3), 215.	2003	1.009
65.	M. I. Choudhary, S. G. Musharraf , F. Shaheen and Atta-ur-Rahman.	Nat. Prod. Lett.	Microbial Transformation of (+)-Androsta-1,4-dien-3,17-dione	16, 417	2002	1.009
66.	S. G. Musharraf , Atta-ur-Rahman, M. I. Choudhary and S. Sultan.	Nat. Prod. Lett.,	Microbial Transformation of (+)-Adrenosterone,	16, 345	2002	1.009

(B)-Conference Proceedings

1)-Oral Presentation

- 1 Invited speaker at 14th Asian Symposium on Medicinal Plants, Spices and Other Natural Products entitled, "High-Throughput Analysis of Plant Metabolites Based on Recent Mass Spectrometric Techniques: Molecules in Finely Powdered Plant Material to Plant Extract", organized by HEJRIC, ICCBS from 09-12 December at ICCBS, Karachi, Pakistan.
- 2 Plenary session Speaker at KDU international Research Symposium entitled "Pattern-based Peptide Profiling of Lung Cancer Patients by MALDI-TOF-MS and Chemometrics analysis" from 22-23 August 2013 at General Sir John Kotelawala Defence University, Srilanka.
- 3 Invited presentation entitled, "Metabolomics and Cancer Research" from 23th June 2013 at Institute of Sustainable Halophyte Utilization, University of Karachi, Pakistan.
- 4 Invited speaker entitle "Mass Spectrometry: from lead compounds identification to disease biomarker identification" from 23 march 2013 at Bahauddin Zakariya University Multan, Pakistan.
- 5 Invited speaker at International & 24th National Chemistry Conference entitled, "Direct Laser Desorption Ionization Mass Spectrometry (DLDI-MS) for Plant Metabolites Analysis: An Ambient and High-throughput Mass Spectrometry Approach", organized by Chemical Society of Pakistan from October 28-30, 2013 at Institute of Chemical Society Bahauddin Zakariya University Multan, Pakistan.
- 6 Session speaker at 4th International Symposium-cum-Training course on Molecular Medicine and Drug Research entitled, "Comprehensive Metabolites Profiling of Human Plasma by Applying Different Fractionation Techniques through GCMS", organized by PCMD, ICCBS from January 7-10,2013 at ICCBS, Karachi, Pakistan.
- 7 Lecture delivered at 11ⁿ International & 23rd National Chemistry Conference, 15-17th October, 2012, University of Peshawar, Peshawar, Pakistan entitled, "Plasma analysis of Non-smokers, Smokers and Lung Cancer Patients for Pattern-Based Differentiation Profiling of Proteins and Peptides by Magnetic Bead Technology with MALDI-TOF MS"
- 8 Lecture delivered at 13th International Symposium on Natural Products Chemistry, 22-25th September, 2012, Karachi, Pakistan entitled, "Rapid Dereplication Approach in Natural Products Chemistry Based on Liquid Chromatography Electrospray Tandem Mass Spectrometry (LC-ESI-MS/MS)- A case Study on *Sarcococca Coriacea*".

- 9 Lecture delivered at BioCon2012-Biochemistry in the Post Genomics Era, 9-12 July 2012 entitled "Pattern-Based Differentiation Profiling of Low Molecular Weight Proteins and Peptides in Plasma Samples of Non-smokers, Smokers and Lung Cancer Patients by Magnetic Bead Technology with MALDI-TOF MS"
- 10 Invited Lecture delivered at International Conference held in New Delhi, during February 15-18, 2012, entitled TLC Densitometric Method Development and Validation for the Simultaneous Determination of Insects and Pests Controlling Agents, Permethrin, Esbiothrin, Alpha-cypermethrin and Deltamethrin in House-hold Products
- 11 Lecture delivered at National Sciences Conference, Roadmap of Cutting Edge Technologies, 10th-12th January 2012, PMAS-Arid Agriculture University, Rawalpindi-Pakistan entitled, "New Classes of Compounds as Alternate Laser Desorption/ Ionization Matrices".
- 12 Lecture delivered at ANRAP-IFFASA workshop on Natural products for Diabetes, 31st Dec. 2011-3rd January 2012, Dhaka, Bangladesh, entitled, "Mass Spectrometric Advancement for High-throughput Phytochemical Analysis.
- 13 Lecture delivered at The 1st Annual Conference of Middle-Eastern Association for Cancer Research (MEACR), 27th-29th December 2011, Tanta University, Egypt, entitled, "Plasma analysis of Non-smokers, Smokers and Lung Cancer Patients for Pattern-Based Differentiation Profiling of Proteins and Peptides by Magnetic Bead Technology with MALDI-TOF MS".
- 14 Lecture delivered at Cancer Conference organized by Shoukhat Khanum Cancer Memorial Hospital, 18-20th November, 2011 entitled, "Pattern-Based Differentiation Profiling of Low Molecular Weight Proteins and Peptides in Plasma Samples of Non-smokers, Smokers and Lung Cancer Patients by Magnetic Bead Technology with MALDI-TOF MS".
- 15 10th International and 22nd National Chemistry Conference" held on 21st-23rd November, 2011 at Agriculture University, Faisalabad. Lecture entitled, "Rapid Dereplication Approach in Natural Product Chemistry based on Liquid Chromatography Electrospray tandem mass spectrometry (LC-ESI-MS/MS)-A Case Study on *Withania somnifera*".
- 16 3rd Chemistry Conference 2011 on Recent Trends in Chemistry, October 17-19, 2011, Organized by Chemistry Division, PINSTECH entitled HPTLC-Densitometry Mass Spectrometric Utilization in the Chemical Fingerprinting of Herbal Drugs-A Case Study on *Commiphora mukul*
- 17 Improving Capacities of Research and Identification of Marketable Science and Technology Research Graha Widya Bhakti, 10 -13 October 2011, Serpong - Indonesia entitled "Marketable Science Research of the International Center for Chemical and Biological Sciences (ICCBS)"
- 18 Afro-Asia workshop on Advance topics in Chemistry 2011 conducted by JNCASR June 3-17, Bangalore (India), funded by TWAS. entitled "Plant Steroids: Chromatographic Method Development and SFR Studies".

- 19 3rd International Symposium-cum-Training Course on Molecular Medicine and Drug Research (mmdr-3). January 03-06, 2011, entitled "Comparative Profiling of Low Molecular Weight Proteins in Healthy, Smokers and Lung Cancer Plasma by Magnetic Bead Technology with MALDI-TOF MS".
- 20 12th International Symposium on Natural Product Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan, November 22-25, 2010, entitled "ESI-QqTOF-MS/MS Analysis and Development of Structure-Fragmentation Relationship (SFR) in Withanolides".
- 21 8th International and 20th national conference, 15-17th February, 2010, organized by Chemical Society of Pakistan, Islamabad, entitled "Chromatographic Method Development and Validation for the Quantification of *E*- and *Z*-Guggulsterones in *Commiphora mukul* from Raw Materials to Finish Products".
- 22 Workshop on Separation Science and the OMICS, School of Biological Sciences, University of the Punjab, Lahore, Pakistan, April 6-10, 2009, entitled "Applications of Mass Spectrometry in Proteomics".
- 23 Research Protocol Development Workshop, 8-10, March, 2007, L.E.J. University of Karachi, Pakistan, entitled "Ethics in Research".
- 24 7th International and 17th National Chemistry Conference", 26-28 Feb., 2007, D. I. Khan, Pakistan, entitled "Biotransformation of Bioactive Natural Product".
- 25 Federation of Asian Chemical Society Symposium and EXCO meeting, March 29-30, 2006, Japan, entitled "Novel Methods for Bioconversion of Bioactive Natural Products".
- 26 Pak-China Bi-national Workshop on The Pharmacology and Standardization of Herbal Medicines Karachi, Pakistan, Oct. 22-27, 2004, entitled "Use of Analytical Instruments in the Standardization of Herbal Extracts".
- 27 3rd International and 13th National Chemistry Conference, Karachi, Pakistan, December 28-31, 2002, entitled "Microbial Transformation of Ambrox and Sclareolide".
- 28 2nd International and 12th National Chemistry Conference, Karachi, Pakistan, February 4-6, 2001, entitled "Microbial Transformation of Steroids".

2)-Poster Presentations

- 1 **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**).
- 2 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.

- 3 Z. A. Siddiqui, S. M. I. Choudhary, **S. G. Musharraf** and M. Atif, "Fungal Transformation of Diosgenin", 9th International Symposium on Natural Product Chemistry, Karachi, Pakistan, Jan. 10-13, 2004.
- 4 **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.
- 5 **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.

(C)- Patents

- 1 Novel hydroxylated enantiomers of (-) 3a, 6, 6, 9a-tetramethylperhydronaphtho [2, 1-b] furan as perfuming agents derived from a fungal fermentation process. Atta-ur-Rahman, M. I. Choudhary, **S. G. Musharraf**, A. Sami, US Patent # 20120301956, Publication date 2012/11/29

(D)- Chapter in Books

- 1 "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).