STAFF RESEARCH HANDBOOK

COLLEGE OF CLINICAL PHARMACY
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2011
**College Vision**

The college be recognized nationally and internationally for preparing role models and leaders in pharmacy practice, education and research with strong social commitment.

**College Mission**

The primary mission of the College of Clinical Pharmacy at King Faisal University is to improve human health of the community through excellence in education, research and community services.

The college:

1. Prepares Pharm D graduates who will be providing direct patient care as effective team members in health care system as lifelong experts in therapeutic planning and intervention and rational use of medicines. This is achieved through an innovative academic program, excellence in teaching, clinical training, and planned development activities

2. Conducts exceptional research in basic and applied pharmaceutical sciences in the field of drug discovery, development and application.

3. Brings together dedicated faculty and competent students in a supportive and excellent teaching learning and research atmosphere that encourage continuous intellectual and personal development

4. Serves the community by sharing our expertise with the public and health care professionals by facilitating opportunities for continuing professional development and postgraduate education
Dr. Ibrahim A. Alhaider,
B. Pharm., King Saud University, KSA, Ph. D., University of Houston, Houston, USA.

TEACHING EXPERIENCE: Involved in teaching undergraduate students mainly pharmacology.

RESEARCH INTERESTS:

1. Studying the effects of Alzheimer's disease on the hypothetical model of learning and memory using electrophysiological recordings.

2. Molecular Pharmacology of memory in the hippocampus, including the levels of crucial proteins such as brain derived neurotrophic factors and calcium-calmodulin kinase II.

3. Investigating the impact of sleep deprivation on memory-related tasks.

4. The correlation between environmental factors such as caffeine, nicotine, and exercise and spatial memory.

LIST OF PUBLICATIONS:

1. Ibrahim A. Alhaider, Abdulaziz M. Aleisa, Trinh T. Tran and Karim A. Sleep deprivation prevents stimulation-induced increases of levels of P-CREB and BDNF: Protection by caffeine, Molecular and Cellular Neuroscience, 2011, 46(4), 742-751.

2. Alhaider IA, Aleisa AM, Tran TT, Alzoubi KH, Alkadhi KA; Chronic caffeine treatment prevents sleep deprivation-induced impairment of cognitive function and synaptic plasticity; Sleep; 2010, 33 (4):437-44.

3. Alhaider IA, Aleisa AM, Tran TT, Alkadhi KA; Caffeine prevents sleep loss-induced deficits in long-term potentiation and related signaling molecules in the dentate gyrus; Eur J Neurosci; 2010, 31(8):1368-76.

ABSTRACTS:


Success is the ability to go from one failure to another with no loss of enthusiasm.
Dr. Ahmed O. Alnajjar
B.Sc., King Fahad University, KSA; Ph.D., Ohio University, USA
ASSOCIATE PROFESSOR, Analytical & Pharmaceutical Chemistry

TEACHING EXPERIENCE:
Have a total teaching experience of 11 years at a university level. During this period, teaching undergraduate level laboratories and lectures courses comprising general chemistry and analytical chemistry including the following courses: General Chemistry, Analytical Chemistry (Volumetric and Gravimetric), Pharmaceutical Analytical chemistry and Instrumental Chemical Analysis (Spectroscopy, Chromatography, Electrochemical analysis).

RESEARCH INTERESTS:
1. Development of new analytical methods for extraction, analysis and detection of drugs in pharmaceutical and biological samples using analytical techniques such as GC, HPLC and CE.
2. Development of sensitive and selective methods for abused drugs analysis in biological fluids.

LIST OF PUBLICATIONS:


**Genius is one percent inspiration, ninety-nine percent perspiration.**

- Thomas A Edison
Dr. Ahmed O. Alnajjar,

International Conference Papers:


3. Abubakr M. Idris and Ahmed O. Alnajjar, Chemometrics, a Powerful Tool for Optimizing Flow Injection Analytical Methods, Euroanalysis Conference, Innsbruck, Austria 2009


5. Ahmed Alnajjar and Abubakr M. Idris. Microchip electrophoresis with laser induced fluorescence detection for the separation and determination of some drugs of abuse in biological fluids. 34th International Symposium on High-Performance Liquid Phase Separations and Related Techniques (HPLC 2009), Dresden, Germany 2009.


7. Abubakr M. Idris and Ahmed Alnajjar. What did will flow injection techniques provide for pharmaceutical, pharmacological and toxicological analysis? The 68th Inter. Congress of Pharmacy and Pharmaceutical Sciences (FIP), Switzerland 2008.


Instruments handled:
Gas Chromatography
High Performance Liquid Chromatography
Capillary Electrophoresis
UV Visible Spectrophotometer
Spectrofluorophotometer
Flow Injection and sequential Injection Instruments.
Infra Red spectrophotometer
Mass and NMR


Research Projects:

1. "Developing microchip electrophoresis and its application to drugs of abuse analysis in biofluids". It is funded by King Abdulaziz City for Science and Technology started at 01 Jan. 2011 and will end at 30 Dec. 2013 ($200,000)

2. “Simultaneous estimation of Metformin and Miglitol by HPLC” It is currently being funded by Deanship of Scientific Research, King Faisal University; started at 26 Jan 2011 and will end at 30 Jan. 2012 ($25,000)

3. "Developing microchip electrophoresis technology and applications to drug analysis". It is currently being funded by Deanship of Scientific Research, King Faisal University; started at 23 Jan 2010 and will end at 30 Nov. 2011 ($53,000)

4. "Developing inexpensive analytical methods for pharmaceuticals employing sequential injection chromatography". It is currently being funded by Dean- ship of Scientific Research, King Faisal University; started at April 2009 and will end at April 2011 ($53,000)

The best way to destroy your enemy is to make him your friend. -Abraham Lincoln
Dr. Ahmed O. Alnajjar,

5. "Development of Sequential Injection Chromatography Technology, the State-of-the-Art Microfluidic Separation Technology". It is currently being funded by King Abdulaziz City for Science and Technology started at 01 Dec. 2008 and will end at 30 Nov. 2010 ($180,000).

6. "The analysis and detection of low explosives by capillary electrophoresis". It is currently being funded by the Deanship of Scientific Research, King Faisal University; started at 01 Apr. 2008 and ended on 31 Mar. 2010 ($ 53,333).

7. "Development of microfluidic devices and adoption of novel methods for drugs of abuse analysis". It is currently being funded by King Abdulaziz City for Science and Technology started at 22 Dec. 2006 and ended on 21 Dec. 2008 ($118,000).

8. "Exploitation of capillary electrophoresis technique for exploring new methods for pharmaceutical analysis". It is currently being funded by the Deanship of Scientific Research, King Faisal University; started at 01 Apr. 2006 and ended on 31 Mar. 2007 ($ 53,000).

9. “The Development of New Analytical Methods for the Analysis of Abused Drugs in Human Urine using Capillary Electrophoresis”. It was funded by the Deanship of Scientific Research, King Faisal University; 2005. ($20,000).

He who travels in the search of knowledge, to him God shows the way of Paradise.
1. Dr. Bandar E. Aldhubaab

B. Ph., King Saud Univ, KSA, & Ph. D., University of Arizona, USA.

ASSISTANT PROFESSOR, PHARMACEUTICAL SCIENCES

TEACHING EXPERIENCE: Involved in teaching undergraduate students mainly Pharmaceutics, Biopharmaceutics and clinical pharmacokinetics.

RESEARCH INTERESTS:

1. Analysis of Pharmaceutical Compounds
2. Dissolution studies of some generic drugs.
3. Development of new analytical methods using HPLC

LIST OF PUBLICATIONS AND PRESENTATIONS:

2. 2009, Using NMP as a model for the solubility of the drugs [American Association of Pharmaceutical Society, AAPS]
3. 2009, Eutectic formation using PEG 400, [AAPS]
4. 2009, Eutectic formation using disposable syringe method, [AAPS]
5. 2008, Effect of the pH on the solubilization of the drugs in the Micelle, [AAPS]
6. 2007, Solubility of the sparingly soluble drugs using PVP, [AAPS]
7. 2004, Synergic drug evaluation, [Armed Forces Hospital].
8. 2004, Asthma & Counseling in asthmatic patient, [Armed Forces Hospital].

Many of life's failures are people who did not realize how close they were to success when they gave up.

Thomas A. Edison
Room Location: College of Clinical Pharmacy, Room No: 1026
Ph.: 58000000 Extn.: 1774
Mobile no: + (966)503761265
Email: akhalil888@yahoo.com
nmsgkhalil@hotmail.com


HONORS AWARDED:
- Certificate of Merit, 3rd place award for the best research project, King Abdulaziz City for Science and Technology (KACST), Saudi Arabia, 2005.
- Graduates Scholarship (1993-1997) and Graduate Student Achievement Award (1996), Uni. of Mississippi, USA.


Dr. Ashraf A. Khalil,

PRESENTATIONS:


SKILLS:

- Enzyme kinetics.
- Multistep (small and large scale) syntheses.
- Chemical modification of natural products.
- Drug metabolism using radiolabeled drugs.
- Preparation of radioligands using different nuclides e.g. Tc-99m and Re-188.
- Handling of radioactive isotopes e.g. $^{14}$C, $^{54}$Mn, Tc-99m and Re-188.
- Isolation and purification of the natural products, utilizing successive solvent extraction, normal and reversed-phase chromatography (including TLC and HPLC), distillation and crystallization.
- Spectroscopic identification of natural products utilizing NMR (1D and 2D), UV, IR and MS.
- Hands on experience with the following instruments: Bruker Avance 300 and 400 MHz NMR, Varian 400 MHz NMR, Beckman Model DU-50 spectrophotometer, Perkin-Elmer Infrared spectrophotometers, HP 5973.


What you earn depends on what you learn.
President William Clinton
ASSOCIATE PROFESSOR, MEDICINAL CHEMISTRY

TEACHING EXPERIENCE: 20 years experience in teaching medicinal chemistry and general chemistry.

RESEARCH INTEREST:
Design and synthesis of bioactive molecules including anticancer, antimitotic agents, anti-inflammatory agents and aldose reductase inhibitors.

PUBLISHED PAPERS: 14 publications

LIST OF PUBLICATIONS:


**Current International Collaborations:**

1. Professor **Susan L. Bane** Research group; Department of Chemistry, State University of New York, Binghamton, NY, USA. Research Project title: Design and synthesis of 3-aryl-pyrimidino[4,5-c]quinolines as potential antitumour agents. Manuscript preparation is in progress.

2. Professor **Dimitris Kletsas** Research group; laboratory of cell Proliferation and Aging, Institute of Biology, national Centre of scientific research "Demokritos", Athens, Greece. Research project title: design and synthesis of novel 3-aminopyrimidino[4,5-c]quinolines as potential antitumour agents.

3. Professor **Federico Da Settimo** research group; Department of Pharmaceutical Sciences, University of Pisa, Pisa, Italy. Research project title: Design and synthesis of novel potent and selective aldose reductase inhibitors as potential therapeutic candidates for diabetic complications.

4. Professor **Paolo La Colla** research group; Dipartimento Di Biologia Sperimentale, Universita Di Cagliari, Monserrato, Italy. Research Project title: Cytotoxic and tubulin polymerization inhibitory activity of certain 5-arylamino-4H-1,2,4-triazoles.

**Invited presentations:**


Drug discovery: serendipity and nature inspiration. Gwatha Hall, King Faisal University, Hufuf city, Al-Ahsa.

*If your plan is for 1 year, plant rice. If your plan is for 10 years, plant trees. If you plan is for 100 years, educate children.*
4. Dr. Tanveer A. Khan

B-Pharm; M-Pharm; University of Karachi, Ph.D. USM, Malaysia.

ASSOCIATE PROFESSOR, PHARMACEUTICS

PROFESSIONAL EXPERIENCES: About 15 years of Professional experiences in academia, government sector, and pharmaceutical industry.

RESEARCH AND TEACHING INTEREST:
1. Drug Formulation and Dosage Forms Design/Pharmaceutical Preparations.
2. Physical Pharmaceutics, and Biopharmaceutics.
5. Formulation of softgels from Halal Source.

LIST OF PUBLICATIONS:


AWARDS/ACHIEVEMENTS AT THE NATIONAL & INTERNATIONAL LEVEL


When you play, play hard; when you work, don’t play at all.
5. Dr. Sree Harsha

M.Pharm & Ph. D, Rajiv Gandhi Uni. Health Sciences, India

ASSISTANT PROFESSOR, PHARMACEUTICS

TEACHING EXPERIENCE: 11 years of experience in teaching pharmaceutics, pharmacokinetics & biopharmaceutics and physical pharmacy.

RESEARCH INTEREST:

1. Targeted Drug Delivery Systems
2. Novel Drug Delivery Systems

LIST OF PUBLICATIONS:


**Presentations:**

1. The effect of process parameter on preparation of biodegradable polymeric nanospheres, ICNAM 2009, International Conference for Nanotechnology and Advanced Materials, University of Bahrain, BAHRAIN.

2. Preparation and evaluation of Nanospheres: Liver Targeting, ICNAM 2009, International Conference for Nanotechnology and Advanced Materials, University of Bahrain, BAHRAIN.


**Skills**

1. Proficient in all leading word and numerical processing packages Corel Draw

2. Data analysis and statistics like Sigma Plot and Design of Experiments.

**KFU GRANTS:**


Mahesh Attimarad, Ahmaed O. Alnajjar, Shree Harsha N Simultaneous Estimation Of Metformin And Miglitol By High Performance Liquid Chromatography (2011-2012) (92,400 SR)

Dr. Sree Harsha, Dr. Mohammed Dr. Al-Wesali, Dr. Sahibzada Tasleem Rasool Exploring the Anti-Leishmaniasis Activity of Phoenix Dactylifera (Date Palm) (99,400 SR) (Completed)

Mahesh Attimarad, Ramachandra setty, , Sree Harsha Nagaraja, Simultaneous Estimation of Flavoaxte HCl and Ofloxacain by High Performance Liquid Chromatography. (71,400 SR) (Completed)
6. Dr. Mahesh Attimarad

B.Pharm Gulbarga University, M.Pharm; Bangalore Uni, Ph.D. Rajiv Gandhi Uni. Health Sciences, India

ASSISTANT PROFESSOR, PHARMACEUTICAL & ANALYTICAL CHEMISTRY

TEACHING EXPERIENCE: 13 years of experience in teaching pharmaceutical chemistry, medicinal chemistry and analytical chemistry.

RESEARCH INTEREST:

1. Development of new analytical methods for drug molecules
2. Microwave assisted synthesis of organic compounds.
3. In-vitro antioxidant screening.
4. Screening for anti-inflammatory and analgesic activities.
5. Bioavailability studies in rodents.

LIST OF PUBLICATIONS:


Papers Accepted in International Conferences

1. Mahesh Attimarad, Development of HPLC Analytical Method With Programmed Wavelength UV Detection for Simultaneous Determination of Paracetamol and Lornoxicam in Tablet" accepted for Oral presentation at First United Arab Emirates Conference on Pure and Applied Chemistry, American University of Sharjah, UAE, held during 1-3 March, 2011
7. Dr. Mueen Ahmed. K K

B-Pharm M-Pharm; Bangalore University, Ph.D. Dr. H. S. Gour University, India

ASSISTANT PROFESSOR, PHARMACOGNOSY

TEACHING EXPERIENCE: 13 years of teaching experience

RESEARCH INTEREST:
1. Screening of natural products for pharmacological activity with special emphasis on cardiovascular activity.
2. Plant metabolic profiling.

LIST OF PUBLICATIONS:

“Whoever has not made any improvements in one day has lost.”


Grants

Received AICTE’s CAYT grant of Rs. 10.5 Lakhs for the period of three years from the year 2008.

Received KFU annual research Grant “Studies on Metabolomic profiling of Saudi Arabian Medicinal Plants through the integration of Metabolomics and Fluxomics”
8. Dr. Noor Kamil

B. Pharm M. Pil; Ph.D. Karachi University, Pakistan

ASSISTANT PROFESSOR, PHARMACOLOGY

TEACHING EXPERIENCE: 8 years of Pharmacology teaching to undergraduate (MBBS, BDS and Pharm D) and post graduate (MPhil and PhD) in medical dental and pharmacy colleges.

RESEARCH INTEREST:
1. Antineoplastic toxicity
2. Neurochemical and behavioral pharmacology

LIST OF PUBLICATIONS:

"Anger spoils Faith as much as vinegar spoils honey."


Other Literary Work

1. Article on ‘The Compounding Pharmacist’ in Farmacia 2001

2. Article on ‘Role of Pharmacist as a primary health caregiver’ in The Pharmacist issue 01/July 2003

3. Article on ‘Pharmacogenomic’, ‘How to prepare a curriculum vitae’, and ‘what is compounding’ in Farmacia 2003-2004


Special Skills

- Training of Trauma Psychology & Psychotherapy
- Gene isolation and detection
- Molecular Biology and the genetics in Humans: Urology and Health, Disease and the environment
- Hand’s on training of Molecular Genetics
- Laparoscopic Techniques in Urology
- Orientation of Electron Microscope

Words are, of course, the most powerful drug used by mankind.
9. Dr. Fatma Abdel Kader Mohamed Moharram

B. Pharm M. Pharm & Ph.D. Cairo University, Egypt

PROFESSOR, PHARMACOGNOSY

TEACHING EXPERIENCE: Pharmacognosy, Phytochemistry, Chromatography, Herbal medicine, Biosynthesis and Spectroscopic methods of structural elucidation, including UV, MS, NMR, IR and other instrumental methods of analysis courses at the graduate and undergraduate levels as well as Learning Skills and Introduction to pharmacy profession to undergraduate levels

RESEARCH INTEREST:

1. Isolation and structural elucidation of the natural products (tannins, flavonoids, lignans…) by the use of different chromatographic and spectroscopic techniques.

2. Examination of some biological activities (e.g. Antitumor, Antioxidant, Hepatoprotective, antidiabetic or Antiinflammatory,…) of the investigated extracts or pure isolates.

LIST OF PUBLICATIONS:


9. Dr. Fatma Abdel Kader Mohamed Moharram


**Participation in International Conferences, Workshops & Meetings**


8. 4th Conference of pharmaceutical sciences, 6-7 March, 2004, Faculty of Pharmacy, Assuit University, Assuit, Egypt (Three abstracts in poster presentation).

9. 5th Conference of pharmaceutical sciences, 7-8 March, 2006, Faculty of Pharmacy, Assuit University, Assuit, Egypt (Three abstracts in poster presentation).

10. 55th International Congress and Annual Meeting of the Society for Medicinal Plant Research September 2-6, Graz, Austria (2007).
10. Dr. Safaa Shafik Toubar

B. Pharm, M Pharm, Mansoura Uni, Egypt, Ph.D. Mansoura University, with Glasgow University (UK)

ASSOCIATE PROFESSOR ANALYTICAL CHEMISTRY

TEACHING EXPERIENCE: 32 years teaching experience

RESEARCH INTEREST:

LIST OF PUBLICATIONS:


There is no substitute for hard work.
Thomas Edison


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He who never made a mistake never made a discovery.


There are two things to aim at in life: first, to get what you want; and, after that, to enjoy it. Only the wisest of mankind achieve the second.
11. Dr. Azza Ali Hasan Soliman

BSc, MSc and Ph.D. Zagazig University, Egypt

ASSISTANT PROFESSOR, PHARMACEUTICS

TEACHING EXPERIENCE: 17 years experience in teaching Pharmaceutics and Industrial Pharmacy.

RESEARCH INTEREST:
1. Formulation and evaluation of certain controlled release drug delivery systems, such as Liposomes, Niosomes, Nanospheres,
2. Ocular drug delivery system.

LIST OF PUBLICATIONS:


\[\text{We don't know half of one millionth of 1 percent of anything. - Thomas Alva Edison}\]
ADHESIVE OF PHARMACEUTICAL SCIENCES

12. Dr. Arshia Shariff

B. Pharm, Govt. College, M. Pharm, Al-Ameen College Ph.D, Annamalai University, India

ASSISTANT PROFESSOR

TEACHING EXPERIENCE : 12 years teaching experience

RESEARCH INTEREST :
1. Study on drug polymorphism.

LIST OF PUBLICATIONS:
**PAPERS PRESENTED IN CONFERENCES**

1. Formulation of Topical Antiacne Gel Containing Herbal Extracts at Current Trends in Bio-Analytical Techniques Conducted at Krupanidhi College of Pharmacy, (Feb 2009) at Bangalore.

**STUDENTS GUIDED FOR MASTERS IN PHARMACY**

13. Dr. Sheeba Shafi

B. Sc, M. Sc, Ph.D, AMU, Aligarh, India

ASSISTANT PROFESSOR

TEACHING EXPERIENCE: 8 years of teaching experience, I am engaged in teaching general and organic chemistry and its application as a basis for the student of the medical science to the undergraduate and postgraduate students. I have a thorough understanding of human metabolism, which involves the knowledge at the molecular level.

RESEARCH INTEREST: Separate study of $^1$H-$^1$H NMR (Homonuclear cosy NMR spectroscopy) and $^1$H-$^{13}$C-NMR (Heteronuclear cosy NMR spectroscopy) for the elucidation of complex chemical compounds.

Study and interpretation of noble steroidal compounds with the help of two dimensional nucleomagnetic resonance (2D-NMR) spectroscopy.

Synthesis, Chemical and spectral studies of steroidal oxathiolanes and spirothiazolidinones for configurational study.

Synthes, Chemical and spectral studies of palladium catalysed coupling reactions of estradiol.

LIST OF PUBLICATIONS:


PAPERS PRESENTED IN CONFERENCES


2. Sheeba Shafi, Suhail Ahmad, Photoadduct and steroidal --unsaturated ketone with coumarins. 88th Indian Science Congress, New Delhi, 3-7 Jan., 2001.


1. Dr. Sherif W. Mansour

MBBCH, M. Sc, & Ph.D. Zagazig University, Egypt

PROFESSOR, PHYSIOLOGY

TEACHING EXPERIENCE: 26 Years experience in teaching endocrinology, cardiovascular physiology, physiology of the cell, renal physiology, neurology and respiratory physiology, haematology and metabolism.

RESEARCH INTEREST: C.V.S., Liptin, melatonin, exercise, diabetes Mellitus, G.I.T. motility, haemostasis and factors affecting it and angiotensin – II receptors with portal hypertension – adiponectine variation with exercise – cytokines and CVS.

LIST OF PUBLICATIONS:


11. Chronic zinc administration improves endothelial cell function and vascular reactivity in experimentally-induced diabetes mellitus in rats. The journal of the Egyptian society of pharmacology and experimental therapeutics.


We may not always get what we want, but surely we will get what we deserve. It's always too soon to quit.
2. Dr. Hafez R. Madkour

B. Sc, M. Sc & Ph. D. Assiut University, Egypt

ASSISTANT PROFESSOR, MEDICAL AND CLINICAL BIOCHEMISTRY

TEACHING EXPERIENCE: 13 years of experience, teaching basic, medical and clinical biochemistry and molecular biology.

CURRENT PROJECTS & RESEARCH INTEREST:

1. Anti-angiogenic Activities of Some Saudi Medicinal Plants on Experimentally Induced Breast Cancer in Rats
3. Possible treatment and finding of new diagnostic tools for diabetes mellitus.
4. Possible treatment and prevention of progress of chronic liver diseases including Chronic hepatitis, Liver cirrhosis, and hepatocellular carcinoma.
5. Possible treatment of male and female infertility.
6. Role of angiogenesis and apoptosis in pathogenesis of some chronic diseases.

LIST OF PUBLICATIONS:


Papers Submitted for reviewing: (In process)

1. Endothelial injury and distribution of serum lipids and lipoproteins in children with b thalassemia

2. Serum and placental tissues Levels of Interleukin-1beta and in women with preeclampsia.
Scientific Conferences and Workshops attended:


2. The First Congress of Biochemistry, Department of Biochemistry, Assiut University, Assiut, Egypt, December 21-23, 2005.


4. Workshop entitled "The First Pharmacy Day", National Guard Health Affairs, Eastern Region; King Abdul Aziz Hospital, Al Ahsa. 21/10/2008.

5. Workshop on "The Role of Saudi Commission For Health Specialties", College of Clinical Pharmacy, KFU, KSA; 28/10/2008

6. Supervisor on a Scientific trip to Jamjoom Company for Pharmaceutical products, Jeddah, College of Clinical pharmacy, King Faisal University, KSA, 12-13/4/1429 H

7. Supervisor on a Scientific trip to Al-Kaseem Company for Pharmaceutical products "SPIMACO ADDWAEIHI", Al-Kaseem College of Clinical pharmacy, King Faisal University, 20-22/5/2009 H


Experimental Skills

1. Basic Biochemistry Techniques including quantitative Immuno- and spectroscopic assays.

2. Qualified experience with ELISA and RIA Techniques.

3. HPLC and other chromatographic techniques.

4. DNA isolation (Bacteria, blood and plasmid)

5. PCR, Agarose gel electrophoresis, restriction digestion and DNA purification and ligation.

6. Transformation and Protein purification.

7. SDS –PAGE electrophoresis
3. Dr. Muhammad Shahzad Chohan

M.phil Uni Health Sc, Lahore. M.B.B.S. Nishter Med College, Multan, Pakistan

ASSISTANT PROFESSOR,
ANATOMY AND HISTOLOGY

TEACHING EXPERIENCE: 10 years of teaching experience in teaching Gross anatomy, Embryology, Neuroanatomy and Histology.

CURRENT PROJECTS & RESEARCH INTEREST:

1. Paraquat induced spleen toxicity (in progress)
2. Paraquat induced hepatotoxicity
3. Paraquat induced adrenal toxicity (in progress)

Workshops attended

1. A research workshop on RESEARCH METHODS at University of health sciences Lahore. Pakistan in 2005
2. REAL TIME PCR WORKSHOP at University of health sciences Lahore. Pakistan in 2005
3. Workshop on Academic Advising At king Faisal university, KSA in 2011

Every child should have a caring adult in their lives. And that's not always a biological parent or family member. It may be a friend or neighbor. Often times it is a teacher.
ASSISTANT PROFESSOR, MICROBIOLOGY AND IMMUNOLOGY

TEACHING EXPERIENCE: 9 years of experience in teaching biochemistry, microbiology, molecular biology, immunology.

RESEARCH INTEREST: Viruses disrupt immune system and among various other aberrations, expression of several immunologically important cytokines is also altered during viral infections. My research is focused on elucidation of the interplay between viruses and the novel cytokines. On one hand I am interested in finding the effects of viruses on interleukins while on the other hand I am also keen to explore the mechanisms through which these cytokines affect different viruses.

LIST OF PUBLICATIONS:


8. S T Rasool, The synergistic effects of organotin compounds in Polysorbate 80 as a chronic nerve toxin, University of Scranton, PA 18510 USA, 2000 (Thesis)


Conference Presentations.


4. Dr. Asia Taha

B.Sc (General Sci), M. Sc (Biochem), & Ph.D Jamia Millia Islamia, New Delhi, India

ASSISTANT PROFESSOR, BIOCHEMISTRY

TEACHING EXPERIENCE: 3 years of teaching experience in teaching Biochemistry. Guest Faculty for teaching Animal Physiology and Biophysical Chemistry.


LIST OF PUBLICATIONS:


**Conference**

1. Anti-Diabetic Effect of Trigonella foenum graecum on Altered Membrane Functions in Alloxan Diabetic Rats. 2nd International Conference on Trends in Cellular and Molecular Biology. January 5-7, 2008, School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.


4. Effect of Experimental Diabetes on DNA Degradation, GLUT4 translocation and Membrane linked function in rat tissues and their reversal by insulin and antidiabetic compounds. 76th Annual meeting of Society of Biological Chemists (India), 25-27 Nov 2007. Sri Venkateswara University, Tirupati, India.
1. **Dr. Afzal H. Asif**

MBBS, BZ University, Pakistan, University of Punjab, Pakistan,

ASSOCIATE PROFESSOR, PHARMACOLOGY & THERAPEUTICS

TEACHING EXPERIENCE: 24 years experience in teaching and research in pharmacology

RESEARCH INTEREST:
1. Protection against Aminoglycoside induced nephrotoxicity
2. Anti hyperlipidemia Anti arrhythmic and anti diabetic activity of indigenous plants

LIST OF PUBLICATIONS:


23. NA Noor, GMD Chauhdry, M.Masood, A.H. Asif, Acute poisoning in Adults in Multan (letter); JPMA: 38(11); 1988.


25. A.H. Asif, Role of Pyridoxal-5-Phosphate in Protection Against Aminoglycoside induced Nephrotoxicity Thesis approved by the University of Punjab, for Postgraduate Degree in Pharmacolog: 1995.

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I never did anything worth doing by accident, nor did any of my inventions come by accident; they came by work. Thomas Edison
ASSOCIATE PROFESSOR, PHARMACOLOGY

TEACHING EXPERIENCE: 21 years of experience, teaching Pharmacology, Therapeutics, Hospital Pharmacy, Clinical trials, Drug marketing and monitoring including Evidence based medicine.

RESEARCH INTEREST:

1. Psychopharmacology
2. Cancer treatment
3. Cardiovascular pharmacology
4. Drug interactions
5. Non-opiate treatment of opioid dependence

LIST OF PUBLICATIONS:


6. Dr. Muhammad aslam channa, Dr. Muhammad ashfaq, Dr. Sibghatullah sangi, Dr. Muhammad Baqar soomro Toxicity of Ciprofloxacin; preventive role of zinc chloride on appearance of secondary ossification centers in wistar albino rat litters The professional vol:11, No:01, 2004


10. Dr. Muhammad Aslam channa, Dr. Muhammad zahoor janjua, Dr. Muhammad Baqir soomro, Dr. Sibghatullah sangi, Protective role of Anti-oxidant against hepatotoxicity by ciprofloxacin in wistar albino rats, THE PROFESSIONAL vol:10, No:03, 2003.


3. Mr. Tahir M. Khan

B.Pharm, University of Peshawar, M. Sc, Clinical Pharm, University Sains Malaysia, Malaysia

ASSISTANT PROFESSOR,

TEACHING EXPERIENCE : Four year Experience of teaching Pharmacy Practice

RESEARCH INTEREST :
1. Social and Clinical Aspects of Mental Health and Psychological disorders
2. Epidemiological Study Design For Infectious diseases
3. Drug Use Evaluation
4. Cross-sectional and Interventional study Designs for TB, Depression and Renal Disorders
5. Research in Social and administrative aspects of Pharmacy
6. Social and Behavioural Medicines

LIST OF PUBLICATIONS:


9. Tahir .M. Khan et al., Community knowledge, attitudes and beliefs towards depression in the state of Penang, Malaysia. Community Ment Health J. 2010 Feb ;46 (1):87-92 20146000


3. Mr. Tahir M. Khan


*If you judge people, you have no time to love them.*  
*Mother Teresa*
3. Mr. Tahir M. Khan

Presentation at Conferences


“Analysis of a sample is not the true aim of analytical chemistry… the real purpose of the analysis is to solve a problem.”
**Gas Chromatograph / Mass Spectrometer (GC/MS)**

GCMS is the technique for separation of thermally stable and volatile compounds and detection of these compounds by mass spectrometer.

- **Make / Model**: Shimadzu, GCMS-QP2010
- **Carrier gas**: Helium
- **Mass Range**: 10-1500 m/z
- **Resolution**: R>2M (FWHM)
- **Maximum temp**: 450°C

This instrument is used for qualitative and quantitative determination of organic and Pharmaceutical compounds in biological samples, separation and identification of unknown compounds, trace analysis and determination of isotopic contents, analysis of herbicides, pesticides, structural elucidation of molecules etc.

**Liquid Chromatograph / Mass Spectrometer (LC/MS)**

LC-MS, (alternatively HPLC-MS) is a technique that combines the physical Separation capabilities of HPLC with the mass analysis capabilities of mass spectrometry. If the molecules are a nonvolatile and polar macromolecule, the choice would be LCMS for the separation and identification.

- **Make / Model**: Agilent LCMS– 1200 series
- **Mass Range**: 10-1500 m/z
- **Mass Accuracy**: ±0.13 U

LC-MS is very commonly used for qualitative and quantitative analysis in pharmacokinetic studies of pharmaceuticals, proteomics, Drug discovery and development.
**High Performance Liquid Chromatography (HPLC)**

HPLC, the most powerful of all the chromatography techniques, can often easily achieve separations and analyses that would be difficult by other techniques. HPLC methods use a special kind of column and a mobile phase.

Make / Model: Shimadzu class LC-20AT

Detectors: UV/Visible and fluorescence

HPLC is one of the most widely used analytical techniques. The speed, versatility and reliability of HPLC have been major factors for its acceptance both as a research tool and for routine analysis. With a variety of column packings and solvents, HPLC can be used in various areas.

**FTIR Spectrophotometer**

FTIR can be routinely used to identify the functional groups and identification/quality control of raw material/finished products. High signal to noise ratio makes FTIR more useful for difficult samples.

Make/Model: Shimadzu, FTIR-8400S

Scan range: 4000 cm\(^{-1}\) to 400 cm\(^{-1}\)

Resolution: 1 cm\(^{-1}\)

IR absorption has numerous applications in qualitative and quantitative analysis.

**UV-Visible Spectrophotometer**

The optical absorption by samples in the ultraviolet and visible regions are measured with this instrument. The absorption of light is directly proportional to the concentration of the components. In this region of the electromagnetic spectrum, molecules undergo electronic transitions.

Make/Model: Shimadzu, UV-1700

Spectrum Range: 1100-190 nm

Wavelength accuracy: ±0.1nm

UV/Vis spectroscopy is routinely used in the quantitative determination of solutions of transition metal ions and highly conjugated organic compounds.
Atomic Absorption Spectrophotometer

Atomic absorption spectrophotometry provides accurate quantitative analyses of trace elements (ppm level) in a variety of samples from different fields including organic matters, pharmaceutical samples, medical samples, rocks etc. Samples are analyzed in solution form, so solid samples must be leached or dissolved prior to analysis.

Make / Model : Shimadzu, AA-6300
Carrier gas : Acetylene
Wavelength Range : 185-900 nm
Detector : Photo multiplier and semiconductor

This instrument is used for Qualitative and Quantitative determination of metal ions in biological samples. Further it is very useful in the quality control of most of the industries.

Spectrofluorophotometer

Spectrofluorophotometer is a type of electromagnetic spectrophotometer which analyzes fluorescence from a sample. It involves using a beam of light, usually ultraviolet light, that excites the electrons in molecules of certain compounds and causes them to emit light of a lower energy.

Make / Model : Shimadzu, RF-5301PC
Wavelength Scan Range : 220-900 nm and zero order light
Wave length accuracy : ±1.5 nm
Detector : Photomultiplier tube

It is used in biochemical, medical, and chemical research fields for analyzing organic compounds.

"Anger is a destroyer for the heart of a sage; and he who does not have his anger under his control does not have his wisdom under his control, either."
**Differential Scanning Calorimeter (DSC)**

**Differential scanning calorimetry** is a thermoanalytical technique in which the difference in the amount of heat required to increase the temperature of a sample and reference are measured as a function of temperature. Both the sample and reference are maintained at nearly the same temperature throughout the experiment.

- **Make / Model**: Perkin Elmer
- **Temperature Range**: -150 °C to max. 700°C
- **Measurement range**: ± 350 mW at RT
- **Temperature Accuracy**: ± 0.2°C
- **Temperature reproducibility**: ± 0.1°C
- **Heating rate**: RT to 700°C in 7 min
- **Cooling rate**: + 100°C to - 100°C in 15 min

The main application of DSC is in studying phase transitions, such as melting, glass transitions, or exothermic decompositions, chemical kinetics etc.

**Thermal Cycler**

The TC-412 provides the researcher with the means of accurately controlling the temperature profile of samples.

- **Make/Model**: Techne/ TC 412
- **Temperature**: Range : 4 °C to 99 °C
- **Temperature accuracy**: ± 1 °C
- **Heating rate**: 2.5 °C/sec
- **Cooling rate**: 1.3 °C/sec

It has many scientific applications including DNA amplification, sequencing and polymerase chain reactions (PCR).
The VERSAmax reader is used to detect biological, chemical or physical events of samples during different types of assay. The narrowly focused light beam and optical design give the same high performance with round bottom, flat bottom, or half area well plates. The dual-wavelength readings report the actual absorbance at each wavelength. The reader also provides controlled temperatures, up to 45°C, for kinetics at ambient and elevated temperatures.

Make / Model : VERSAmax

Wavelength Range : 340-850 nm

Wavelength Accuracy : ±1.0 nm

Detector : Silicon Photodiode

The VERSAmax reader covers a wide range of applications. Microbial growth/MIC IC 50s/LD 50s, Endpoint ELISAs/EIAs, Cytoproliferation/cytotoxicity, Colorimetric protein, Kinetic ELISAs/enzyme assays, Platelet aggregation, Bacterial identification, Clotting/clot lysis.

Polarimeter can be used to measure various optical properties of a material, including linear birefringence, circular birefringence (also known as optical rotation or optical rotary dispersion), linear dichroism, circular dichroism and scattering.

Make/ Model : Bellingham, Polarimetry ADP220.

Range : -90 to +90 °A

Resolution : 0.01

Accuracy : 0.02

Light source : LED/Interference filter (589.3 nm)

Reading time : 15 sec

Temperature : 5-40 °C

Optical density range : 0.0 to 2.0 OD

Used for the determination of PURITY, Specific Rotation, Concentration and inversion of optically active compounds.
Double beam scanning densitometer is employed for both the *accurate identification* of the spot position and the *precise quantitative estimation* of TLC plate, one-dimensional and two-dimensional electrophoregrams, and micro plates content. The zigzag scanning method using flying spot method will eliminate errors caused by irregular shape of chromatographic spots.

**Make /model**: Shimadzu, CS-9301PC

**Measuring wavelength range**: 200-650 nm

**Photometric system**: Double-beam monitor, dynode feedback system

**Measuring mode**: Transmission- or reflection-absorption photometry in single or dual wavelength method.

**Sample scanning mode**: Zigzag scanning with the flying spot method

**Scanning range**: X direction 5 ~ 195 mm  
Y direction: 2 ~ 185 mm

**Scanning speed**: Linear scanning: 125 mm/min.  
Zigzag scanning: 0.4W x 0.4H mm/min

The reliable densitometry of TLC, DNAs, electrophoretic gels, micro plates and even study of solid surface can be used for qualitative and quantitative analysis of proteins and DNAs.

*The only disability in life is a bad attitude.*
Elemental Analyzer

This analyzer measures the amount of C, H, N, O, and S in samples by the rapid combustion of small amounts (1-2 mg) of the sample in pure oxygen (Dumas method or "flash combustion"). Catalysts are present at high temperature of around 1100° Celsius.

Make / Model : Euro EA3000
Front Furnace : up to 1100°C
GC Oven : temperature from 40 up to 190°C
TCD detector : Thermal Conductivity detector
Lab Conditions : Room Temp. max. 30°C, Humidity max 75%.
Gas Needed : He:99.995% (GC Grade), O₂ :99.998% (Transistor grade)

Micro and macro determination of total nitrogen, carbon, sulphur and hydrogen present in a wide range of organic and inorganic compounds of any type, soil, plant material, pharmaceuticals, foodstuffs and drinks, waste material, carbon and oil, tobacco, polymers and many more.

Gel Electrophoresis

Gel electrophoresis is process in which molecules (such as proteins, DNA, or RNA fragments) can be separated according to size and electrical charge by applying an electric current to them while they are in a gel.

Used power in standby mode : Developing unit 6 W
Migration mode 6 W
Used power in running mode : Developing unit 150 W
Migration mode 16 W
Fuses : 2x 1,25 A slow Blow (developing unit)
2 x 500mA Slow blow (Migration unit)
Speed : approx. 8 tests / hour

Gel electrophoresis is used in forensics, molecular biology, microbiology and biochemistry. Gel electrophoresis is used to provide genetic information, to separate and identification of proteins, scientific dyes. Human DNA can be analyzed to provide evidence in criminal cases, to diagnose genetic diseases, and to solve paternity cases.
Rotary tablet press is used for pressing various granular/powdered raw material into shaped tablets or compacts. It is an important type of tablet punching machine. Also known as multi-station tableting presses, rotary tablet press make use of a punch and die system together with multiple stations or punches for compacting raw material into tablets.

Make / model: Erweka, TRB 16

For round - and odd shaped tablets

TRB 16 max. diameter / length 18 mm

The compression force can be adjusted up to 4 tons

Max. Filling Depth 17 mm

Up to 38,000 tablets/h (TRB16) maximum output.

Rotary tablet press is used to press medicinal tablets, catalysts, calcium coffee pills, candies. It can also be used to compress various tablets of pesticide and fertilizer in small-batch production.

Freeze-dryer

Freeze drying, (lyophilization) uses both a vacuum and a freezing process to remove water from perishable foods and medicines. The result is a product that can be stored at room temperature for years without spoilage, or packed in limited storage spaces and reconstituted with water later. Freeze drying is also used in the pharmaceutical industry to preserve the integrity of air or moisture-sensitive medicinal compounds, particularly those of biological origin, such as enzymes, blood plasma, vaccines, etc.

Experience is a hard teacher because she gives the test first, the lesson afterwards.
“When man takes one step to God, God takes ten steps towards him. But the first step is to be taken by man”