STAFF RESEARCH HANDBOOK

COLLEGE OF CLINICAL PHARMACY
KING FAISAL UNIVERSITY
clinicalpharmacy@kfudu.edu.sa
College Mission

The primary mission of the College of Clinical Pharmacy at King Faisal University is to promote comprehensive pharmaceutical care to the citizens of the Kingdom of Saudi Arabia through its fundamental commitment to education, service and research by training clinical pharmacy professionals. This is to be achieved through a dynamic, challenging and comprehensive curriculum leading to a Doctor of Pharmacy (Pharm. D.) degree. Focused on the future it is envisaged that the Pharm. D. graduates will be potential leaders in the profession and will be competent in providing quality and cost-effective pharmaceutical care and pharmacy services all over the Kingdom. Consistent with the King Faisal University tradition, the College would bring together dedicated faculty and competent students in a supportive teaching and learning atmosphere that encourages continuous intellectual and personal development. The College is also committed to provide specialized post-graduate programs in different branches of Clinical Pharmacy and encourage research in basic and applied Pharmaceutical sciences. It will promote innovative educational strategies relevant to the region and be socially responsible and accountable to the society.

College Vision

The College of Clinical Pharmacy in King Faisal University to be recognized nationally and internationally for its innovative approach in the field of Clinical Pharmacy Education, excellence in Pharmacy services, Clinical Pharmacy, Research and Social Commitments.
COLLEGE OF CLINICAL PHARMACY
KING FAISAL UNIVERSITY

Dr. Mohammed. S. Al Wesali, Dean

Committee of Research, Labs and Books

Dr. Kamel A. Metwally

Dr. Sherif W. Mansour  Dr. Hafez R. Madkour

Dr. Sahibzada T. Rasool  Dr. Mahesh Attimarad
1. Dr. Ibrahim I. Mahmoud

BSc Alexandria Uni, MSc Cairo Uni, PhD Illinois Uni., USA

PROFESSOR, PHARMACOGNOSY

TEACHING EXPERIENCE: 40 years experience in Phytochemistry, pharmacognosy and biosynthesis.

PUBLISHED PAPERS: 57 publications

PUBLICATIONS:


4. Melek F. R; Miyasd, T; Soad M. A.,Ibrahim I. M; and Suzan A. M, (2004), Saponins and Acylated Saponins from *Diazygothica kercheviana*, *Phytochemistry*, 65, 3089-3095.


6. El-Dib R; Kolodziej H; Ibrahim I. M; Sablacaurin A and B, two 19-nor-3,4-seco-lanostane type triterpenoids from *Sabal causiarum* and *Sabal blackburniana* respectively; (2004), *Phytochemistry*, 65, 1153-1157.


8. Ibrahim I. M; Moharram F. A; Marzouk M. S;Soliman H. M. and El-Dib R.; (2001), Two New flavonol Glycosides from leaves of *Koelreuteria paniculata*, *Die Pharmazie*, 56 , 7-12.


11 Ibrahim I. M; Moharram F. A; Elgindi, M. R; Marzouk M. S; Notle. J ; and Hassan A. M; (2002), Essential Oils from Two Species of Eugenia, Bull.Fac.Pharm. ,Cairo University, 242-8.


13 Ibrahim I. M; Moharram F. A; Marzouk M. S; Linscheid M. W and Saleh M. I., (2001), Polyphenolic constituents of Callistemon taceolatus , Phytochemistry, 57, 494-6.

14 Ibrahim I. M; Marzouk M. S; Moharram F. A; El-Gindi M. R and Hassan A. m. K; (2001), New Acylated Flavonol Glycosides from Eugenia jambolana leaves, Phytochemistry, 58,1239-45.


17 Ibrahim I. M; Moharram F. A; Marzouk M. S;Soliman H. M. and El-Dib R.; (2001), Two New flavonol Glycosides from leaves of Koelreuteria paniculata, Die Pharmazie, 56, 7-12.


Dr. Ibrahim I. Mahmoud


39 El-Sebai I. and Ibrahim I. M., (1987), Medicinal Plants in Arab Countries, Medicinal Plant Congress held in Sansepolcro, Italy.


2. Dr. Mahmoud H. Kourish
BSc & MSc Assiut Uni, PhD Chiba Uni, Japan and Al-Azhar Uni,

PROFESSOR, PHARMACOGNOSY

TEACHING EXPERIENCE: 30 years experience in phytochemistry, applied pharmacognosy and herbal medicine.

RESEARCH INTEREST:
Phytochemistry, applied pharmacognosy, pharmacognostical studies, botany, tissue culture, chemistry and biology of lupin alkaloids, herbal medicine and hypoglycemic plants.

PUBLISHED PAPERS: 59 publications

PUBLICATIONS:


9 M.S. Kamel, M.H. Mohamed, S.A. El-Moghazy and A.A. Ali: Steroidal Glycosides from the Fruits of Balanites aegyptica Del.,

10 S.A. El-Moghazy, M.S. Kamel and M.H. Mohamed: Essential Oil of Aphanamixis rohituka Wall,


   • This is also presented by Prof. Mahmoud Hamed at the 9th American Association of Pharm. Sci. (AAPS), San Diego, abstract 5009, S-119 (1994) U.S.A.


Dr. Mahmoud H. Kourish


    ● This is also presented by Prof. Mahmoud Hamed at the American Society of Pharmacognosy Conference, Abstract p-35. July, 1998, Coronado Springs Resort, Orlando, Florida, U.S.A.


27 A. Assi, M.H. Mohamed, M.M. Abdel-Rahman and I. Murakoshi. Biological activities of some Lupine alkaloids.
    ● The 16th Annual Scientific Conference, Faculty of Medicine, Assiut University, Assiut , Egypt; Mar 9-12 PP. 30 (1998)


    ● This also presented by Prof. Samia Mohamed El-Sayyad at the International Botanical Congress, Saint Louis, August (1999), U.S.A.


32 M. H. Mohamed, 13a-hydroxy-17-oxolupanine, A New Lupin Alkaloid from Lupinus subcarusosus Hook Herb.
    ● presented by Prof. Mahmoud Hamed in the 60th International Congress. of FIP (2000) Vienna, Austria.

34- M.A. El-Shanwany, H.A. Hassanane, M.H. Mohamed and A.A. Nafady; A New Oleanene Triterpene and Hydroxy Fatty Acid from Gladiolus segetum Ker-Gawl.
- This is also presented by Prof. Mahmoud Hamed in the 60th International Congress. Of FIP Vienna, Austria (2000).

- This is also presented by H.A. Hassanane in the 6th European Congress of Pharmaceutical Sciences, September Budapest, Hungary.

36 M.A. El-Shanwany, H.A. Hassanane, M.H. Mohamed and A.A. Nafady; “Chemical Constituents Of Corchorus olitorius L. seeds and Seedling and Quantitative Estimation of its Cardenolides”.


- Presented by Prof. Mahmoud Hamed at the 62th International Congress of F.I.P., August (2002). Nice, France.


Dr. Mahmoud H. Kourish

43 M.H. Assaf, A.A. Sayed, M.H Mohamed, M.S. Ahmed: Chemical and Biological Studies Of Lactuca sativa Growing In Egypt,
● This is also presented at the international 62th Congress of F.I.P., September (2003). Sydney Australia.

● This is also presented in 18th Conference of Kyushu branch of Japanese Pharmaceutical Society, 15-16 December 2001, Kumamto-Japan.


49 H.M. Sayed, M. H. Mohamed, F.M. Darwish and A.M. Mohamed, chemical constituents of Flacourtia cataphracta Roxb cultivated in Egypt, presented the 9th International Conference and Exposition, 17-21 December, NP-04 (2005), Riyadh, Saudi Arabia.

51 M.A. El-Shanawany, M.H. Mohamed, A.A. Khalifa and M.A. Abd
-Allah, xanthone glycosides from Centaurium pulchellum (sw.) druce,
● Presented in the 9th International Conference and Exposition, 17-21 Decem-
ber, NP-27 (2005), Riyadh, Saudi Arabia.

52 M.A. El-Shanawany, M.H. Mohamed, A.A. Khalifa and M.A. Abd
-Allah, Macro-and MicroMorphology of Centaurium pulchellum (sw.) druce,

53 M.A. El-Shanawany, M.H. Mohamed, A.A. Khalifa and M.A. Abd
-Allah, Chemical Constituents of Centaurium pulchellum (sw.) druce, Fi-

54 M.H. Mohamed, Z.Z. Ibrahim, A.M. Abd El Mola and A.A. Abd El Kader,
Macro-and MicroMorphology Macro-and MicroMorphology of Polygonum
bellardii growing in Egypt, Bull. Pharm. Sic. Assiut University, vol. 28, Part

55 M.H. Mohamed, Z.Z. Ibrahim, A.M. Abd El Mola and A.A. Abd El Kader,
Phytochemical and Biological Studies of Emex spiinosa (L.) Campd. growing
(2006)

56 H.M. Sayed, M.H. Mohamed, S.F. Farag, G.A. Mohamed, R.Ebel, O.R.M.
Omowuajo and P. Procksch, Plenolics of Cyperus alopecuroides Rottb. Inflo-
rescences and Their Biological Activities, Bull. Pharm. Sic. Assiut University,

57 M.H. Mohamed, A. Y. Bahait, K.M. El Khanadly and A. A. Abd Allah,
Macro-and MicroMorphology of Sanchezia nobilis fam. Acanthaceae culti-

58 M.H. Mohamed, A. Y. Bahait, K.M. El Khanadly and A. A. Abd Allah,
Chemical Constituents of Sanchezia nobilis fam. Acanthaceae cultivated in

59 Hanaa M. Sayed, M. H. Mohamed, Salwa F. Farag, Gamal A. Mohamed and
Peter Procksch, New Steroid Glycoside and Furochromones From Cyperus
rotundus L., Natural Product Research, 21, 4, 343 (2007) USA.
3. Dr. Ashraf A. Khalil,
BSc , Al-Azhar Uni, & Ph.D. Uni of Mississippi USA

ASSISTANT PROFESSOR, MEDICINAL CHEMISTRY

TEACHING EXPERIENCE:
Organic chemistry courses at the graduate and undergraduate levels. medicinal
chemistry, spectroscopic methods of structural elucidation, including MS,
NMR, IR and other instrumental methods of analysis and communication Skills.

RESEARCH INTERESTS:
Characterization of new monoamine oxidase inhibitors from synthetic and/ or
natural sources; drug metabolism; chemical modification of natural products
and multistep syntheses of heterocyclic systems and biologically active comp-
ounds.

PUBLICATIONS:
1. Philippe Bissel, Ashraf Khalil, John M. Rimoldi, K. Igarashi, Emre Isin, Dale
Edmondson, Tony Miller, Frank Fronczek, and Neal Castagnoli, Jr.
“Stereochemical studies on the novel monoamine oxidase-B substrates
(1R,6S)- and (1S,6R)-3-methyl-6-phenyl-3-aza-bicyclo[4.1.0]heptane” Bio-

2. Khalid A. El Sayed, Ashraf A. Khalil, Muhammad Yousaf, Guillermo
Labadie, Mahesh K. Gundluru, Scott G. Franzblau, Alejandro M.S. Mayer,
Mitchell A. Avery, and Mark T. Hamann “Semisynthetic Studies of the Man-

3. Ashraf A. Khalil, Bruce Davies, and Neal Castagnoli, Jr. “Isolation and Char-
acterization of a Monoamine Oxidase B Selective Inhibitor from Tobacco

Al-Shabanah, Sami G. Abdel Hamid, Hassan A. El-Kashef, Ahmed M. Al-
Afifi, Elrasheed A. Gadkariem and Hussein El-Subbagh “Synthesis and Inves-
tigation of Novel Shelf-Stable Brain-Specific MAO Inhibitors” Saudi

5. John Rimoldi, Emre Isin, Philippe Bissel, Ashraf Khalil, and Neal Castagnoli,

6. František Hubálek, Claudia Binda, Ashraf Khalil, Min Li, Andrea Mattevi,
Neal Castagnoli and Dale E. Edmondson “Demonstration of Isoleucine199 as
a Structural Determinant for the Selective Inhibition of Human Monoamine
Oxidase B by Specific Reversible Inhibitors” J. Biological Chem., 280, 15761


SKILLS:

- Enzyme kinetics.
- Multistep (small and large scale) syntheses.
- Chemical modification of natural products.
- Drug metabolism using radiolabeled drugs.
- Preparation of radiogands 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.

Dr. Ashraf A. Khalil,

PRESENTATIONS:


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**DMPK STUDIES CONDUCTED AT ABC LABORATORIES:**

**A) As a Study Director:**


**B) As a Principal Investigator:**


4. Dr. Kamel A. Metwally

BSc & MSc Zagazig Uni, PhD Zagazig Uni. and Virginia Commonwealth Uni, USA.

ASSOCIATE PROFESSOR, MEDICINAL CHEMISTRY

TEACHING EXPERIENCE: 18 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: 13 publications

PUBLICATIONS:


Current International Collaborations:


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.
5. Dr. Tanveer A. Khan

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

ASSOCIATE PROFESSOR, PHARMACEUTICS

TEACHING EXPERIENCE: 10 years of experience in teaching pharmaceutics, biopharmaceutics, physical pharmacy, drug delivery systems and dosage forms.

RESEARCH INTEREST:

1. Drug Formulation and Dosage Forms Design/Pharmaceutical Preparations.
2. Physical Pharmaceutics
3. Chitin and Chitosan (Pharmaceutical and Medicinal applications e.g. Wound Healing) Transdermal drug delivery system.
4. Formulations of Halal soft gel capsules.

PUBLISHED PAPERS: 10

PUBLICATIONS:


Reviewer: -Appointed as a peer reviewer for the articles to be published in the following journals:


5. “Pakistan Journal of Zoology” published by the School of Biological Sciences, University of the Punjab, Lahore, Pakistan, since 2008.


AWARDS/ACHIEVEMENTS AT THE NATIONAL & INTERNATIONAL LEVEL


6. **Dr. Sree Harsha**

M.Ph & PhD, Rajiv Gandhi Uni. Health Sciences, India

**ASSISTANT PROFESSOR, PHARMACEUTICS**

**TEACHING EXPERIENCE**: 10 years of experience in teaching pharmaceutics, pharmacokinetics & biopharmaceutics and physical pharmacy.

**RESEARCH INTEREST**:
1. Targeted Drug Delivery Systems
2. Novel Drug Delivery Systems

**PUBLISHED PAPERS**: 6

**PUBLICATIONS**:


Presentations:

1. Preparation and evaluation of nanospheres for lung targeting, Saudi Arabia, 2008
3. Drug targeting to lungs by way of microspheres. International Congress of Indian Pharmacy Graduates. TAMIL NADU, 2003
5. Use of Microsoft excels in Pharmacy field. 54th IPC, PUNE, 2002
6. Drug targeting to lungs. 54th IPC, PUNE, 2002
8. Preparation and evaluation of microspheres of gentamicin sulphate. 53rd IPC, DELHI, 2001

Participation:

1. Participated in ICMR Sponsored workshop on “Biomedical communication in the cyber age”, KERALA, India, 2002.

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.
7. Dr. Mahesh Attimarad

B-Pharm Gulbarga Uni, M-Pharm, Ph.D. Rajiv Gandhi Uni. Health Sciences, India

ASSISTANT PROFESSOR, ANALYTICAL CHEMISTRY

TEACHING EXPERIENCE: 12 years of experience in teaching pharmaceutical chemistry, medicinal chemistry and analytical chemistry.

RESEARCH INTEREST:

1. Microwave assisted synthesis of organic compounds.
2. Screening for anti-inflammatory and analgesic activities.
3. In-vitro antioxidant screening.
5. Bioavailability studies in rodents.

PUBLISHED PAPERS: 14

PUBLICATIONS:


Papers Accepted in International Conferences

1. Mahesh Attimarad and S. Mohan “Microwave assisted one pot Synthesis of ethyl 2-(arylidenehydrazino)-4-(p-chlorophenyl)thiazole-5-acetates as potent NSAIDs” 10th International Conference on Microwave and High Frequency Heating, University of Modena and Reggio Emilia (Italy), September 12-15, 2005.


3. Mahesh Attimarad and S. Mohan “Microwave assisted synthesis of ethyl 2,4, 6-di substituted thiazole-5-acetates for their antioxidant activity” IX Joint Meeting on Heterocyclic Chemistry, Urbino, Italy. 05-09 May 2004.

Reviewer for Bioorganic and Medicinal chemistry and Indian Journal of Chemistry, Section B.
1. **Dr. Sherif W. Mansour**

MBBCH, Msc, & Ph.D. Zagazig Uni, Egypt

**PROFESSOR, PHYSIOLOGY**

*Teaching Experience*: 23 Years experience in teaching endocrinology, cardiovascular physiology, physiology of the cell, renal physiology, neurology and respiratory physiology, hematology, and metabolism.

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

**PUBLISHED PAPERS**: 15 publications

**PUBLICATIONS**:

1. Effects Of Acute And Chronic Exercise Training On Serum Leptin Levels In Rats, Zagazig university medical journal vol.6, No. 3 May 1996: 368-381.


12. 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.


2. Dr. Hafez R. Madkour,
BSc, MSc & PhD Assiut Uni, Egypt

ASSISTANT PROFESSOR, MEDICAL AND CLINICAL BIOCHEMISTRY

TEACHING EXPERIENCE: 11 years of experience, teaching basic, medical and clinical biochemistry and molecular biology.

CURRENT PROJECTS & RESEARCH INTEREST:

1. Sharing with Prof. Dr. Felix Kratz - Clinical Tumor Biology Center - Albert-Ludwigs University - Freiburg - Germany in Supervision on PhD thesis Bakheet Elkot Mostafa Elsadek - Assistant Lecturer of Biochemistry, Faculty of Pharmacy, Al-Azhar University, Assiut, Egypt entitled in (Development of anticancer activity of albumin binding prodrugs of 6-Mercaptopurins)
2. Effect of Natural Medicinal Herbs "dietary Curcuma longa, Ginger (Zingiber officinale) and Garlic (Allium sativum)", as an insulinotropic agents, on experimentally induced diabetes mellitus in rats.
3. Development of anticancer prodrugs that are cleaved by PSA tumor markers in Breast Cancer.
5. Possible treatment and new diagnostic tools for cancer (through development of anticancer pro-drugs) and diabetes mellitus.
6. The biological effects of Physalis peruviana on ccl4 induced liver cirrhosis in rats.
7. Possible finding of new diagnostic tools for cancer (new tumor marker) and diabetes mellitus.
8. Possible treatment and prevention of progress of chronic liver diseases including Chronic hepatitis, Liver cirrhosis, and hepatocellular carcinoma.
9. Role of Apoptosis and Angiogenesis in pathogenesis of different chronic diseases.

PUBLISHED & COMMUNICATED PAPERS: 12

PUBLICATIONS:


Papers on Publications:


2. Serum and placental tissues Levels of Interleukin-1beta and in women with preeclampsia.
3. Dr. Sahibzada T. Rasool

MBBS, Uni of Punjab, MA, Uni of Scranton, USA, PhD, Wuhan Uni., China

ASSISTANT PROFESSOR, MICROBIOLOGY AND IMMUNOLOGY

Teaching Experience: 7 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.

PUBLISHED PAPERS: 12

PUBLICATIONS:


Experimental Skills

Biochemical and Molecular Biology

E. coli transformation, isolation and purification of plasmid and chromosome DNA, total RNA and mRNA; PCR technique such as RT-PCR and over-lap PCR; site-directed mutagenesis. Expression and purification of recombinant protein in E coli, Preparation of polyclonal antibody.

Cellular Experiment

Cell culture, skilled at 293, 293T, Hela cells, Jurkat T cells, U251, U937 cells etc. MTT cytotoxicity assay, Cell transient transfection. Detection of Protein expressing by SDS-page, Western Blot, ELISA and Immuno-Fluorescence. Gene knock down with RNAi. Test protein-protein interaction with Mammalian Two-Hybrid Assay, Co-localization and immuno-precipitation in vivo.

Virus Experiment

Package, isolation and purification of recombinant adenovirus and Human Immunodeficiency Virus with 293T cells.

Bioinformatics

Familiar with Vector and DNASIS software for both primer designing and DNA, protein analysis; familiar with GeneBank websites to carry out all kinds of analysis.

Yanni Chen, Wei Li, Wei Wei, Guiqing Peng, Yongxin Mu, Yi Yu, Wenjie Huang, Sahibzada Rasool, Ying Zhu. "Human endogenous retrovirus W family envelope glycoprotein plays a role in Schizophrenia development by activating brain-derived neurotrophic factor and dopamine D3 receptor through calcium-dependent ERK signaling pathway" Submitted to The Journal of Neuroscience.

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


3. Talat Ahmed, Tasleem Rasool and others, Ethics for Teachers, Conference of Association for Medical Education in Europe, Amsterdam, Netherlands, 2005, pp120.


**1. Dr. Afzal H. Asif**  
MBBS, BZ Uni, Pakistan, Uni of Punjab, Pakistan, PhD  
ASSOCIATE PROFESSOR, PHARMACOLOGY & THERAPEUTICS

**TEACHING EXPERIENCE**: 22 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

**PUBLISHED PAPERS**: 22 publications

**PUBLICATIONS**:


18. AH Asif, Effect of Pyridoxal-5-Phosphate in Protection against Amino glycoside induced Nephrotoxicity.

19. Paper presented at International Scientific Conference, Postgraduate Medical Institute, Lahore on 22.4.1999

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


22. AH 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.

Memberships

1. Member, Medical Research Society of Pakistan.
2. Patron, Society of Pharmacology, Frontier Medical College, Abbottabad
3. Member Saudi Society for Medical Education. Kingdom of Saudi Arabia
4. Fellow Royal Society for Promotion of Health. (FRSH) UK.
5. Member American College of Clinical Pharmacy, (MACCP), USA.
2. Dr. Sibghatullah M. Sangi

MBBS, Uni. of Sindh, MPhil & PhD, Uni of Karachi, Pakistan

ASSOCIATE PROFESSOR, PHARMACOLOGY,

TEACHING EXPERIENCE: 19 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

PUBLISHED PAPERS: 12 publications

PUBLICATIONS:


4. Dr. Muhammad Aslam Channa, Dr. Muhammad Ashfaq, Dr. Sibghatullah Sangi, Dr. Muhammad Baqar soomro Toxicity of Ciprofloxacin; preventative role of zinc chloride on appearance of secondary ossification centers in wistar albino rat litters The professional vol:11, No:01, 2004

5. Muhammad Aslam Channa, Muhammad Ashfaq, Sibghatullah Sangi, Muhammad azam qureshi Muhammad Zahoor Janjua. Effects of ciprofloxacin on secondary ossification centers in juvenile wistar albino rats. Published in JAMC journal of Ayub medical college vol:16 No.3 2004


8. 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.


Membership

1. The Pakistan Pharmacological society.
2. Board of studies in Pharmacology, University of Karachi, Pakistan.
3. List member, American Association for treatment of opioid dependence
“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 the 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 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.
**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.

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<tr>
<th>Make / Model</th>
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<td>Temperature Range</td>
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<td>Measurement range</td>
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<td>Temperature Accuracy</td>
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</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Make/Model</th>
<th>Techne/ TC 412</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>Range : 4 °C to 99 °C</td>
</tr>
<tr>
<td>Temperature accuracy</td>
<td>± 1 °C</td>
</tr>
<tr>
<td>Heating rate</td>
<td>2.5 °C/sec</td>
</tr>
<tr>
<td>Cooling rate</td>
<td>1.3 °C/sec</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Make / Model</th>
<th>VERSAmax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength Range</td>
<td>340-850 nm</td>
</tr>
<tr>
<td>Wavelength Accuracy</td>
<td>±1.0 nm</td>
</tr>
<tr>
<td>Detector</td>
<td>Silicon Photodiode</td>
</tr>
</tbody>
</table>

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

**Polarimeter**

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.

<table>
<thead>
<tr>
<th>Make/ Model</th>
<th>Bellingham, Polarimetry ADP220.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>-90 to +90 °A</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01</td>
</tr>
<tr>
<td>Accuracy</td>
<td>0.02</td>
</tr>
<tr>
<td>Light source</td>
<td>LED/Interference filter (589.3 nm)</td>
</tr>
<tr>
<td>Reading time</td>
<td>15 sec</td>
</tr>
<tr>
<td>Temperature</td>
<td>5-40 °C</td>
</tr>
<tr>
<td>Optical density range</td>
<td>0.0 to 2.0 OD</td>
</tr>
</tbody>
</table>

Used for the determination of PURITY, Specific Rotation, Concentration and inversion of optically active compounds.
**Densitometer**

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 densiotmetry 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.
“When man takes one step to God, God takes ten steps towards him. But the first step is to be taken by man”