



FACULTY FULL NAME: Dr. MOHAMMAD SARAFROZ

POSITION: Assistant Professor

Personal Data

Nationality | Indian

Date of Birth | 20/12/1978

Department | College of Clinical Pharmacy, Pharmaceutical Chemistry

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Language Proficiency

Language	Read	Write	Speak
Arabic	Yes	No	No
English	Yes	Yes	Yes
Urdu	Yes	Yes	Yes
Hindi	Yes	Yes	Yes
Bhojpuri	Yes	Yes	Yes

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
December 2010	Ph. D	Jamia Hamdard University, New Delhi, India	Jamia Hamdard University New Delhi
August 2007	M. Pharm	Jamia Hamdard University, New Delhi, India	Jamia Hamdard University New Delhi
August 2005	B. Pharm	Jamia Hamdard University, New Delhi, India	Jamia Hamdard University New Delhi

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

Ph.D	“Synthesis and Biological Screening of Some Novel Azoles and Related Fused Heterocyclic Derivatives”
Master	“Synthesis and Anticonvulsant Activity of Some New derivatives of 5- Carbomethoxy Benzoxazoles”
Fellowship	UGC Delhi

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
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Assistant professor	Dammam	Imam Abdulrahman Bin Faisal University, Department of Pharmaceutical Chemistry, College of Clinical Pharmacy, Dammam, KSA.	May 2013 to till date
Assistant professor, Head	Greater Noida	NIET, Department of Pharmaceutical Chemistry, College of Pharmacy, Greater Noida, Uttar Pradesh, India.	August 2012-April 2013
Assistant professor	Meerut	IIMT, College of Medical Science Department of Pharmaceutical Chemistry, IIMT Ganga Nagar Mawana Road, Meerut, Uttar Pradesh, India.	August 2010-July 2012

Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Member	Pharmacy Council of India (PCI), Combined Council Building, Kotla Road, New Delhi-110002, India.	01/08/2005

Scientific Achievements

Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Mohammad Sarafroz , Yasmin Khatoon, Niyaz Ahmad, Mohd Amir, Salahuddin, Faheem Hyder Pottoo, Mohammad Taleuzzaman and Wasim Ahmad.	Design and Synthesis of Novel Hydrazones of Ethyl 3-Amino-4-Hydroxybenzoate as Promising Anticonvulsant Agents.	International Journal of Pharmaceutical Sciences and Research, 11(1): 137-45, 2020 .
2	Shrestha Sharma, Md. Noushad Javed, Faheem Hyder Pottoo, Syed Arman Rabbani, Md. Abul Barkat, Harshita, Md. Sarafroz and Mohd. Amir.	Bioresponse Inspired Nanomaterials for Targeted Drug and Gene Delivery.	Pharmaceutical Nanotechnology, 7, 1-15, 2019 .
3	Supriya Mishra, Shrestha Sharma, Md. Noushad Javed, Faheem Hyder Pottoo, Md. Abul Barkat, Harshita, Md. Sabir Alam, Mohd. Amir and Md. Sarafroz .	Bioinspired Nanocomposites: Applications in Disease Diagnosis and Treatment.	Pharmaceutical Nanotechnology, 7, 1-15, 2019 .



4	Leena Kumari, Salahuddin, Avijit Mazumder, Daman Pandey, Mohammad Shahar Yar, Rajnish Kumar, Rupa Mazumder, Mohammad Sarafroz , Mohamed Jawed Ahsan, Vivek Kumar and Sushma Gupta.	Synthesis and Biological Potentials of Quinoline Analogues: Review of Literature.	Mini-Reviews in Organic Chemistry, 16, 1-36, 2019 .
5	Mohammad Sarafroz , Yasmin Khatoon, Niyaz Ahmad, Mohammad Amir, Salahuddin and Faheem Hyder Pottoo.	Synthesis, Characterization and Anticonvulsant Activity of Novel Fused 1,2,4-Triazolo-1,3,4-Thiadiazoles.	Oriental Journal of Chemistry, Vol. 35(1), 64-70, 2019 .
6	Niyaz Ahmad, Rizwan Ahmad, Md Aftab Alam, Farhan Jalees Ahmad, Mohd Amir, Faheem Hyder Pottoo, Md Sarafroz , Mohammed Jafar, Khalid Umar.	Daunorubicin oral bioavailability enhancement by surface coated natural biodegradable macromolecule chitosan based polymeric nanoparticles.	International Journal of Biological Macromolecules, 128, 825–838, 2019 .
7	Mohd Amir, Niyaz Ahmad, Md Sarfaro , Wasim Ahmad, Sayeed Ahmad, Mohd Mujeeb	Pharmacognostical, Physicochemical Standardization and <i>in vitro</i> Antioxidant Activity of <i>Punica granatum</i> Linn fruit,	Pharmacognosy Journal, Vol 11(2), 272-277, 2019 .
8	Yasmin Khatoon, Vijender Singh and Mohammad Sarafroz	Anticonvulsant and Neurotoxicity Evaluation of Some Fused 1,2,4-triazolo-[3,4-b]-1,3,4- thiadiazole Derivatives	International Journal of Pharmaceutical Sciences Review and Research, Vol 48(2), 70-78, 2018 .
9	Niyaz Ahmad, Md Aftab Alam, Farhan Jalees Ahmad, Md Sarafroz , Khalid Ansari, Sonali Sharma, Mohd Amir.	Ultrasonication techniques used for the preparation of novel Eugenol- Nanoemulsion in the treatment of wounds healings and anti-inflammatory.	Journal of Drug Delivery Science and Technology 46, 461–473, 2018 .
10	Mohd Amir, Niya Ahmad, Mohammad Sarafroz , Mahvish Jamal, Faheem Hyder Pottoo and Mohd Mujeeb.	In vitro Propagation, Development and Validation of HPTLC Method for Quantification of Steroidal Glycoalkaloid Solasodine in In vitro Culture and Plant Parts of Solanum nigrum.	Oriental Journal of Chemistry, Vol. 34(6), 2018
11	Salahuddin, Avijit Mazumder, Mohammad Shahar Yar and Mohammad Sarafroz ,	Synthesis and Anticonvulsant Activity of a Combined Pharmacophore of 2-Oxo-1,2-Dihydroquinoline Containing 1,3,4-Oxadiazole Derivatives.	Indian Journal of Heterocyclic Chemistry Vol. 27 - Number 01, 1-9, 2017 .
12	Yasmin Khatoon, Mohammad Shaquiquzzaman, Vijender Singh and Mohammad Sarafroz ,	Synthesis of Some New 2,5-Disubstituted-1,3,4-Thiadiazole Derivatives and Investigation of their Anticonvulsant Activities.	International Journal of Pharmaceutical Sciences Review and Research, Vol 43 (2), 231- 237, 2017 .



13	Yasmin Khatoon, Mohammad Shaquiquzzaman, Vijender Singh and Mohammad Sarafroz,	Synthesis, Anticonvulsant and Neurotoxicity Screening of Some Novel 2,5-Disubstituted -1,3,4-Oxadiazole Derivatives.	International Journal of Pharmaceutical Sciences and Drug Research, Vol 9 (1), 22-29, 2017
14	Yasmin Khatoon, Mohammad Shaquiquzzaman, Vijender Singh and Mohammad Sarafroz,	Synthesis, Characterization and Anticonvulsant Activity of Some Novel 4,5-Disubstituted 1,2,4-Triazole Derivatives.	Journal of Applied Pharmaceutical Science Vol. 7 (07), 158-167, 2017 .
15	Mohd Rashid, Asif Husain, Mohammad Shaharyar and Mohd Sarafroz,	Anticancer Activity of New Compounds Using Benzimidazole as a Scaffold'	Anti-Cancer Agents Medicinal Chemistry 2014, 14 (7), 1003-1018.
16	Asif Husain, Md Sarafroz, Nadeem Siddiqui, Yasmin Khatoon, Mohd. Rasid and Niyaz Ahmad.	Synthesis, Anticonvulsant and Neurotoxicity Screening of Some Novel 1, 2, 4-Trisubstituted-1 <i>H</i> -imidazole Derivatives.	Acta Poloniae Pharmaceutica - Drug Research, Vol. 68, (5), 657-663, 2010 .
17	Nadeem Siddiqui, M. Sarafroz, M. Faiz Arshad, M. Mumtaz Alam and Asif Husain,	Anti-inflammatory and analgesic activity of N-aryl-2-[(2-aryl-1,3-benzoxazol-5-yl) carbonyl] hydrazine carbothiomodes.	International Journal of Chemical Sciences, Journal of Ultra Chemistry, Vol (5) 1, 1-6, 2009 .
18	Asif Husain, Mohammad A. Naseer and Mohammad Sarafroz	Synthesis and anticonvulsant activity of some novel fused heterocyclic 1,2,4-triazolo-[3,4-b]-1,3,4-thiadiazole derivatives.	Acta Poloniae Pharmaceutica - Drug Research, Vol. (66)2, 135-140, 2009
19	Asif Husain, Priyanka Ahuja and Sarafroz,	Synthesis and Biological Evaluation of β -Aroylpropionic acid based 1,3,4-Oxadiazoles.	International Journal of Pharmaceutical Sciences, Vol (71)1, 62-66, 2009 .
20	Asif Husain, Mohammad Sarafroz, and Priyanka Ahuja,	2-[3-(4-Chloro/ethyl phenyl)propan-3-one]-5-(Substituted phenyl)-1,3,4-Oxadiazoles: Synthesis and Biological Evaluation	Acta Poloniae Pharmaceutica - Drug Research, Vol. (65)5, 527-534, 2008 .
21	Nadeem Siddiqui, M. Sarafroz, M. Mumtaz Alam and Waquar Ahsan,	Synthesis, Anticonvulsant and Neurotoxicity Evaluation of 5-Carbomethoxybenzoxazole Derivatives.	Acta Poloniae Pharmaceutica - Drug Research, Vol. (65)4, 449-455, 2008 .

Refereed Scientific Research Papers Accepted for Publication

#	Name of Investigator(s)	Research Title	Journal	Acceptance Date

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences



#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	M. Sarafroz , M.S. Mansour, M.A. AlGhamdi, Y.M. Garwan	Design of Novel Hybrids For Dual Beta-1 Receptors and HMG-CoA Reductase Inhibition as Promising Cardiovascular Therapeutic Agents	Arab International Pharmacy Congress, Riyadh, May 2018.
1	Md. Sarafroz , Asif Husain, Yasmin Khatoon, Mohd. Rashid	Synthesis of some novel substituted imidazole derivatives for Evaluation of Anticonvulsant activity.	National Symposium on Epilepsy: Recent Advances in Drug Discovery and Treatment, Scientific Programme and Abstracts, Department of Pharmacology, Faculty of Pharmacy Jamia Hamdard, New Delhi, 13 th Feb, 2010)
2	Md. Sarafroz Asif Husain,, Waqar Ahsan, Yasmin Khatoon	Synthesis and Anticonvulsant activity of some newer fused pyrazole derivatives.	61 st Indian Pharmaceutical Congress Scientific Abstracts, 11 th -13 th Dec, 2009
3	Md. Sarafroz Asif Husain, Md. Afroz, and Waqar Ahsan	Synthesis and antimicrobial activities of some novel biphenyl hydrazine carbothioamide derivatives.	60 th Indian Pharmaceutical Congress Scientific Abstracts, 12 th -14 th Dec, 2008
4	Asif Husain, Md. Sarafroz , Waqar Ahsan and Md. Afroz	Design and Synthesis of some new derivatives of 5-Carbomethoxy benzoxazole as Anti-inflammatory and analgesic agents.	(60 th Indian Pharmaceutical Congress Scientific Abstracts, 12 th -14 th Dec, 2008)
5	Husain A, Shaharyar M, Ahuja P, Sarafroz	Mutual prodrug of Paracetamol and Aceeclofenac.	60 th Indian Pharmaceutical Congress Scientific Abstracts, 12 th -14 th Dec, 2008)
6	Md. Sarafroz , Asif Husain and Md. Arif Naseer	Novel Fused Heterocyclic 3,6-Disubstituted-1,2,4-Triazolo-1,3,4-Thiadiazoles: Synthesis And Antimicrobial Activities.	National Conference on Chemistry-Structure, Reaction Dynamics and Spectroscopy, Department of Chemistry, St. Stephen's College, University of Delhi, 21 st - 23 rd Aug, 2008
7	Md. Sarafroz , Asif Husain, Afroz Akhter and Priyanka Ahuja	Design And Synthesis of Biphenyl Hydrazine carbothioamides and Hydrazones as Potential Anticonvulsant Agents.	National Conference on Chemistry-Structure, Reaction Dynamics and Spectroscopy, Department of Chemistry, St. Stephen's College, University of Delhi, 21 st - 23 rd Aug, 2008)
8	Md. Sarafroz , Asif Husain, M. Akhter, P. Ahuja, M. Abdullah, M.S. Zaman	Bioactive Sulfonamide based 5-Methyl-1,3-Thiazolan-4-ones.	Local Organising Committee, DDNP-TM, Department of Natural Products, NIPER, 15 th Sep, 2008, India



9	Md. Sarafroz , Asif Husain, N. Siddiqui, Afroz Akhter	Diphenyl hydrazine carbothiomides and hydrazones: Design, Synthesis and Anticonvulsant activity.	Local Organising Committee, DDNP-TM, Department of Natural Products, NIPER, 15 th Sep, 2008 , India
10	Md. Sarafroz Nadeem Siddiqui, Md. Mumtaz Alam, and Waqar Ahsan.	Design and synthesis of some new derivatives of 5-carbomethoxybenzoxazoles as anticonvulsants.	(59 th Indian Pharmaceutical Congress Scientific Abstracts, 20 th -23 rd Dec, 2007)

Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	M. Sarafroz, M.S. Mansour, M.A. Al-Ghamdi, Y.M. Garwan	Design of Novel Hybrids For Dual β -1 Receptors and HMG-CoA Reductase Inhibition as Promising Cardiovascular Therapeutic Agents	May 2018
2	M.S. Mansour, M. Sarafroz, Zahraa Alhashim, Fatma Beshr, Fatma Noor Alhussain	Novel EGFR inhibitors for the treatment of solid tumor: Design, synthesis and testing.	April 2019
3	M.S. Mansour, M. Sarafroz, Zahra Aljuzair, Yara Alsadek	Design and synthesis of novel sulphonamides with anticancer activity acting through Abl-BCR inhibition.	April 2019
4	M.S. Mansour, M. Sarafroz, Amani Alansary, Nooran Alkharaa, Sameera almasmoom	Development and optimization of hit compounds for dual inhibition of β 1-receptors and HMGC α : Design synthesis and testing.	April 2019
5	M.S. Mansour, M. Sarafroz, Sultan Babki, Mohanad Alateby, Ibrahim Feta	Development of novel Akt inhibitors as antiproliferative agents for the treatment of cancer.	April 2019

Current Researches

#	Research Title	Name of Investigator(s)
1	Synthesis New Schiff Baases of Benzoxazole: Synthesis, Anticonvulsant and Neurotoxicity Evaluation	Mohammad Sarafroz, Erum Hassan Mohammad Abdurab Al Ameer, Amina Lutfi Hussain Al Khalifah, Khadijah Ahmad Al Turki, Mohd Amir and Niyaz Ahmad
2	Identification, Method Development, Validation and Quantification of Luteolin in Selected Herbal Drugs by	Mohammad Amir, Ali Abdulmalik al Fraij, Abdullah



UPLC and Its Pharmacological Action Such as Antimicrobial Activity, Antifungal Activity and Antioxidant Activity	Munner Towireet, Hussain Mazin AlSadah and Mohammad Sarafroz
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Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Assessment Module (ESHPE)	Medical Education Department, King Fahd Hospital of the University, Saudi Arabia on 17-19 December, 2018	
2	“Reaxys: The shortest path from Chemistry Questions to Answers”	Strategic Partnership of IAU and Elsevier at Imam Abdulrahman Bin Faisal University, Saudi Arabia on 20th February 2018.	
3	“Author Workshop Scholarly Publishing”	Strategic Partnership of IAU and Elsevier at Imam Abdulrahman Bin Faisal University, Saudi Arabia on 20th December 2017	
4	“Assessing project and labs”	The Deanship of Education Development at Imam Abdulrahman Bin Faisal University, Saudi Arabia on 28th September 2017.	
5	Topic Selection, Definition” & “Performance Evaluation ”	University of Dammam & Thomson Reuters Strategic Partnership at University of Dammam, Saudi Arabia on 2nd November 2016.	
6	“Thermo Fisher Scientific Solutions in Chromatography & MS Solutions in Food Safety, Environment Forensics, Clinical & Toxicology”	Naizak & Thermo Scientific held at Le Meridien Hotel, Al-Khobar, Saudi Arabia, on 09th October, 2016.	
7	“How to prepare for A Conference”	University of Dammam & Thomson Reuters Strategic Partnership at University of Dammam, Saudi Arabia on 5th October 2016.	
8	“1. InCites: Benchmark and Analyze Research & Generate Reports; 2. ESA: Analyze Research Performance	University of Dammam & Thomson Reuters Strategic Partnership at University of Dammam, Saudi Arabia on 2nd June 2016.	



	& Identify Significant Trends (Phase II)”		
9	“Trauma Informed Care”	University of Dammam – University Counseling Center, at University of Dammam, Saudi Arabia, on 26th May 2016.	
10	“Thermo Fisher Scientific Solutions in X-Ray Spectroscopy – XRF & XRD for Material Analysis”	Naizak & Thermo Scientific held at Hoilday Inn, Al-Khobar, Saudi Arabia, on 25th May, 2016.	
11	“1. Bibliographic Search & Publishing Methodology; 2. Bibliography Management”	University of Dammam & Thomson Reuters Strategic Partnership at University of Dammam, Saudi Arabia on 5th May 2016.	
12	“Incites: Performance Evaluation: Reports generation”	University of Dammam & Thomson Reuters Strategic Partnership at University of Dammam, Saudi Arabia on 4th May 2016.	
13	“Reporting and communicating results of DQAA surveys”	Deanship of Education Development, University of Dammam, Saudi Arabia, on 2nd May, 2016.	
14	“Strategic Planning”	Deanship of Education Development, University of Dammam, Saudi Arabia, on 21st April, 2016.	
15	“Complete THERMAL ANALYSIS Solutions”	Naizak, & Netzsch held at InterContinental Hotel – Al Khobar, Saudi Arabia, on 28th February, 2016.	
16	Trendsetting New Technologies. New Dimensions. More Possibilities. The Spectroscopy Innovation Seminar	Hotel Movenpick Khobar Khobar, Saudi Arabia 08 th February 2016	
17	“Innovative & Economic Solutions for Quality Control”.	Naizak, & Anton Paar held at Double Tree Hotel by Hilton – Dhahran, Saudi Arabia, on 23rd November, 2015	
18	“Integrating Critical Thinking in Academic Curriculum”	Deanship of Education Development, University of Dammam, Saudi Arabia, on 29th October, 2015.	



19	“ProQuest Central, ProQuest Dissertations & Theses Global and Ebrary Content & functionality”.	ProQuest at University of Dammam, Saudi Arabia on 18th October 2015	
20	“Why Quality in Research” “Select Research Topic and Collaborate”	University of Dammam & Thomson Reuters Strategic Partnership at University of Dammam, Saudi Arabia on 12th October 2015.	
21	“Providing a Constructive Feedback”	Deanship of Education Development, University of Dammam, Saudi Arabia, on 8th October, 2015.	
22	Student Engagement in Learning	Deanship of Education Development, University of Dammam, Saudi Arabia, on 5th January 2015	
23	Essential Skills of Health professions Education 2 nd Module (Curriculum Development)	Deanship of Education Development, University of Dammam, Saudi Arabia, on 23-25 th February 2015	
24	Elsevier Science Direct, Scopus and Mendely Training	Deanship of Education Development, University of Dammam, Saudi Arabia, on 3 rd March 2015	
25	Questioning Strategies and Leading Discussion in Class room	Deanship of Education Development, University of Dammam, Saudi Arabia, on 5 th March 2015	
26	Health Awareness Lecture Entitled Ebola Virus Disease	Deanship of Education Development, University of Dammam, Saudi Arabia, on 13 th April 2015	
27	Students Learning Outcomes	Deanship of Education Development, University of Dammam, Saudi Arabia, on 27 th May 2014	
28	Course Portfolio	Deanship of Education Development, University of Dammam, Saudi Arabia, on 18 th September 2014	
29	Introduction to NCAA and Checklist of Activities	Deanship of Education Development, University of Dammam, Saudi Arabia, on 16 th September 2014	



30	Using MCQs to Test High Order Thinking Skills	Deanship of Education Development, University of Dammam, Saudi Arabia, on 23 rd October 2014	
31	Taylor and Francis Publishing in Academic Journals	Deanship of Education Development, University of Dammam, Saudi Arabia, on 21 st October 2014	
32	Essential Skills of Health professions Education (Teaching and Learning)	Deanship of Education Development, University of Dammam, Saudi Arabia, on 18-20 th November 2014	
33	Optimize the use of Web of Sciences Services Learn How to use EndNote	Deanship of Education Development, University of Dammam, Saudi Arabia, on 17 th December 2014	

Membership of Scientific and Professional Societies and Organizations

- Registered Pharmacist of the Delhi Pharmacy Council India, Registration no. 16870.
- Life time member of the Delhi Pharmacy Council Registered Pharmacist Welfare Trust, India

Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Pharmaceutical Organic Chemistry - 1	PHCH 203	3+1
2	Pharmaceutical Analytical Chemistry	PHCH 208	2+1
3	Pharmaceutical Organic Chemistry - 2	PHCH 209	3+0
4	Pharmaceutical Medicinal Chemistry - 1	PHCH 302	3+0
5	Pharmaceutical Medicinal Chemistry – 2	PHCH 308	3+0
6	Pharmaceutical Medicinal Chemistry - 3	PHCH 403	3+0

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

Pharmaceutical Chemistry-I (Pharmaceutical Inorganic Chemistry, RPH 101) – For First year first semester level: Taught inorganic chemistry topics includes the methods of preparation, tests of identification of inorganic pharmaceuticals in dosage forms like tests for iron, arsenic, lead, heavy metals, chloride and sulphate. Topical agents include astringents (Zinc sulphate, Alums). Anti-infectives (Boric acid, Hydrogen peroxide, Povidone-Iodine, Silver nitrate). Dental products: Dentifrices (Dicalcium Phosphate), anti-carries agents (Sodium fluoride). Antioxidants: Sodium metabisulphite. Gastrointestinal agents: Antacids (Aluminium hydroxide, Calcium carbonate, Magnesium hydroxide, Magnesium carbonate-light and heavy, Bismuth sub-carbonate),



Combination antacids. Cathartics (Disodium hydrogen phosphate, Magnesium sulphate). Protective and Adsorbents (Activated charcoal, Aluminium sulphate). Miscellaneous agents: Expectorants (Ammonium chloride, Potassium iodide). Respiratory stimulants (Ammonium hydroxide).

Pharmaceutical Analysis – I (RPH-104) – For First year first semester level: Taught analytical chemistry it includes the introduction and application of volumetric analysis, preliminaries and definitions, precision and accuracy, types of errors, methods of expressing concentration, primary and secondary standards, different techniques of analysis, Factors affecting the choice of analytical methods, significance of quantitative analysis in quality control. Acid base titrations, Oxidation reduction titrations: Complexometric titrations: Precipitation titrations: Diazotization titrations, Karl-Fischer titration. Kjeldahl's method of nitrogen determination in different dosage forms.

Pharmaceutical Chemistry-II (Pharmaceutical Organic Chemistry) (RPH-206) - For First year second semester level: Introduction, classification and nomenclature of organic compounds. Stereochemistry of organic as well as medicinal compounds. Hydrocarbons like alkane, alkene and alkyne. Reaction and mechanism of alkyl halides and alcohols, amines, aldehydes and ketones, carboxylic acids and their derivatives. Introduction to aromatic organic compounds, structure of benzene and their reactions. Polynuclear hydrocarbons (naphthalene).

Pharmaceutical Analysis- II (BOP- 244) - For second year first semester level: Non-aqueous titrations, Complexometric titrations, Potentiometry titration, Conductometry: titration. Paper chromatography, Thin layer chromatography (TLC), High Performance Thin Layer Chromatography (HPTLC), Column chromatography, Flash Chromatography, High performance thin layer chromatography (HPLC), Reverse Phase-High Performance Liquid Chromatography (RP-HPLC), Introduction to gas liquid chromatography (GLC). Diazotization titrations, Kjeldahl method of nitrogen estimation, Karl- Fischer titration. Radio-assays (RIA, ELISA, Autoradiography). Polarography: Principles, instrumentation and applications. Amperometry: Principles, instrumentation and applications including amperometric titrations.

Pharmaceutical Chemistry-VI (Medicinal Chemistry-I) (BOP-351) - For third year first semester level: Taught medicinal chemistry topics include: Physicochemical parameters in relation to biological activity, Stereochemical aspects of drug design, Bioisosterism. Drug-receptor interaction, Concept of pro-drugs. Classification, mode of action, uses, recent advances and structure activity relationship of the drugs acting at autonomic nervous system like Cholinergic drugs, Anticholinergic drugs, Anticholinesterases and Adrenergic drugs. Classification, mode of action, uses, recent advances and structure activity relationship of the drugs acting at central nervous system like general anaesthetics, Local anaesthetics. Skeletal muscle relaxants, Opioid analgesics, Antitussives, Anxiolytics, Sedatives and hypnotics, Anticonvulsants, drugs for neurodegenerative disorders like Alzheimer's disease (Tacrine), Parkinson's disease, Antidepressants, Antipsychotic, CNS Stimulants and psychedelics, Antispasmodics.

Pharmaceutical Chemistry-VI (Medicinal Chemistry-II) (BOP-361) - For third year second semester level: Taught medicinal chemistry topics include: Classification, mode of action, uses, recent advances and structure activity relationship of Cardiovascular agents like Antiarrhythmic drugs, Antianginal drugs, Antihypertensive drugs, Antihyperlipidemics, Hypoglycaemics, Diuretics and Thyroid and antithyroids. Non-steroidal anti-inflammatory drugs (NSAIDs) and analgesics, Anticoagulants. Antihistaminics: Proton pump inhibitors: introduction of the Drug design: Basic concepts of drug design, introduction to analogue based drug design, structure based drug design, introduction to basic concepts of QSAR, molecular descriptors (2D and 3D parameters), quantitative models, introduction to 2D and 3D QSAR methodologies.

Pharmaceutical Chemistry-VIII (Medicinal Chemistry-III) BOP-471 - For fourth year first semester level: Taught medicinal chemistry topics include: Classification, mode of action, uses, recent advances and structure activity relationship of the Steroidal drugs including Androgens and



anabolic steroids: Estrogens and progestogens: Adrenocorticoids. Chemotherapy of microbial infections: Antibiotics: Penicillin, Semi-synthetic Penicillins, Cephalosporins, Tetracyclines, Antifungals: Antiseptics & disinfectants: Chemotherapy of microbial infections: Synthetic antibacterials: Sulphonamides, Quinolones/Fluoroquinolones, Antimycobacterial agents. Chemotherapy of parasitic infections: like Antimalarials, Antiamoebics, Anthelmintics, Cancer chemotherapy: Alkylating agents, Antimetabolites, Anticancer antibiotics. Antiviral/Anti-HIV agents: Amantadine, Acyclovir, Zidovudine, Saquinavir, Raltegravir.

Research Methodology Project (BOP 485) - Fourth year graduation project Projects based on

1. Literature survey, data collection, formulation and testing of hypothesis, interpretation of results on a particular research project.
2. Use of statistical packages/ programs (such as SPSS, Graph Pad Prism) in data analysis.
3. Collection, compilation and execution of computational programs for research benefits.
4. Manuscript preparation, communication and follow-up of a research paper/review article.
5. Writing a research project for the procurement of research grant/travel grant from any funding agency.
6. Preparation and presentation of a research report (Oral and Poster presentations using Microsoft PowerPoint Package, Microsoft Publisher etc.).

Postgraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Modern Pharmaceutical Analytical Techniques	MPC-101	6 Two lectures (2 hour) per week and lab (4 hours)
2	Advanced Organic Chemistry - I	MPC-102	6 Two lectures (2 hour) per week and lab (4 hours)
3	Advanced Medicinal Chemistry	MPC-103	4 Two lectures (2 hour) per week and lab (2 hours)
4	Advanced Spectral Analysis	MPC-201	6 Two lectures (2 hour) per week and lab (4 hours)
5	Advanced Organic Chemistry – II	MPC-202	4 One lecture (1 hour) per week and lab (3 hours)
6	Computer Aided Drug Design	MPC-203	4 One lecture (1 hour) per week and lab (3 hours)

Brief Description of Postgraduate Courses Taught: (Course Title – Code: Description)

1	Modern Pharmaceutical Analytical Techniques (MPC 101) - For first year first semester level: Taught modern analytical chemistry topics include: advanced analytical instrumental techniques for identification, characterization and quantification of drugs. Instruments dealt are NMR, mass spectrometer, IR, HPLC, GC. UV-Visible spectroscopy, IR Spectroscopy, Spectrofluorimetry, Flame Emission Spectroscopy and Atomic Absorption Spectroscopy, NMR Spectroscopy, Brief outline of principles of FTNMR and ¹³ C NMR. Mass Spectroscopy, Chromatography, Thin layer chromatography, High performance thin layer chromatography, Ion exchange chromatography, Column chromatography, Gas chromatography, High Performance Liquid chromatography, Ultra high performance liquid chromatography, Affinity chromatography, Gel chromatography. Electrophoresis, Paper electrophoresis, Gel electrophoresis, Capillary electrophoresis, Zone
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	electrophoresis, Moving boundary electrophoresis, Isoelectric focusing. X-ray Crystallography, Immunological Assays: RIA (Radio immune assay), ELISA, bioluminescence assays
2	Advanced Organic Chemistry – I (MPC 102) - For first year first semester level: Taught advanced medicinal chemistry topics include: The chemistry of heterocyclic compounds. Basic Aspects of Organic Chemistry, Addition reactions, Substitution reactions, Elimination reactions, Rearrangement reactions. Study of Ugi reaction, Brook rearrangement, Ullmann coupling reactions, Dieckmann Reaction, Doebner-Miller Reaction, Sandmeyer Reaction, Mitsunobu reaction, Mannich reaction, Vilsmeier-Haack Reaction, Sharpless asymmetric epoxidation, Baeyer-Villiger oxidation, Shapiro & Suzuki reaction, Ozonolysis and Michael addition reaction Study of five, six membered and fused heterocyclics such as Debus-Radziszewski imidazole synthesis, Knorr Pyrazole Synthesis Pinner Pyrimidine Synthesis, Combes Quinoline Synthesis, Bernthsen Acridine Synthesis.
3	Advanced Medicinal Chemistry (MPC 103) - For first year second semester level: Taught advanced medicinal chemistry topics include: Different stages of drug discovery, Role of medicinal chemistry in drug research, Different techniques for drug discovery, Various strategies to design and develop new drug like molecules for biological targets. Drug Discovery, lead discovery, Prodrug Design and Analog design. Medicinal Chemistry Aspects of the Following Class of Drugs: Systematic study, SAR, Mechanism of action and synthesis of new generation molecules of following class of drugs: Anti-hypertensive drugs, psychoactive drugs, anticonvulsant drugs, H1 & H2 receptor antagonist, COX1 & COX2 inhibitors, adrenergic & cholinergic agents, antineoplastic and antiviral agents.
4	Advanced Spectral Analysis (MPC 201) - For first year second semester level: Taught advanced spectral analysis topics include: UV and IR Spectroscopy, ATR-IR, IR Interpretation of organic compounds. NMR Spectroscopy: 1-D and 2-D NMR, Mass Spectroscopy: Chromatography, GC-MS, GC-AAS, LC-MS, LC-FTIR, LC-NMR, CEMS, High performance thin layer chromatography, Supercritical fluid chromatography, Ion chromatography, I-EC (Ion-Exclusion Chromatography), Flash chromatography.
5	Advanced Organic Chemistry – II (MPC-202) - For second year first semester level: Taught advanced medicinal chemistry topics include: Introduction, principles of green chemistry, Microwave assisted reactions, Coupling reactions in peptide synthesis, side reactions in peptide synthesis. Heterogeneous catalysis – preparation, characterization, kinetics, Homogenous catalysis. Basic concepts in stereochemistry: Optical activity, specific rotation, racemates and the Cahn-Ingold-Prelog (CIP) sequence rule, meso compounds, pseudoasymmetric centres, axes of symmetry, Fischers D and L notation, cis-trans isomerism, E and Z notation.
6	Computer Aided Drug Design (MPC-203) - For second year first semester level: Taught CADD in chemistry include: Role of CADD in drug discovery, Different CADD techniques and their applications. Quantitative structure activity relationships (QSAR), 2D-QSAR equations, 3D-QSAR approaches and contour map analysis, Statistical methods used in QSAR analysis and importance of statistical parameters, Molecular Modeling and Docking, Pharmacophore Mapping and Virtual Screening: Concept of pharmacophore, pharmacophore mapping, identification of Pharmacophore features and Pharmacophore modeling; Conformational search used in pharmacophore mapping. In Silico Drug Design and Virtual Screening Techniques Similarity based methods and Pharmacophore based screening, structure based In-silico virtual screening protocols.

Course Coordination



#	Course Title and Code	Coordination	Co-coordination	Under grad.	Post grad	From	To
1	Pharmaceutical Organic Chemistry - 1	Yes	Yes	Yes	-	Aug 2013	Dec 2013
2	Pharmaceutical Analytical Chemistry	Yes	Yes	Yes	-	Jan 2014	June 2014
3	Pharmaceutical Medicinal Chemistry - 1	Yes	Yes	Yes	-	Sep 2014	Dec 2014
4	Pharmaceutical Medicinal Chemistry - 2	Yes	Yes	Yes	-	Jan 2015	June 2015
5	Pharmaceutical Medicinal Chemistry - 1	Yes	Yes	Yes	-	Sep 2015	Dec 2015
6	Pharmaceutical Medicinal Chemistry - 2	Yes	Yes	Yes	-	Jan 2016	June 2016
7	Pharmaceutical Medicinal Chemistry - 1	Yes	Yes	Yes	-	Sep 2016	Dec 2016
8	Pharmaceutical Medicinal Chemistry - 2	Yes	Yes	Yes	-	Jan 2017	June 2017
9	Pharmaceutical Medicinal Chemistry - 1	Yes	Yes	Yes	-	Sep 2017	Dec 2017
10	Pharmaceutical Medicinal Chemistry - 2	Yes	Yes	Yes	-	Jan 2018	June 2018
11	Pharmaceutical Medicinal Chemistry - 1	Yes	Yes	Yes	-	Sep 2018	Dec 2018
12	Pharmaceutical Medicinal Chemistry - 2	Yes	Yes	Yes	-	Jan 2019	June 2019
	Pharmaceutical Organic Chemistry - 1	Yes	Yes	Yes	-	Aug 2019	Dec 2019
	Pharmaceutical Organic Chemistry - 2	Yes	Yes	Yes	-	Jan 2020	----- 2019

Guest/Invited Lectures for Undergraduate Students

#	Activity/Course Title and Code	Subject	College and University or Program	Date
1	Advanced Medicinal Chemistry (MPC 103)	Advanced Medicinal Chemistry	Sunder Deep Pharmacy college, Ghaziabad, Uttar Pradesh, India	2008-10
2	Pharmaceutical Chemistry-VIII (Medicinal Chemistry-III) BOP-471	Pharmaceutical Medicinal Chemistry-VIII	Ram- Eesh Institute of Technology Pharmacy College, Greater Noida, Uttar Pradesh, India	2007-2008

Student Academic Supervision and Mentoring

#	Level	Number of students	From	To
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1	Under Graduate level (B. Pharma) at IIMT College of Medical Science, College of Pharmacy, Meerut, India. Supervised four students working for their bachelor degree dissertation. The program is affiliated to the Uttar Pradesh Technical University (UPTU), Uttar Pradesh, India.	4	2011	2012
2	%th Year Pharm D	4	Novem ber201 8	April 2019

Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
1	Master of Pharmacy (Pharmaceutical Chemistry)	"Synthesis, characterization and biological screening of benzoxazole containing hydrazone moiety"	IIMT College of Medical Sciences, College of Pharmacy, Meerut, Uttar Pradesh, India	May 2012
2	Master of Pharmacy (Pharmaceutical Chemistry)	"Synthesis, characterization and biological evaluation of pyrazole derivatives"	IIMT College of Medical Sciences, College of Pharmacy, Meerut, Uttar Pradesh, India	May 2012
3	Master of Pharmacy (Pharmaceutical Chemistry)	"Synthesis and Biological evaluation of 1, 2, 4- triazole and related fused heterocyclic derivatives."	IIMT College of Medical Sciences, College of Pharmacy, Meerut, Uttar Pradesh, India	May 2012
4	Master of Pharmacy (Pharmaceutical Chemistry)	"Synthesis and antimicrobial activities of some new chalcone derivatives."	IIMT College of Medical Sciences, College of Pharmacy, Meerut, Uttar Pradesh, India	May 2012

Ongoing Research Supervision

#	Degree Type	Title	Institution	Date
1	Pharm D Student Research Project	Design and synthesis of some new derivatives of 5-carbomethoxybenzoxazoles as anticonvulsants.	Imam Abdulrahman Bin Faisal University, Dammam	Jan 2020
2	Pharm D Student Research Project	Identification, Method Development, Validation and Quantification of Luteolin in Selected Herbal Drugs by UPLC and Its Pharmacological Action Such as Antimicrobial Activity, Antifungal Activity and Antioxidant Activity	Imam Abdulrahman Bin Faisal University, Dammam	Jan 2020



Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

Administrative Responsibilities

#	From	To	Position	Organization
1	2010	2012	Head, Assistant Professor	IIMT College of Medical Sciences, College of Pharmacy, Meerut, Uttar Pradesh, India
2	2012	2013	Head, Assistant Professor	NIET College of Pharmacy, Greater Noida, Uttar Pradesh, India

Committee Membership

#	From	To	Position	Organization
1	2005	Till date	member	Registered Pharmacist of the Delhi Pharmacy Council India, Registration no. 16870.
2	2005	Till date	member	Life time member of the Delhi Pharmacy Council Registered Pharmacist Welfare Trust, India

Scientific Consultations

#	From	To	Institute	Full-time or Part-time

Volunteer Work

#	From	To	Type of Volunteer	Organization

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Evaluation of Bio-medical data using specialized software like, MS Excel programs and Origin.
2	Experienced with Internet applications for scientific research activities.
3	Experienced in the use of MS office (MS Word, MS Excel, Power point) and other software packages such as Chemdraw, Ultra Chems sketch, Basic Autocad etc.
4	Data Analysis and Biostatistics software ie., GraphPad Prism, InStat, Statmate, etc.

Last Update

26/01/2020

