

## DEPARTMENT OF PHARMACOLOGY ISF COLLEGE OF PHARMACY, MOGA



legacy of excellence in pharma education & research

## **VISSION OF THE DEPARTMENT**

To prepare exceptional students for productive and successful careers in the pharmaceutical industry, academia, research, and public sectors.

## **MISSION OF THE DEPARTMENT**

To improve learning and education of pharmacology in integrative manner with basic medical sciences, enhancement and improvement of research activities are target aim of the staff members in the department.

## **ABOUT US** Year of establishment **Pharmacology : 2005**

The Department of Pharmacology of ISFCP, established in 2005. Currently, is working on molecular pharmacology and experimental models of dementia (Alzheimer type); Ischemia preconditioning a protective cardio-vascular event, pesticide residues toxicology and molecular pharmacology involved in obesity, diabetic neuropathy, diabetic nephropathy, Huntington's Disease, Parkinson disease, and endothelial dysfunction is being explored through various projects. In the pharmacology department, the ecotoxicology (Zebrafish) lab is well established to study various disease models and further these small animals are also used for drug toxicity analysis.

• The offers training in pharmacology and toxicology to both undergraduate and post-graduate students, who may subsequently go on to exciting research, regulatory and administrative careers in academic, industrial, and healthcare provision settings. In this direction, the department's goal is to prepare students for productive and successful careers in the exceptional pharmaceutical industry, academia, research, and public sectors. • The Department has a centralized animal house approved by CPCSEA (Registration no: 118/PO/ReBi/S/1999/CPCSEA) for conducting experiments on Mice, Rats, Guinea Pigs, and Rabbits. Animal House is also approved for

breeding and trading of animals to other institutes and laboratories.

- The scope of pharmacology is rapidly expanding for the discovery, development and provides the rational basis for the therapeutic uses of new drugs. In its entirety, it embraces knowledge of the sources, chemical properties, biological effects, molecular mechanisms, and therapeutic uses of drugs.
- Pharmacologists are also involved in the molecular modelling of drugs, and the use of drugs as tools to dissect aspects of cell function.
- The scope of pharmacology has expanded exponentially over the last decade to incorporate many new approaches such as computer-assisted drug design, genetic screens, protein engineering, and the use of novel drug delivery vehicles including viruses and artificial cells.
- Trained Pharmacologists can look forward to rewarding Careers in Academia, Pharmaceutical Industries, Contract Research Organizations, and Drug Regulatory Agencies, in India and Foreign Countries.

## Minimum qualification for admission

## **For Pharmacology**

- A pass in any of the following examinations –
- 10+2 examination with Physics and Chemistry as compulsory subjects along with one of the following subjects: Mathematics or Biology.
- A pass in D. Pharm course from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act.
- Any other qualification approved by the Pharmacy Council of India is equivalent to any of the above examinations. Provided that a student should complete the age of 17 years on or before 31<sup>st</sup> December of the year of admission to the course. Provided that there shall be reservation of seats for the students belonging to the Scheduled Castes, Scheduled Tribes, and other Backward Classes in accordance with the instructions issued by the Central Government/State Government/Union Territory Administration as the case may be from time to time.

## **For Pharmacology**

A pass in B. Pharm from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act: Provided that there shall be reservation of seats for the students belonging to the Scheduled Castes, Scheduled Tribes, and Other Backward Classes in accordance with the instructions issued by the Central Government/State Government/Union Territory Administration as the case may be from time to time

### **Duration of the program**

Maters in Pharmacology - Two years

### **Attendance and progress**

A candidate is required to put in at least 80% attendance in individual courses considering theory and practical separately. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations

## **CHIEF ADVISOR & CHAIRMAN, RAC**

### Prof. (Dr.) Y.K.Gupta

Principal Adviser (Project),THSTI - DBT,GOI Principal Advisor India Strategy Development – GARDP President, AIIMS –Bhopal, President AIIMS,Samba,Jammu Chairman, Board of Directors,BIBCOI,DBT,GOI Member General Body and Governing body, National Dope Testing Lab, GOI , Member GB, National Institute of Immunology,DBT ,GOI Member Governing Body, Regional Institute of Biotechnology ,DBT,GOI Former Dean (Academics), and Head,Department of Pharmacology, AIIMS,New Delhi

Vice Chairman, Standing National Committee on Medicines & Health Care Products, GOI

Chairman, National GLP Technical committee, DST, GOI of India Member, National Committee for International Science Council Union -INSA , Former Director CSIR- IITR, Lucknow President, National Society of Alternatives to Animals National Scientific Co-ordinator, Pharmacovigilance Program of India Convener, India Initiate Programme, Indian Pharmacological Society IPS) Founder President, Indian Society of Nanomedicine Former President ,Indian Pharmacological Society



Prof. (Dr.) Y.K.Gupta M.D.,FAMS,FNASc, FIPS,FIAN,FST,FIACS, FAEB



Prof. R.D. Budhiraja Director, HOD, Pharmacology (29/08/2005- 15/08/2009)



Prof. Manjeet Singh Director, (Academics) (20/05/2006-29/05/2009)



Prof. P. L. Sharma HOD, Pharmacology (11/05/2009-31/03/2013)



Prof. R. K. Goyal Director (16/08/2011- 22/11/2011) Mrs. Sania Grover Assistant Professor



## **STAFF:** At present department has a team of 13 dedicated well trained faculty



Dr. Shamsher Singh Associate Professor & Head



Dr. Rimpi Arora Associate Professor



Dr. Sidharth Mehan Associate Professor



Mrs. Sania Grover Assistant Professor



Dr. Arti Singh Associate Professor



Ms. Karamjit Kaur Assistant Professor



Dr. G.P. Singh Associate Professor



Ms. Dilpreet Kaur Assistant Professor

Mrs Kininige Ekojuer **ARSistantProfessor** 



# **STAFF:** At present department has a team of 13 dedicated well trained faculty



**Ms. Avileen Kaur Assistant Professor** 



Mr. Anupam Awasthi **SRF-ICMR** 



Mr. Khadga Raj **SRF-ICMR** 



Ms. Urvashi **JRF-DST** 



Ms. Ruvind **Assistant Professor** 

## INFRASTRUCTURE

S.No.	Particular	Number	Facilities
1.	Laboratory UG	03	Well-equipped laboratories with latest equipment, standard furniture and fixtures, well ventilated, lightened with safety arrangements.
2.	Laboratory PG	05	Well equipped with digital and latest sophisticated instruments, standard furniture and fixtures, well ventilated, lightened with safety arrangements.
3.	Classroom UG	02	Cozy and comfortable furniture with multi-media facilities.
4.	Seminar room PG	01	Cozy and comfortable furniture with smart boards
5.	Tutorial room	02	Cozy and comfortable furniture with well-ventilated and lightened.
6.	Staff room	04	Well maintained furniture and fixture with all basic requirements – computer and printer.

### Facilities

#### Laboratory UG -03

Well-equipped laboratories with latest equipment, standard furniture and fixtures, well ventilated, lightened with safety arrangements.





#### Laboratory PG -05

Well equipped with digital and latest sophisticated instruments, standard furniture and fixtures, well ventilated, lightened with safety arrangements.



### PG Classroom 01

Cozy and comfortable furniture with smart boards



#### **Tutorial room 01**

Cozy and comfortable furniture with well-ventilated and lightened.





### Staff rooms: 05

Well maintained furniture and fixture with all basic requirements: computer, printer, freezer etc.



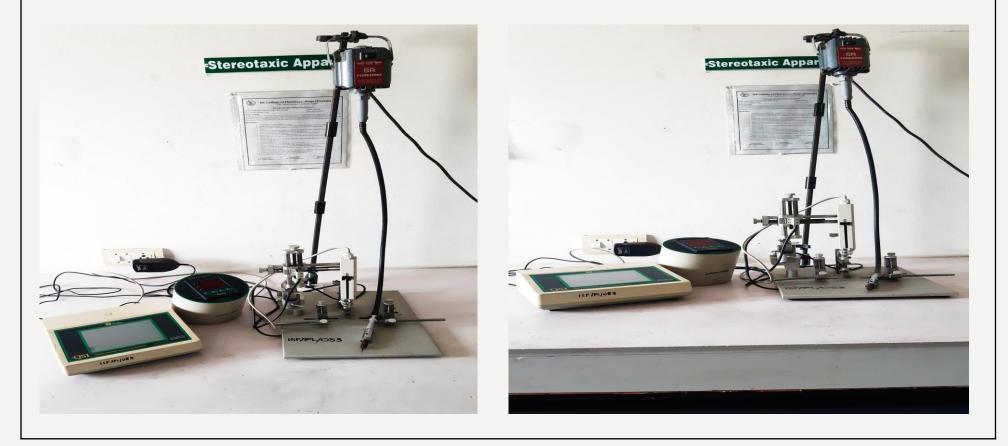
## **INSTRUMENTS**

S.No.	Name	Make	Year of	Cost	Unique ID	
			Purchase			
1.	HPLC-ECD	Waters	2011	900000	2465	
Purpose	• To detect various neurotransmitters in the brain of the animals.					
	• To analyse	phenol compound	s from food	samples		

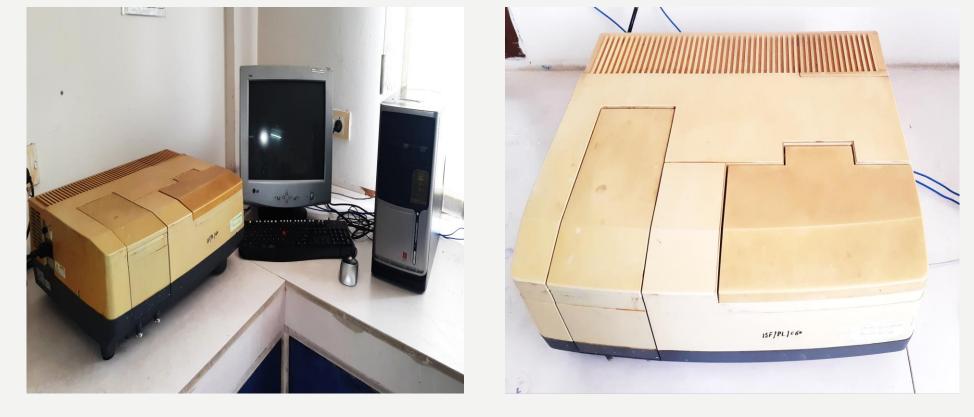




S.No.	Name	Make	Year of Purchase	Cost	Unique ID	
2.	Stereotaxic Apparatus	Stoeling USA	2012	3,70,000	SR	
Purpose	To perform stereotactic surgery which is used to implant substances /drugs at precise location in the brain					



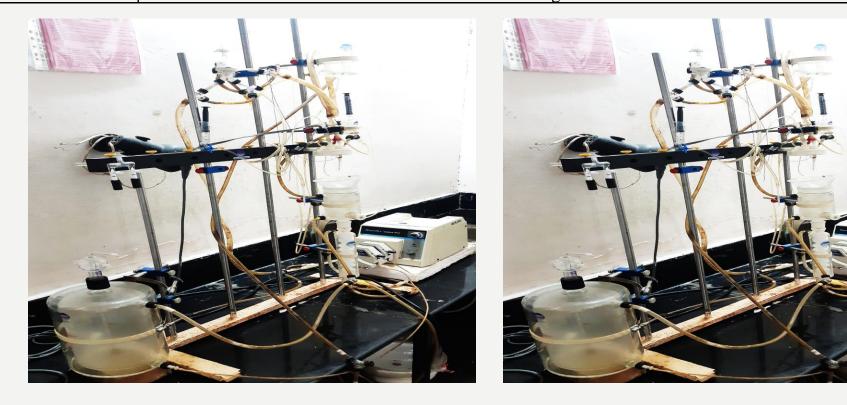
S.No.	Name		Make	Year of Purchase	Cost	Unique ID
3.	UV-Vis		PharmaSpec	2006	5,00,000	UV-1700 PharmaSpec
	Spectrophotometer					
Purpo	1		easure light absor cal compounds	bance across UV and	visible ranges of elec	ctromagnetic spectrum for



S.No.	Name	Make	Year of Purchase	Cost	Unique ID
4.	Fluorescen microscope		2011	1,53,717	Type 102M
Purpo	se	1	with desired and specific based on with lighten specific way	U	bed by fluorophores.



S.No.	Name		Make	Year of Purchase	Cost	Unique ID
5.	Lange Appar	ndorf's atus	Radnoti	2008	15,00,000	MP100
Purpose	It is used for isolated perfused heart assay.					
		• It is als	o used to examine o	cardiac contractile strength and	l heart rate.	



S.No.	Name	Make	Year of Purchase	Cost	Unique ID
6.	Western Blot Unit	Bio-Rad	2008	3,90,690	Semi dry Unit
PurposeIt is used for the identification and separation of proteins.•Mixture of proteins is separated based on molecular weight through gel electrophoreses					

S.No.	Name		Make	Year of Purchase	Cost	Unique ID
7.	Elisa R Well pla	eader (96 ate)	Bio-Rad	2012	5,74,526	iMark plate 96 well
-			n of biological, chemical, very, bioassay validation,	<b>1</b>	pple.	



S.N	No.	Name		Make	Year of Purchase	Cost	Unique ID
	8.	Refrigerated centrifuge		Eppendorf	2012	5,74,514	5810R
Pı	urpos	e	•	ample that needs a conste out dense substance a	<b>U</b> 1		centrifuge.



S.No.	Name		Make	Year of Purchase	Cost	Unique ID
9.	Ultra-Low Freezer (-80°C)	-	New Brunswick Scientific U410	2013	7,85,265	U410
Purpo	ose	• It is use	ed for long term storage of	chemical, drugs, enzy	ymes bacteria and o	ther samples.





S.No.	Name	Make	Year of Purchase	Cost	Unique ID
10	Dynamic Planter	Ugo Basile Italy	2009	4,39265	337370-002
Purpose	e De	esigned to automate the	assessment of touch sense	sitivity on the planter su	irface of rat or mice





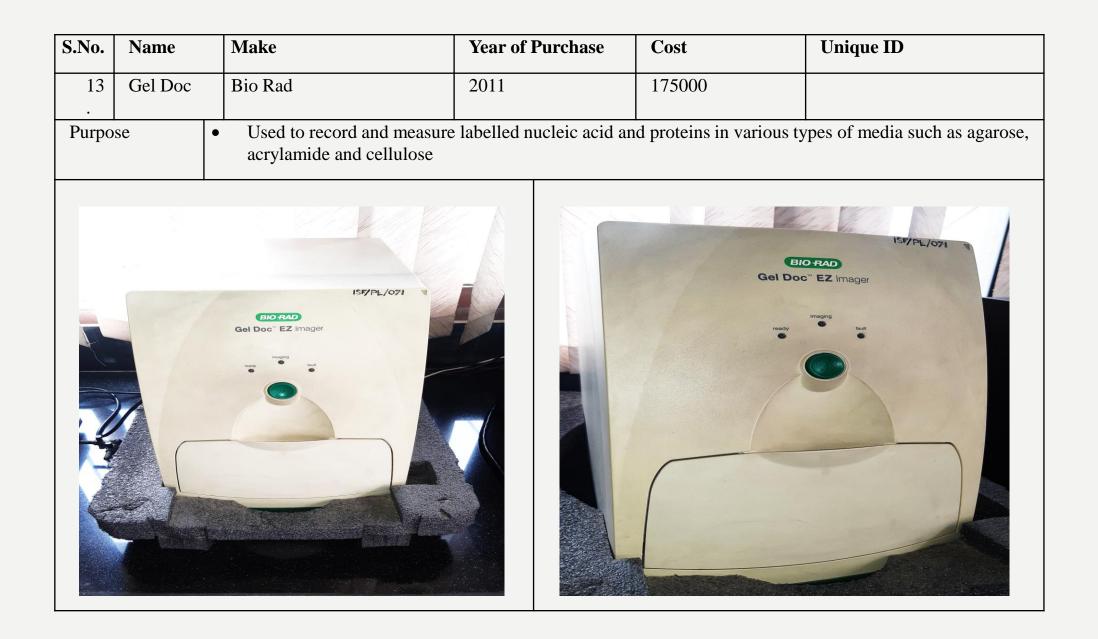
S.No.	Name		Make	Year of Purchase	Cost	Unique ID
11.	Refrigerated centrifuge		Eppendorf	2012	5,74,514	5810R
Purpos	Purpose Appar		atus is used for sepa	ration of supernatant from	homogenate of biological t	issues.



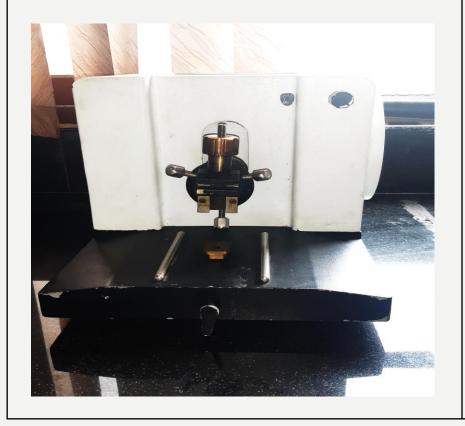
ſ	S.No.	Name	Make	Year of Purchase	Cost	Unique ID	
	12.	Myograph	Radnoti	2011	550000	M1600	
	Purpose		<ul> <li>To measure the force produced by a muscle when under contraction.</li> <li>To study velocity and intensity of muscular contraction.</li> </ul>				

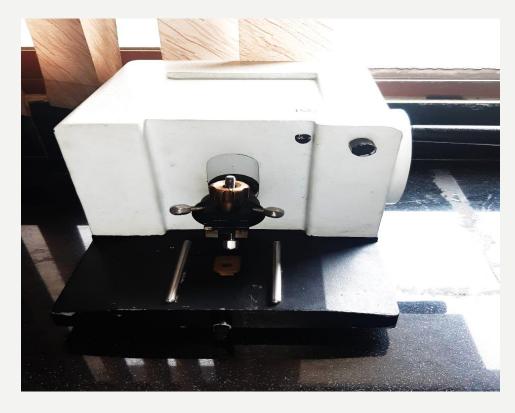






S.No.	Name	Make	Year of Purchase	Cost	Unique ID	
14.	Micro	Spencers	2012	30500	1010SMT-005	
	Tome					
Purpose		It is used for the preparation of thin slices of tissues up to 4µm.				





S.No.	Name		Make	Year of Purchase	Cost	Unique ID	
15.	Tissue Bath	Floation	Popular India	2012	2500		
Purpose		• It	• It lets tissues to relax and smoothens before being mounted on slide.				





S.No.	Name	Make	Year of Purcha	se Cost	Unique ID
16	. Paraffin	Popular India	2006	8000	
	Embedding	5			
	Bath				
Purpose		• This bath is used for	histology and in forensic r	nedical lab.	





S.No.	Name	Make	Year of Purchase	Cost	Unique ID	
17.	Grip Strength	Chatillon	2012	230000	10LBF 50 N	
Purpose		• To measure the muscle strength and the maximum force/tension generated by four arms muscles.				





S.No.	Name		Make	Year of Purchase	Cost	Unique ID	
18.	Electro- convulso	meter	INCO	2005	17900	100-3	
Purpose		• To pr drugs	produce minimal & maximum seizure required in the assay of anti-epileptic and anti-convulsant				





S.No.	Name	Make	Year of Purchase	Cost	Unique ID	
19.	Actophotometer	SWASTIKA INDIA	2009	13700	649929	
Purpose	• To n	measure the locomotor activities in animals.				





S.No.	Name		Make	Year of Purchase	Cost	Unique ID	
20.	Analgesiometer- Tail Flick		LABGO INSTRUMENTS	2011	2800		
Purpose		• To	o study the anti-nociceptive activity in mice and rats.				





S.No.	Name		Make	Year o	f Purchase	Cost	Unique ID
21.	Pole Apparatus	Climbing	INCO	2013		9000	
Purpose	2	To study o	cognitive function, mainly	response	e to condition stimu	l Ili during learning and its	retension.
Purpose			etus			Pole Climbing A Pole Climbing Apparate	

S.No.	Name	Make	Year of Purchase	Cost	Unique ID
24.	Organ Bath	AMBALA	2011	1800	
Purpose		<ul> <li>To study the effect of drug/c conditions.</li> <li>To investigate the physiolog</li> </ul>		lated tissues under prop	er physiological



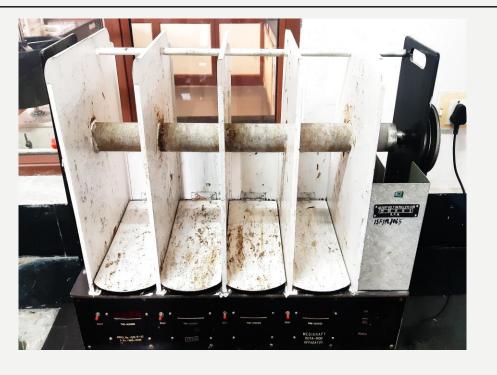


S.No.	Name		Make	Year of Purchase	Cost	Unique ID
23.	Analgesion Plate)	eter (Hot	INCO	2009	8500	
Purpos	e	• It is used	in analgesic drug tes	sting.		
		D				



S.I	No.	Name		Make	Year of Purchase	Cost	Unique ID
	22.	Rota Rod ap	pparatus	ROLEX	2010	6500	
P	urpose		To evalua	te drug effect on motor co-or	dination balance and motor le	earning in rodents.	





## **Area of Research**

The faculty and students of the department have the expertise to take up projects in the areas of

#### **4** Neuro- Psychopharmacology

✓ Molecular Target identification to attenuate neurodegenerative processes in Epilepsy, Alzheimer, Parkinson's and Huntington's disease, Traumatic Brain Injury, Autism, Multiple Sclerosis, Anxiety, Depression.

#### Cardiovascular pharmacology

- ✓ Hypertension
- ✓ Myocardial infraction
- ✓ Ischemic heart failure
- ✓ Cardiac arrhythmias
- $\checkmark$  Vascular endothelial dysfunction
- Endocrine/Inflammo-Pharmacology
- $\checkmark$  Understanding pathophysiology of Bronchial Asthma, Arthritis, Peptic Ulcer
- ✓ Obesity and Diabetes & associated cardiac, renal, hepatic & neural complications
- ✓ Identification of Novel Targets
- ✓ Development of Novel Drugs (Synthesis & Natural)

#### 4 Toxicology & Histopathology

- ✓ Exploring Toxicity profile of investigational drugs as per Schedule Y and OECD guidelines.
- **4** Molecular Pharmacology
- $\checkmark$  In- depth research to molecular level with advanced research tools
- ✓ Isolation of RNA- PCR/ Gel electrophoresis
- ✓ Molecular Imaging (Gel Doc)
- ✓ Understanding the role of cAMP/cGMP- CREB, Pi3K/Akt, MAPK and RAAS in neurodegeneration, Obesity, Diabetes & cardiovascular disorders

#### 4 Clinical Research

- ✓ Clinical Trials of Drugs
- $\checkmark$  BA and BE studies
- ✓ Pharmacovigilance
- ✓ Design of Clinical Trials and CRF's
- ✓ Monitoring and Audit of Clinical Trials
- ✓ Regulatory aspects of Clinical trials

## Ph. D completed (year wise)

S.No.	Name of candidate	Title of thesis	Year of registrati on	Year of award	Guide	Co- Guide
1	Dr. Shamsher Singh	Neuroprotective mechanism of antioxidants in experimental models of Parkinson's disease: Possible neurochemical modulation	2013	2017	Dr. Puneet Kumar Bansal	NA
2	Dr. Sumit Jamwal	Neuroprotective mechanism of spermidine and L-theanine in experimental models of Huntington's disease	2013	2017	Dr. Puneet Kumar Bansal	NA
3	Dr. Rimpi Arora	Role of natural compounds in cognitive disorders: Investigation of their protective mechanisms	2014	2021	Dr. Rahul Deshmukh	NA

### Ph. D Registered

S.No.	Name of candidate	Title of thesis	Year of registra-tion	Year of award	Guide	Co-Guide
1.	Mr. Khadga Raj Aran	Cryptotanshinone and Auranofin as Neuroprotective Tools to Combat Proton Pump Inhibitors and Chemotherapy Associated Alzheimer's Disease in Experimental Rats	2019	-	Dr. Shamsher Singh	Prof. (Dr.) G.D. Gupta
2.	Mrs. Sania Grover	Protective effects of Imperatorin and Sericin inPentylenetetrazole and Kainic Acid- Induced Epilepsy in Rats	2019	-	Dr. Shamsher Singh	Prof. (Dr.) R.K. Narang
3.	Mr. Anupam Awasthi	Neuroprotective effect of iron chelator deferoxamine alone and combination with necostatin-1 in lipopolysaccharide and rotenone induced Parkinson's like symptoms in rats	2019	-	Dr. Shamsher Singh	Prof. (Dr.) G.D. Gupta
4.	Ms. Karamjeet Kaur	Glabridin and Betulinic Acid as Neuroprotective Strategy against Aluminium Chloride and Titanium Dioxide InducedAlzheimer's Disease in Zebrafish	2019	-	Dr. Shamsher Singh	Prof. (Dr.) R.K. Narang
5.	Ms. Dilpeet Kaur	Neuroprotective effect of cerebrolysin and isoquercetin against MPTP and rotenone induced Parkinson's disease in zebrafish	2019	-	Dr. Shamsher Singh	NA
6.	Dr. Rohit	Analysis of plasma Anti-Glutamic acid decarboxylase antibody and Clusterin levels as diagnostic biomarkers and behaviour changes in Parkinson's Disease patients	2019		Dr. Shamsher Singh	NA 43

## M.Pharm completed (year wise)

#### M.Pharm (Pharmacology) Batch 2015-2017

S.No.	Passout Year	Name of candidate	Title of thesis	Guide	Co-guide
1.	2017	Avileen Kaur	Investigating of myocardial preconditioning potential mammalian target of rapamycin (mTOR) against ischemia/reperfusion injury in ovariectomized rats.	Dr. Saurabh Sharma	
2.	2017	Dishant Kapoor	Development and characterization of rotenone induced experimental Parkinson's disease in rats: possible role of morine hydrate in striatal function.	Dr. Rahul Deshmukh	
3.	2017	Harmanpreet Kaur	Effect of ferulic acid against quinolic acid induced Huntington's disease like symptoms in rats: possible role of nitric oxide.	Dr. Rahul Deshmukh	
4.	2017	Karamjeet kaur	Neuroprotective potential of allicin against MPTP – induced experimental Parkinson's disease in rats.	Dr. Rahul Deshmukh	
5.	2017	Kashish Sharma	Neuroprotective potential of lupeol against aluminium chloride (AlCl <sub>3</sub> ) induced experimental dementia in rats.	Dr. Rahul Deshmukh	

6.	2017	Madhusudhan S Shekhawat	Neuroprotective potential of morin hydrate in experimental vascular dementia in rats.	Dr. Rahul Deshmukh
7.	2017	Parmeet Kaur	Protective effect of lycopiene and ginseng against traumatic brain injury induced cognitive impairment.	Dr. Saurabh Sharma
8.	2017	Raveena Devi	Effect of retinoic acid in hyperhomocysteinemia induced vascular dysfunction in rats.	Dr. Saurabh Sharma
9.	2017	Sakesh Kumar	Effect of embelin on multiple unprictable stress induced depression in mice: possible role of monoamines.	Dr. Rahul Deshmukh
10.	2017	Sanpreet Kour	Neuroprotective effect of allicin against NP- induced Huntington's disease in rats.	Dr. Rahul Deshmukh

11.	2017	Shalini Jamwal	Possible involvement of caveolin in DOCA salt induced renovascular hypertension and vascular dysfunction in rats.		
12.	2017	Shilpa Rani	Beneficial effect of harmine against haloperidol induced Tardive dyskinesia in rats.		Dr. Puneet Kumar Bansal
13.	2017	Sunaina Devi	Neuroprotective potential of spermicide against rotenone induced Parkinson's disease in rats.	Dr. Rahul Deshmukh	
14.	2017	Surendra Singh	Possible involvement of dynamic related protein in attenuated myocardial precondition of hypertensive rats.		
15.	2017	Vandana Bhatia	Beneficial effects of agmatine against aluminium chloride induced cognitive decline in rats.		

### M.Pharm (Pharmacology) Batch 2016-2018

S.No.	Passout Year	Name of candidate	Title	Guide	Co-guide
1.	2018	Sanpreet Kaur	Neuroprotective potential of allicin against metals induced experimental dementia in rats.	Dr. Shamsher Singh	Dr. Sidharth Mehan
2.	2018	Ramandeep Kaur	Therapeutic potential of doxycycline and tocopherol against rotenone induced Parkinson's disease in rats.	Dr. Shamsher Singh	Dr. Sidharth Mehan
3.	2018	Meenakshi Gupta	Exploring statin drugs for the treatment of bacterial infections-In-silico, In-vitro and Ex-vivo study.	Dr. Anoop Kumar	
4.	2018	Himanshi Khera	Investigation of myocardial preconditioning potential of Hedgehog pathway against ischemia/reperfusion in DOCA salt induced hypertension.	Dr. Sidharth Mehan	Mr. Anupam Awasthi
5.	2018	Shivani Verma	Investigation of preconditioning potential of protein tyrosine phosphate 1B inhibitor against ischemic/reperfusion injury of dyslipidemic rat heart.	Dr. Sidharth Mehan	Mr. Anupam Awasthi
6.	2018	Arti Rana	Pharmacological potential of doxycycline and tocopherol against traumatic brain injury induced cognitive impairment in rats.	Dr. Anoop Kumar	Dr. Shamsher Singh
7.	2018	Divya Rana	Repurposing of drugs in the prevention of cataract – An In-silico and In-vitro study.	Dr. Anoop Kumar	

### M.Pharm (Pharmacology) Batch 2017-2019

S.No.	Passout Year	Name of candidate	Title	Guide	Co-guide
1.	2019	Ria	Exploring the activity of thioridazine alone and in combination with amoxicillin and neomycin against bacterial strains: Computational, In-vitro and Ex-vivo studies.	Dr. Arti Singh	
2.	2019	Aakriti Garg	Exploring the antibacterial potential of selective estrogen receptor modulators alone and in combination with ampicillin and neomycin against gram positive and gram negative bacteria: An experimental study.	Dr. Arti Singh	
3.	2019	Kamalpreet Kaur	Effect of transient hyperglycemia on ischemic/reperfusion induced renal injury in rats.	Dr. GP Singh	
4.	2019	Kamal Sethi	Effect of atorvastatin with neomycin and ampicillin against gram positive and gram negative bacteria.	Dr. Arti Singh	
5.	2019	Jeremiah Ogbadu	Investigating the influence of AT <sub>1</sub> receptor antagonism on ischemia/reperfusion induced acute kidney injury in aged rats.	Dr. GP Singh	Dr. Y.K.Gupta
6.	2019	Mohmmad Mamtaj Alam	Effect of forskolin in methyl mercury induced experimental model of amyotrohic lateral sclerosis in rats.	Dr. Sidharth Mehan	
7.	2019	Tarun Kapoor	Effect of forskolin in intracerebropeduncle ethidium bromide induced experimental model of multiple sclerosis in rats.	Dr. Sidharth Mehan	
8.	2019	Kajal	Investigation of solanesol in combined model of intracerebral and intraventricular hemorrhage using autologous blood injection in rats.	Dr. Sidharth Mehan	
9.	2019	Rishabh Kumar	Efficacy study of Plumbagin, Naringenin alone or in combination with Imipenem and Cilastatin in cecal ligation and puncture (CLP) induced polymicrobial sepsis model in swiss albino mice.	Dr. GP Singh	
10.	2019	Shakshi Sharma	Neuroprotective effect of Quercetin in combination with piperine against rotenone and iron supplement induced Parkinson's disease.	Dr. Shamsher Singh	

11.	2019	Nidhi Sharma	Antibacterial potential of Auranofin alone and in combination with Ampicillin and Neomycin against gram positive and gram negative bacteria: An In-silico and In-vitro study.		
12.	2019	Rishabh Jhanji	Exploring the anti-bacterial potential of phytomolecules alone and in combination with standard antibiotics against gram positive and gram negative bacteria.	Dr. Arti Singh	Dr. Y.K. Gupta
13.	2019	Devesh Aggarwal	Effect of combined $AT_1$ and aldosterone receptor antagonism on ischemia/reperfusion injury induced progressive kidney disease in rats.	Dr. GP Singh	
14.	2019	Ramit Sharma	Effect of solanesol in intracerebroventricular propionic acid induced experimental model of autism.	Dr. Sidharth Mehan	
15.	2019	Pallavi Duggal	Effect of microtubule stabilizer cabazitaxel in intracerebroventricular injection of streptozotocin induced alzheimer's disease in rats.	Dr. Sidharth Mehan	
16.	2019	Bibek Shah	Exploring the antifungal activity of abscisic acid (ABA) alone and in combination with fluconazole against candida albicans: an insilico, in-vitro and ex-vivo approach.	Dr. Shamsher Singh	
17.	2019	Balraj Singh	Anti-fungal activity of fluvastatin alone and in combination with fluconazole against Candida albicans: an in-silico, and in-vitro study.	Dr. Shamsher Singh	
18.	2019	Raju Paudel	Neuroprotective potential of oxiracetam alone and with zinc against propionic acid induced experimental autism in rats.	Dr. Shamsher Singh	
19.	2019	Khadga Raj	Neuroprotective effect of L-theanine against tramadol induced Parkinson's like symptoms in experimental rats.	Dr. Shamsher Singh	
20.	2019	Urvashi	Protective effect of verapamil in combination with hesperidin against pentylenetetrazole induced kindling seizure in experimental mice.	Dr. Shamsher Singh	Prof. Y.K. Gupta

### M.Pharm (Pharmacology) Batch 2018-2020

S.No.	Passout Year	Name of candidate	Title	Guide	Co-guide
1.	2020	Aarti Tiwari	Effect of ERK/MAPK inhibitor $\alpha$ -mangostin in intracerebroventricular propionic acid induced experimental model of Autism.	Dr. Sidharth Mehan	
2.	2020	Abha Kumari	Pharmacological effects of PDE4 inhibitor roflumilast in CLP induced septic cardiomyopathy in rats.	Dr. GP Singh	
3.	2020	Akansh Goel	Pharmacological evaluation of Embelin in Benzo $[\alpha]$ pyrene induced experimental model of cognitive and memory impairment in mice.	Dr. Shamsher Singh	
4.	2020	Anirban Ghosh	Neuroprotective effect of microtubule stabilizer, brain penetrant triazolopyrimidine against fluid percussion model of traumatic brain injury in experimental rats.	-	
5.	2020	Bharti	The development of streptozotocin induced dementia model in adultzebrafish and preventive effect of hydroalcholic extract of centella asiatica.	Dr. Arti Singh	
6.	2020	Bhawna Garg	Neuroprotective effect of Rutin alone and in combination with piperine against STZ induced memory deficit in rat via nrf-2 and HO1 signaling pathway.	-	
7.	2020	Diksha	Acrylamide induced neurobehavioural disorders in adult zebrafish model via gut brain axis and the protective effect of CoQ10.	Dr. Arti Singh	
8.	2020	Ehraz Mehmood	Effect of Nrf2/HO-1 modulator acetyl-11- keto-beta- boswellic acid in mercury induced experimental model of amytrophic lateral sclerosis in rats.		
9.	2020	Elizabeth Minj	Effect of Nrf2/HO-1 modulator acetyl-11- keto-beta- boswellic acid in mercury induced experimental model of amytrophic lateral sclerosis in rats.		
10.	2020	Kirti Gupta	Pharmacology effect of PDE4 inhibitor Roflumilast in CLP induced acute kidney injury in rats.	Dr. GP Singh	

11.	2020	Kuldeep Singh	Investigation of PI3K-AKT/mTOR inhibitor Chrysophanol in in intracerebral haemorrage using autologous blood injury in rats.	Dr. Sidharth Mehan
12.	2020	Mahadev Dhami	Neuroprotective effect of Fucoxanthin against intracerebral ventricular streptozotocin (ICV-STZ) induced cognitive impairment by Rescuing IP3/GSK3β pathway.	-
13.	2020	Meena Yadav	Targeting oxidative stress and neuroinflammation in chronicunpredictable stress induced anxiety in adult zebrafish.	Dr. Arti Singh
14.	2020	Neelam Sharma	Effect of Centellaasiatica in 24 hours Sleep deprivation induced memory deficits in adult zebrafish.	Dr. Arti Singh
15.	2020	Nidhi Sharma	Investigation of Solanesol as SIRT-1 activator in intracerebropeduncle ethidium bromide induced experimental model of multiple sclerosis in rats.	
16.	2020	Nitish	Effect of JAK/STAT-PPARγ receptor modulator guggulsterone in intracerebropeduncle ethidium bromide induced experimental model of multiple sclerosis in rats.	
17.	2020	Pallavi Sen	Pharmacological effects of Wnt/ $\beta$ - catenin antagonist in sepsis induced cardiomyopathy in rats.	Dr. GP Singh
18.	2020	Ragini Singh	Pharmacology effects of protein tyrosine phosphate inhibitor in ischemia reperfusion induce acute kidney injury in rats.	Dr. GP Singh
19.	2020	Rajeshwar Kumar	Effect of dual c-JNK/ p38 MAPK inhibitor apigenin in mercury induced experimental model of amytrophic lateral sclerosis in rats.	Dr. Sidharth Mehan
20.	2020	Rashmi Bhushan	Neuroprotective effect of allicin against rotenone and manganese induced Parkinsonism in rats via modulation of JNK and activation of Nrf2/ERK pathways.	-

## M.Pharm pursuing (2019-2021)

S.No.	Name of candidate	Title of thesis	Guide	Co-Guide
1.	Aarti Sharma	Investigation of P13-AKT/MTOR signaling inhibitor chrysophanol in intracerebroventricular propionic acid-induced experimental model of autism in rats.	Dr. Sidharth Mehan	
2.	Ambika	Investigation of IGF-1/GLP-1 signaling activator 4-hydroxyisoleucine in methylmercuryinduced experimental model of amyotrophic lateral sclerosis in rats.	Dr. Sidharth Mehan	
3.	Ankit Chaudhary	Protective effect of apigenin in monobenzone induced mice model of vitiligo.	Dr. Shamsher Singh	
4.	Anshuan Singh	Neuroprotective effect of apigenin as dual C-JNK/P38MAPK signaling inhibitor in intracere- bropedunnleethidiun bromide-induced experimental model of multiple sclerosis in rats.	Dr. Sidharth Mehan	
5.	Ashish	Pharmacological targeting of renal calcium sensing receptor (CaSR) for prevention of sepsis induced acute kidney injury in rats.	Dr. GP Singh	
6.	Ayush Gandhi	Neuroprotective effect of Andrographolide in Rotenone and Iron supplementation induced Parkinsonism in mice.	Dr. Shamsher Singh	
7.	Bidisha Rajkhowa	Investigation the neuroprotective potential of solanesol as SIRT-1 signaling activator in intracerebroventricular injection of ouabain-induced bipolar disorder in rats.	Dr. Sidharth Mehan	
8.	Divya Sharma	Ameliorative effects of trimetazidine in rodent model of sepsis induced acute kidney injury	Dr. GP Singh	
9.	Komal	Neuroprotective effect of Honokiol in propionic acid Autism in experimental rats through down-regulating Akt-mTOR pathway.	Dr. Shamsher Singh	
10.	Kuleshwar	Berberine ameliorates mitochondrial dysfunction and oxidative stress in anticancer drug induced memory dysfunction in mice.	Dr.Arti Singh	

11.	Lav Goyal	Protective effect of Guggulsterone in TBI model of experimental rats via amelioration of TNF- $\alpha$ /Nrf-2 expression.	Dr. Shamsher Singh
12.	Loveinder Bhardwaj	Pharmacological targeting of calcium sensing receptors (CaSR) for prevention of sepsis induced cardiac dysfunction in rats.	Dr. GP Singh
13.	Lovekesh Singh	Neuroprotective effect of honokiol in ICV STZ induced Alzheimer disease in experimental rats.	Dr. Shamsher Singh
14.	Mayank Patel	Protective effect of apigenin alone and in combination with piperine in LPS induced parkinsonism in experimental rats via targeting NF-kB signaling pathway.	Dr. Shamsher Singh
15.	Md. Khalid Deshmukh	Anti-inflammatory and anti-fibrotic effect of trimetazidine (TMZ) in unilateral ureteral obstruction (UUO) model.	Dr. GP Singh
16.	Newly Bagang	Ameliorative effects of calcium sensing receptor in cisplatin induced acute kidneyinjury in rats.	Dr. GP Singh
17.	Nilima Pradhan	Targeting mitochondrial dysfunction and oxidative stress with coenzyme Q10 in anticancer drug induced memory dysfunction in mice.	Dr. Arti Singh
18.	Pardeep	Investigation of neuroprotective effect of andrographolide in aluminium and copper sulphate induced Alzheimer's disease in experimental rats.	Dr. Shamsher Singh
19.	Rakesh	Neuroprotective potential of ERK-1/2 signaling inhibitor of alpha mangostin in methylmercury- induced experimental model of amyotrophic lateral sclerosis in rats.	Dr. Sidharth Mehan
20.	Rashi Faujdar	Protective effect of hydro-alcoholic extract of centella asiatica in acute stress induced anxiety and spatial memory loss in adult zebra fish.	Dr. Arti Singh

11.	Lav Goyal	Protective effect of Guggulsterone in TBI model of experimental rats via amelioration of TNF- $\alpha$ /Nrf-2 expression.	Dr. Shamsher Singh
12.	Loveinder Bhardwaj	Pharmacological targeting of calcium sensing receptors (CaSR) for prevention of sepsis induced cardiac dysfunction in rats.	Dr. GP Singh
13.	Lovekesh Singh	Neuroprotective effect of honokiol in ICV STZ induced Alzheimer disease in experimental rats.	Dr. Shamsher Singh
14.	Mayank Patel	Protective effect of apigenin alone and in combination with piperine in LPS induced parkinsonism in experimental rats via targeting NF-kB signaling pathway.	Dr. Shamsher Singh
15.	Md. Khalid Deshmukh	Anti-inflammatory and anti-fibrotic effect of trimetazidine (TMZ) in unilateral ureteral obstruction (UUO) model.	Dr. GP Singh
16.	Newly Bagang	Ameliorative effects of calcium sensing receptor in cisplatin induced acute kidneyinjury in rats.	Dr. GP Singh
17.	Nilima Pradhan	Targeting mitochondrial dysfunction and oxidative stress with coenzyme Q10 in anticancer drug induced memory dysfunction in mice.	Dr. Arti Singh
18.	Pardeep	Investigation of neuroprotective effect of andrographolide in aluminium and copper sulphate induced Alzheimer's disease in experimental rats.	Dr. Shamsher Singh
19.	Rakesh	Neuroprotective potential of ERK-1/2 signaling inhibitor of alpha mangostin in methylmercury- induced experimental model of amyotrophic lateral sclerosis in rats.	Dr. Sidharth Mehan
20.	Rashi Faujdar	Protective effect of hydro-alcoholic extract of centella asiatica in acute stress induced anxiety and spatial memory loss in adult zebra fish.	Dr. Arti Singh

21.	Ria	Investigation the neuroprotective potential of smo-shh agonist purmorphamine in intra-dorsal raphe nucleus injection of 8-OH-DPAT induced obsessive compulsive disorder in rats.	Dr. Sidharth Mehan	
22.	Rishabh Khera	Neuroprotective potential of JAK/STAT-PPARy pathway modulator guggulsterone in intracerebroventricular propionic acid-induced experimental model of autism in rats.	Dr. Sidharth Mehan	
23.	Satyabrata Kundu	Neuroprotective effect of 3-acetyl-11-keto-beta-boswellic acid alone and in combination with piperine against fluid percussion model of TBI in experimental rats.	Dr. Shamsher Singh	
24.	Sriyansh Srivastava	Cardioprotective effect of wnt/beta antagonist pyrvinium is mediated by ATP sensitive potassium channel isoproterenol cardiomyopathy model	Dr. GP Singh	
25.	Shubham Upadhayay	Effect of NRF2/HO-1signaling activator acetyl-11-keto-beta-boswellic acid in intracerebro- ventricular ethidium bromide- induced experimental model of multiple sclerosis in rats.	Dr. Sidharth Mehan	
26.	Shubham Yadav	Cardioprotective effects of platelet rich plasma on isoproterenol induce cardiac dysfunction in rats.	Dr. GP Singh	
27.	Sukhdev Singh	Protective effect of ursolic acid in lipopolysaccharide induced neuroinflammation in adult zebrafish.	Dr. Arti Singh	
28.	Vishal Kumar	Effect of ursolic acid on 3-nitropropionic acid induced Huntington's like symptoms in adult zebrafish.	Dr. Arti Singh	
29.	Neha Sharma	Neuroprotective evaluation of isoquercitrin and maslinic acid in rotenone and manganese induced Parkinson's in zebrafish.	Dr. Shamsher Singh	
30.	Sakshi	Renoprotective effects of I-type and t-type calcium channel inhibitors in cisplatin induced acute kidney injury in rats.	Dr. GP Singh	

## 6. Journals

	2017	2018	2019	2020	2021
International publication	Number: IF:	Number: IF:	Number: IF:	Number: IF:	Number: IF:
National publication	Number: IF:	Number: IF:	Number: IF:	Number: IF:	Number: IF:
Patents				01	01
Technology transfer					
MoU					
Conference/Sem inar organized					
Workshops/han d of training organized			01		
Webinars organized			02	02	
FDP/STTP/CEP organized					
Guest lecture organized		03	03	01	02

## 7. Membership/Recognition a. Award

Name of faculty	Award	Agency	Amount	Level (International/ National)	Any other
Dr. Shamsher Singh	Patent	Govt. of India (The Patent office)	-	National	Dam Apparatus (86455)
Dr. Shamsher Singh	Travel Grant	IBRO	€1800	International	
Dr. Shamsher Singh	Outstanding reviewer award	Elsevier for Journal of Neuropharmacology	Certificate	International	
Dr. Shamsher Singh	Travel grant	Department of Science and Technology (DST) – Science and Engineering Research Board (SERB)	Rs. 132000/-	International	
Dr. Shamsher Singh	Award	Movement Disorders Society	Free registration and attendee	International	
Dr. Shamsher Singh	Travel grant	Movement Disorders Organization	\$500 USD	International	
Dr. Shamsher Singh	Travel grant	Department of Science and Technology (DST) – Science and Engineering Research Board (SERB)	Rs. 151000/-	International	
Dr. Shamsher Singh	Travel grant	Movement Disorders Society	\$1,000 USD	International	
Dr. Shamsher Singh	Travel grant	IBRO International Travel Grant	€1800	International	
Dr. Shamsher Singh	Award	Punjab Medical Council, Indian Council of Medical Research, National Medicinal Plants Board, Department of Science and Technology, Department of Biotechnology and Association of Pharmaceutical Teachers of India.	Gold Medal and First Prize in Oral Research Paper Presentation	National	
Dr. Sidharth Mehan	Idea of Innovation, 2021 Under the Scheme "Support for EMD" of MSMEs	MSME, Govt. of India Ministry of Micro Small & Medium Enterprises,	Rs. 18.50 Lakh	National	Approved and Ongoing

Dr. Sidharth Mehan	Leader excellence award in Health & Environment Research	Golden Global Health and Education Awards, Mumbai	Rs 25000/-	National	
Dr. Sidharth Mehan	Young Pharma Innovator	Pharmaceutical Royal International Society, MP	Rs 10000/-	National	
Dr. Sidharth Mehan	Young Pharma Researcher	Institute of Entrepreneurship Development, MSME, Govt. of UP in association with LOQMAN National & International Award	Rs 15000/-	National	
Dr. Sidharth Mehan	Young Scientist Award	8th International Conference & Exhibition, IPER, Wardha, Maharashtra by Society of Pharmaceutical Education & Research (SPER)	Rs 10000/-	National	
Dr. Sidharth Mehan	Most Impactful 100- Healthcare Global Leaders Award, India-2018	World Mental Health & Wellness Congress at Taj Lands End, Mumbai	Rs 15000/-	National	
Dr. Sidharth Mehan	Outstanding Research In Life Science Category	<u>AIIMS</u> , Rishikesh (Society of Young Biomedical Scientist, India)	Certificate	National	
Dr. Sidharth Mehan	Award of Honor	Clinical and Medical Case Report Theme: Integrating the advances of case reporting in redefining the healthcare System, Dubai	1.10 Lakh	International	
Dr. Sidharth Mehan	Award of Honor	<u>Clinicaltoxicology</u> and <u>Pharmacology</u> <u>Conference</u> wor ks on the theme "Exploring latest advancements in Clinical Toxicology and Pharmacology". Dubai	Rs 50000/-	International	
Dr. Sidharth Mehan	Pharma Ratan, 2018 Young Achiever Award	Rab Di Mehar, Delhi, India	Rs 12000/-	National	
Dr. Sidharth Mehan	Best Teacher Awarded	ISFCP, Moga	Certificate	National	

Dr. Sidharth Mehan	Award of Honor	People University, Bhopal	Rs 8000/-	National	
Dr. Sidharth Mehan	Eminent Pharmacist award & Award of Appreciation	Nirali Prakashan, New Delhi, India	Rs 7000/-	National	
Rimpi Arora	Travel Grant	CSIR	Rs 42,785/-	National	
Rimpi Arora	Travel Grant	CSIR	Rs 32,000/-	National	
Rimpi Arora	Travel Grant	British Pharmacological Society.	390 £	International	
Rimpi Arora	PG Scholar Award	AICTE	Rs 8000/- per month	National	
Rimpi Arora	UG Scholar Award	IKGPTU	Rs 32000/- per semester	National	

### b. Membership

Name of faculty	Agency	Membership number	Туре	Level (International/N ational)	Any other
Dr. Shamsher Singh	Member of board of study IKGPTU	Active	2019-2024	National	
Dr. Shamsher Sinh	Member of Movement Disorders Society	4575	Lifetime	International	
Dr. Shamsher Singh	Scientist and Member Secretory of IAEC	Active	Lifetime	National	
Dr. Sidharth Mehan	Indian Pharmacology Society (IJP), India	LS937	Lifetime	National	
Dr. Sidharth Mehan	Association of Pharmaceutical Teachers of India (APTI), India	RA/LM-457	Lifetime	National	
Dr. Sidharth Mehan	Indian hospital pharmacist Association (IHPA), India	LM-51075	Lifetime	National	
Dr. Sidharth Mehan	Society of Pharmaceutical Education & Research (SPER), India	SPER/LM/PB/1 06	Lifetime	National	
Rimpi Arora	SfN	000169255	Regular	International	
Rimpi Arora	ISN	17068	Regular Student Membership	International	
Rimpi Arora	APSN	18-10-IND-S01	Regular	International	
Rimpi Arora	ESN	ESN#1346	PhD Research Scholar membership	International	

Rimpi Arora	BPS	BPS-219	Early career Student Membership	International	
Rimpi Arora	ANS	ANS-AU/033	Regular Student Membership	International	
Rimpi Arora	FENS	ESN 44076	Regular Student Membership	International	
Rimpi Arora	SPER	SPER/SM/095	Life Membership	National	

# For Admission Contact Admission Cell

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