

Activities of students exposed to learning resources such as Laboratories, Animal House and Herbal Garden.

#### Introduction:

Our medical institution is committed to providing a holistic and enriching learning experience to our students. In line with this commitment, we have established and maintained various learning resources that enhance the practical knowledge and skills of our students. In this report, we will discuss our laboratories, animal house, and herbal garden, and how these resources contribute to the overall development of our students.

#### Laboratories:

Our institution boasts state-of-the-art laboratories equipped with the latest technology and equipment required for teaching and research. All the Undergraduates and Post Graduates students of our Institution have access and exposure to various laboratories of their assigned subjects where they are posted as per guidelines of the regulatory bodies. Practical sessions are built in to the time table as per the curriculum of the state affiliated university and National Medical commission implemented CBME curriculum.

Students are exposed to various Practical Laboratories in the following department:

- 1. Department of Anatomy
- 2. Department of Physiology
- 3. Department of Biochemistry
- 4. Department of Pathology
- 5. Department of Microbiology
- 6. Department of Pharmacology
- 7. Department of Forensic Medicine and Toxicology
- 8. Department of Community Medicine

### Department of Anatomy



Dissection Hall



Histology Lab

## Department of Biochemistry



Students Practical Lab



Clinical Biochemistry Lab

## Department of Physiology

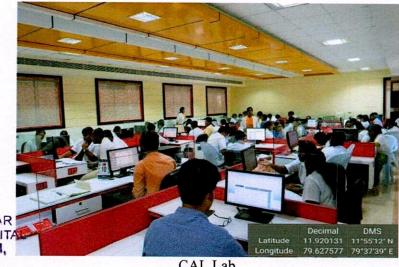


Clinical Lab



Hematology Lab

# Department of Pharmacology



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KAGNE. P N DEAN

CAL Lab

# Department of Microbiology



PG students Lab



UG Students Practical Lab

# Department of Pathology



Penta Microscope lab

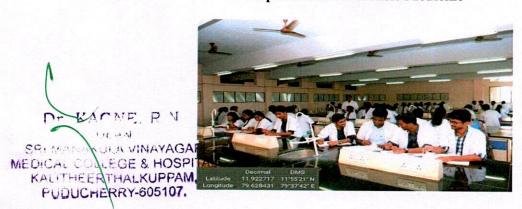


Clinical Pathology lab



Students Practical Lab

## **Department of Forensic Medicine**



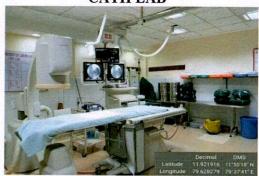
Specialized laboratories accessible to Postgraduate students and students conducting research projects. Each postgraduate student is exposed to different laboratories on rotation basis as per University guidelines. Besides these, they carry out their dissertations in specialized laboratories.

S.No.	Department	Specialized Laboratories
1.	Department of Anatomy	Histology Lab
		Dissection Hall
		Cytogenetics (Embryology) laboratory
2.	Department of Physiology	Clinical Physiology laboratory
		Hematology Lab
		Amphibian Laboratory
		Mammalian / Sports Laboratory
		Reproductive Biology Laboratory
		Neurophysiology Laboratory
		Sleep Laboratory
3.	Department of Biochemistry	Clinical Biochemistry Laboratory
		Research Laboratory
		Students Practical Laboratory
4.	Department of Pathology	Histopathology Laboratory
		Cytology Laboratory
		Hematology Laboratory
		Coagulation and Serology Laboratory
		Research laboratory
		Clinical Pathology Laboratory
5.	Department of Microbiology	Bacteriology Laboratory
		Mycobacteriology (TB ) Laboratory
		Mycology Laboratory
		Serology /Parasitological/Immunology
		laboratory
		Virology / BSL3 Laboratory
		PG Laboratory
		Student laboratory
		RT-PCR Laboratory
6.	Dept of Pharmacology	Research Laboratory
		Computer Assisted Learning (CAL)
		Laboratory
		Experimental Pharmacology Laboratory
		Clinical Pharmacology Laboratory
7.	Department of Forensic Medicine	Students Practical Laboratory
8.	Department of Community Medicine	Public Health Laboratory
9.	OPD	Common Collection Central Laboratory
10.	Department of ENT	Temporal bone dissection Laboratory
11.	Department of Obstetrics	Skill Lab
	and	IVF Centre
	Gynaecology	Dr. KAGNE.
12.	Department of Cardiology	CATH Lab DEAN

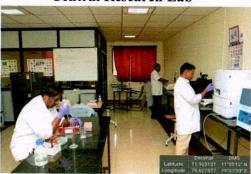
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**CATH LAB** 



Central Research Lab



**RT PCR Lab** 





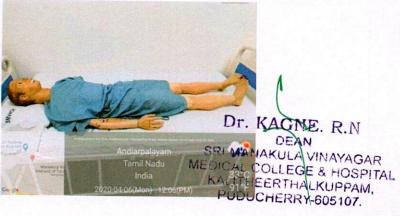


Skill Lab









#### **Students Activities:**

In these laboratories, students have the opportunity to:

- Hands-on Learning: Students gain practical experience by conducting experiments, simulations, and diagnostic procedures, which reinforce classroom learning.
- 2. Research Opportunities: Our laboratories provide a conducive environment for students to engage in research activities, fostering a spirit of inquiry and innovation.
- 3. Skill Development: Through regular use of these laboratories, students develop essential laboratory skills, critical for their future careers.

#### **Animal House:**

The Animal House at our institution Sri Manakula Vinayagar Medical College and Hospital (SMVMCH), Madagadipet, Puducherry is designed to supplement teaching, training, and research facilities for Under Graduates (MBBS), Post Graduates (MD/MS), Research scientists and Faculties.

The Animal House was established and registered on 29<sup>th</sup> April 2005 with the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), under the Ministry of Fisheris, Animal Husbandry and Dairying, Department of Animal Husbandry and Dairying, Government of India. The animal house was registered for "Research for Education Purpose" on Small Animals with the registration number 893/PO/Re/S/05/CPCSEA The animal house was periodically renewed as per the guidelines of CPCSEA. The last renewal was done with Committee for the Control and Supervision of Experiments on Animals (CCSEA) on 9<sup>th</sup> November 2022 and it is valid for the period of Five years. The animal house was maintained and supervised under the department of Pharmacology and it also have an established Institutional Animal Ethics Committee (IAEC).



#### **Animal House Facilities:**

The facility includes several specific rooms and areas:

- 1. Air-Conditioned Facility: The facility is equipped with air conditioning to maintain appropriate temperature and conditions for the animals.
- 2. Quarantine Room: This is likely where newly arrived animals are kept for a period to ensure they are healthy and disease-free before being introduced to the main facility.
- 3. Animal Holding Rooms: These rooms are likely where different species of animals used for experiment or study purposes are housed separately.
- 4. Surgery/Dissection Theatre: This room is used for surgical procedures and dissections, likely for training or research purposes.
- 5. Fish Research Room: This is a specialized room for research involving zebrafish, a common model organism in scientific research.
- 6. Experimental Room: This is likely the main area where experiments on the animals are conducted.
- 7. Veterinary Officer Room: This is the room where a veterinary officer or veterinarian working at the facility might have their workspace.
- 8. Storage Room: A room for storing equipment, cages, supplies, and possibly animal feed.
- 9. Washing and Sanitation Area: An area dedicated to cleaning cages and maintaining hygiene in the facility.
- 10. Autoclave: An autoclave is used to sterilize cages, equipment and supplies to ensure aseptic conditions.
- 11. CCTV: Closed-circuit television cameras are likely installed for monitoring and security purposes.

#### Area

Total Buit-up Area: 1887.75 sq. ft.

## **Animal Species**

- Rat (Wistar albino)
- Mice (Swiss albino)
- Guinea pig (Dunkin Hartley)
- Rabbit (Newzealand white)
- Zebrafish (Danio rerio)

#### ANIMAL HOUSE STAFFS:

Faculty In-charge of Animal Facility - Dr. M. SHANTIH NAKULA VINAYAGAR

❖ In-charge Veterinarian - Dr. RAJARAM P MEDICAL COLLEGE & HOSPITAL KALITHEERTHALKUPPAM, PUDUCHERRY-605107.

Dr. KAGNELR N

### **Students Activities:**

The animal house offers students the following learning opportunities:

- Ethical Animal Handling: Students learn the ethical handling and care of research animals, ensuring that they adhere to the highest standards of animal welfare.
- 2. Experimental Research: The animal house facilitates experiments and studies that are crucial for understanding disease mechanisms, drug testing, and developing clinical skills.
- 3. Interdisciplinary Learning: Interactions with faculty and researchers from diverse fields enrich students' understanding of animal-based research.

Undergraduate (MBBS) Students Exposed to Animal House





Herbal Garden:

SNE. R.N DEAN A VINAYAGAR MEDICAL COLLEGE & HOSPITAL KALITHEERTHALKUPPAM. PUDUCHERRY-605107.

Having an herbal garden in a medical college can be a valuable and beneficial addition to the educational and research aspects of the institution. An herbal garden is a curated space where various medicinal plants are cultivated, grown, and maintained for academic, research, and therapeutic purposes. Our herbal garden is a unique feature of our institution, providing students with exposure to traditional medicinal plants and alternative therapies.



Some of the common herbal plants that maintained in a our medical college:

- > Thulasi (Ocimum sanctum)
- Neem
- ➤ Aloe Vera
- Curry Leaf
- Coriander
- Vallarai (Gotu Kola)
- Adathoda (Vasaka)
- > Hibiscus
- Karpooravalli (Indian Borage)
- Pirandai ( Cissus Quadrangularris)

### **Students Activities:**

Here's how it benefits our students:

- 1. Botanical Knowledge: Students learn about various medicinal plants, their properties, and traditional healing practices, bridging the gap between modern and traditional medicine.
- 2. Research Opportunities: The herbal garden serves as a resource for student research projects, encouraging exploration of herbal remedies and their potential applications in healthcare.
- 3. Cultural Sensitivity: Exposure to herbal medicine instills cultural sensitivity: making our students more well-rounded healthcare professionals.

Impact on Students:

SRI MANAKULA VINAYAGAR MEDICAL COLLEGE & HOSPITAL KALITHEERTHALKUPPAM, PUDUCHERRY-605107. The availability of these learning resources has had a profound impact on our students. They report increased confidence in their practical skills, improved research acumen, and a deeper understanding of the diverse aspects of healthcare. The hands-on experience gained through these resources has prepared them better for their future careers as healthcare professionals.

#### Conclusion:

Our institution is committed to providing a comprehensive learning experience for our students. The laboratories, animal house, and herbal garden play a pivotal role in this endeavor, equipping our students with practical skills, research acumen, and a holistic understanding of healthcare. These resources are a testament to our commitment to quality education and holistic development.

#### **UG Students Lab Record Note Book**

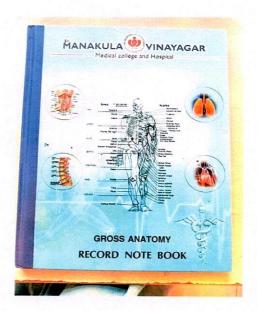


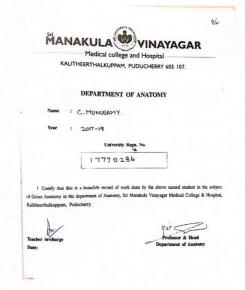


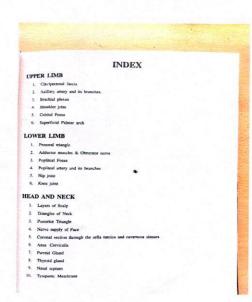
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LABORATORY INSTRUCTIONS	PAGE NO.	DATE	REMARKS
HEMATOLOGY EXPERIMENTS	2		SCHUBE!
Microscope			
Method of collection of blood	7		-
Preparation & staining of blood smear &	- 11		-
Performing DLC	13	415155	Wit
4. Ameth count	19		(3).
5. Total Leucocyte count	21	-	9
6. Absolute ensinophil count	25	3814125	0-
7. Total RBC count	27	1916/192	
8. Determination of haematocrit	31	miels	4
9. ESR	35	rate las.	10
10. Estimation of haemoglobia concentration	39	PE/4/20	TEN-
11. Determination of BT & CT	45	m/ s/ ss	-
12. Determination of blood group	49	africa i	
13. Reticulocyte count	13		-
14. Platelet count	57	_	
15. Fragility of RBC	59	25/4/15	8
CLINICAL EXPERIMENTS			-51-
16. General examination	65	14/04/12	No.
17. Clinical examination of respiratory system	71	w/1/12	0 -
18. Clinical examination of CVS	77	246122	1
19. Clinical examination of abdossen	83		
20. Examination of sensory functions	29	niels.	4
21. Examination of motor functions	93	214122	
22. Reflexes	99	41414	
23. Examination of cranial nerves	105	meles	
	117	10/1/12	
24. Visual scuity	121	Helder	1
25. Colour vision	125	telelar.	
26. Field of vision	129	10/0/24	-
27. Tests of hearing	133	selala.	
28. Examination of smell and taste	133	velalite.	-
IUMAN EXPERIMENTS	-	- de L	128
29. Determination of lung volumes & capacities	139	ASILIN	11277
30. Stethography	145	.4 14 tzs	1

I. NO. EXPERIMENT	PAGE NO.	DATE	REMARKS
31. Effect of physical exercise on respiration	149		1
32. Cardio pulmonary resuscitation	151		
33. Examination of radial pulse	153	146 22	
33. Examination of 1200 points  14. Examination of 8P	159	20/6/22	90
	162	24422	10-
35. Effect of posture on BP & HR	167	1/1/22	10
36. Effect of physical exercise on BP & HR	171	217/22	
37. Electrocardiography	175	-	-
38. Autonomic function test	177		
39. Cardiac function test	_		-
40. Systolic time interval in normal subjects	179		-
Changes in vaginal opithelium, cervical mucous & Endometrium in different phases of menstrual Cycle in women	181		
42. Pregnancy diagnosis test	183		-
13. Examination of semen	185		1-1-
44. Electroencephalography	187		3 -5 12
45. Evoked potential	189		
46. Electromyography	191		
47. Opthalmoscopy	193		-
48. Mosso's ergography	195		
49. Calculation of mechanical efficiency by Bicycle ergometry	(199	1/1/20	1
50. Measurement of BMR.	201	Helra	-
MPHIBIAN EXPERIMENTS			_
51. Study of appliances used in amphibian practicals	205	1	
52. Recording of simple muscle twitch & Calculation of velocity of nerve impulse in frog	207		100
53. To observe genesis of fatigue and recovery (or) Effect of 'rhythmic repeated stimuli on SMC	211		
54. To observe the effect of various strengths of Stimuli on SMT	213		10.75
To observe the effect of stimulation of vagus nerve & Response to drugs on frog's heart	215		
Response to desgs on frog's heart			ζA(

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SRI MANAKULA VINAYAGAR
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KALITHEERTHALKURPAM,
PUDUCHERRY-605 07.







#### THORAX

- 1. Typical spinal nerve
- Medial surface of right lung
   Medial surface of Left lung
- Horizontal section through the thorax at the level of T4
- 5. External features of the heart

#### ABDOMEN AND PELVIS

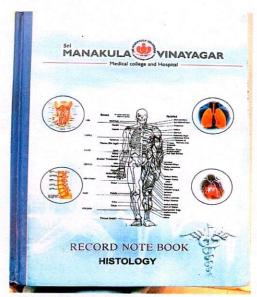
- 1. Contents of rectus sheath
- Inguinal canal
   Stomach arterial supply
- Horizontal section through abdomen at the level of the Epiploic foramen
- Visceral surface of spleen
   Anterior relations of Kidney
   Extra hepatic biliary apparatus
   Perineal membrane

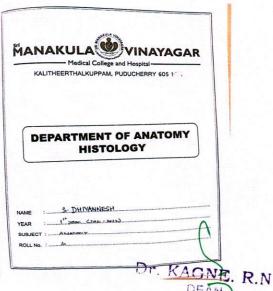
- Ischiorectal fossa
   Interior of Anal canal

#### NEURO ANATOMY

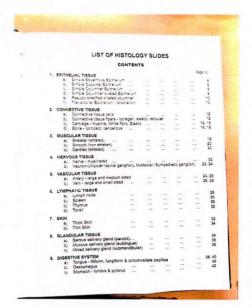
- 1. Tracts of spinal cord

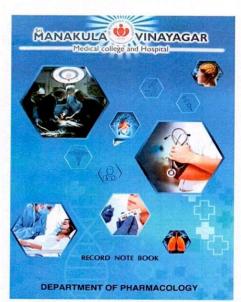
- 2. Transverse section of Medialla at Pyramidal decursation
  3. Floor of fourth ventricle
  4. Circle of Willia
  5. Horizontal section through convirual beningbers at the level of interventricular forumen

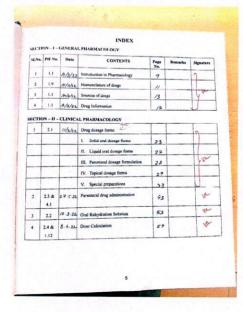




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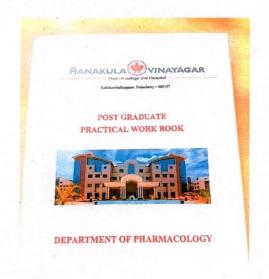


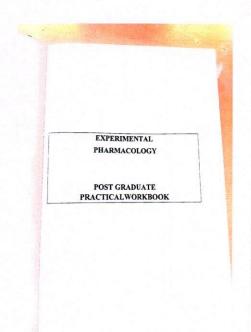
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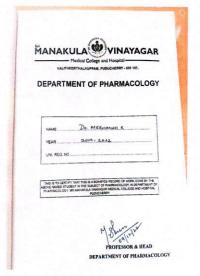
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## PG Student Lab Record Note Book







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Dr. KAGNE R.N

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