



Facilities for Research & Innovation, MGUMST

India is progressing rapidly in the areas of education of physicians and medical facilities. As a university we aim at taking the education of medicine, the practice of medicine and medical research to its finest. This effort and direction has been made not only on state level but nationwide. Our entire efforts are made to groom and produce the best researchers who will bear our baton and provide selfless service to every human.

MGUMST is emerging as a cradle of innovation with state of art research Infrastructure & facilities for our faculties and researchers. The university invests money and resources in creating infrastructure for central facilities for all constituent colleges coming under its ambit.

A handwritten signature in blue ink, appearing to read 'Sachin'.

PRESIDENT
Mahatma Gandhi University of
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Sitapura, JAIPUR-302 022

CENTRAL RESEARCH MOLECULAR LAB

(INFECTIOUS DISEASE, RESEARCH AND DIAGNOSTICS)

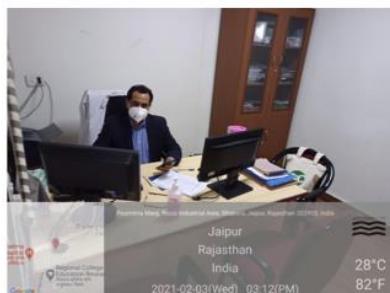
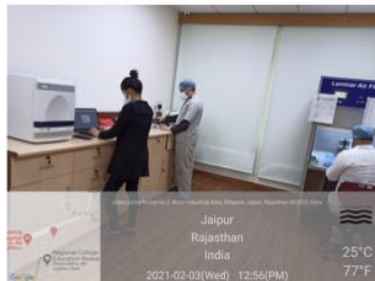
MGUMST CRL Molecular lab has state of the art molecular research facility for all interdisciplinary studies. The thrust area to run this lab is its own R&D programs in technology development, assay development and biomarker discovery. This lab is equipped with cutting edge technologies like Real-Time PCR, NAAT, DNA Hybridization assays, EVOS FL Auto microscope, Immunological assays and Culture and Drug susceptibility studies.

As a healthcare organization, we are conscious of our responsibility to reduce the test cost burden on the society. We aim to achieve this objective with increased efficiency and productivity gained from a centralized processing laboratory, which is in line with the Vision and Mission of our

Sachin

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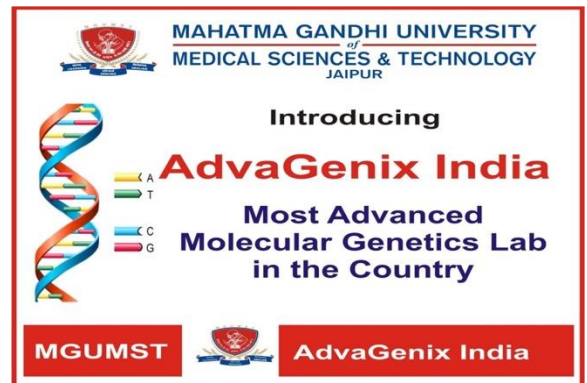



GENETIC LABORATORY

Medical Genetics department at Mahatma Gandhi Medical College and Hospital is first of its kind in Rajasthan.

Some of the facilities available for research and diagnosis are

- Comprehensive diagnostic and management facilities to patients with genetic disorders with trained geneticist and appropriate testing like chromosomal analysis, Multiplex ligation dependent probe amplification (MLPA), Cytogenetic microarray (CMA) or gene sequencing.
- Pre-conceptual counseling
- Antenatal cases
- Screening for chromosomal disorders in fetus via prenatal invasive testing chorionic villous sampling and amniocentesis for confirmation of chromosomal disorder in fetus.
- Prenatal testing for genetic disorders in family like Thalassemia major, Spinal muscular atrophy, muscular dystrophy etc.
- Fetal autopsy services for ultrasonographically detected malformed fetuses for exact diagnosis and risk of recurrence of the disorder in the concerned family.
- The Central Research Facility has PCR (Applied Biosystems) to augment latest research in the University by the Faculty and the Post Graduate Students
- PERSONAL GENOME MACHINE (PGM) is being used for the study of Cancer Genetics, Microbial Genetics and other diseases
- The PGM can be used to diagnose diseases on molecular level, as well as can be used to the field of Research in Genomics
- The Real Time PCR Technology is used to diagnose Infectious Diseases, like Mycobacterium tuberculosis, HIV, Hepatitis, Chlamydia, etc. on genetic level.
- PCR machine is used to develop multiple numbers of DNA fragments.
- The Gradient PCR is mainly used for Research Purposes.




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MGUMST SKILLS LAB

MGUMST Skills Lab is a state of the art, well-equipped training center. It was established in 2018 and has recently been relocated to a more comprehensively developed venue.

- The major vision of this skill lab focuses around the following aspects:
 - Early exposure for medical students to both clinical as well as life support skills
 - To impart high quality standardized procedural and clinical skills training for interns and junior doctors
 - Impart Basic Life Support and Advanced Cardiac Life Support training courses
 - Provide ATLS training to all post-graduates and staff.
 - To introduce Life Support Skills Training into medical and allied curriculum as competency-based education
 - To educate the community at large about cardiac arrest and basic resuscitation skills.
- Some of the important courses that are practiced and preached here to faculty and post graduates are ATLS, American Heart Association (AHA) Certified Basic Life Support (BLS), Advanced Cardiac Life Support Courses (ACLS).
- This skill lab also serves as the first in state provider of ATLS course.
- It is also the nodal center for Pediatric BLS course.
- In addition to these, we also offer training in Basic Clinical Skills, Basic Surgical Skills and Advanced Airway Skills.



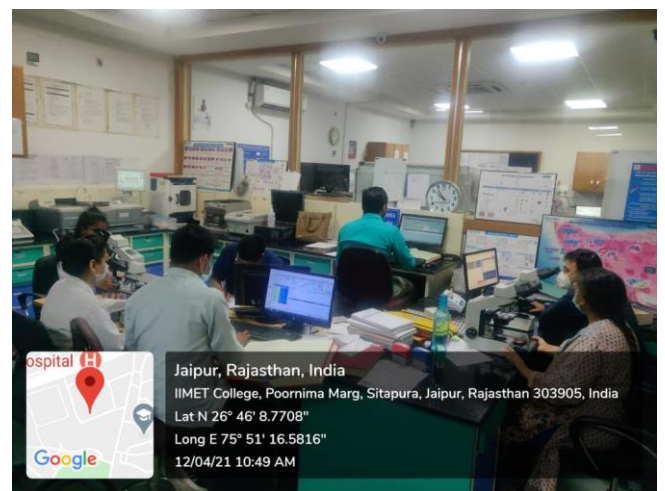
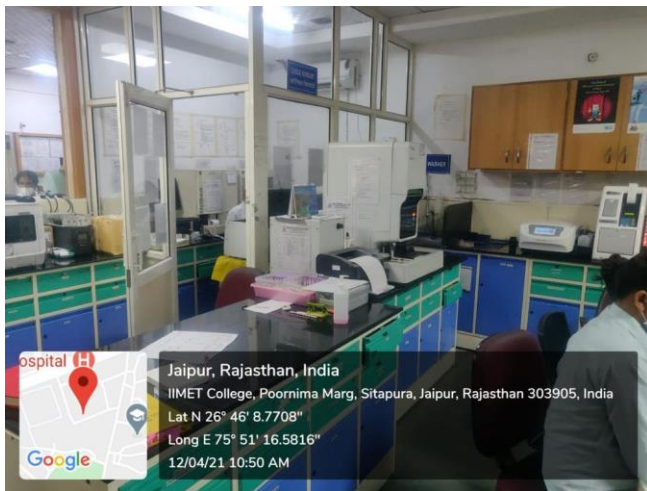
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CENTRAL LABORATORY

It is reputed diagnostic laboratory catering patients from all over Rajasthan. The laboratory is NABL accredited laboratory with all latest infrastructure. The Laboratory offer more than 500 tests, using the most advanced state-of-the-art technology supported by our highly skilled personnel. We believe in delivering accurate and quality reports in affordable rates.

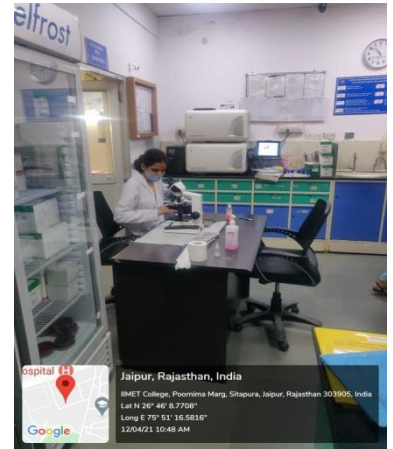
MGUMST central laboratory wish to extend its services in communities by participating in Health checkup plans and also by establishing memorandum of understanding with other hospitals at periphery, in order to benefits all needy and disserving patients.




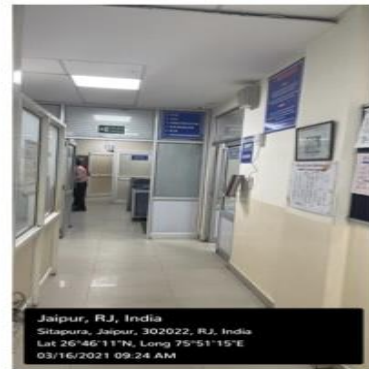

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BLOOD BANK

- Mahatma Gandhi Medical College and Hospital Blood Bank is a state of art Blood Bank with NABH accreditation.
- Department has modern histopathology, cytopathology, hematology and service laboratories for catering the needs of Mahatma Gandhi Hospital attached to the medical college.
- The blood bank is equipped with modern technology and blood component facilities. It operates round the clock for issue of blood components to patients mainly in-house and to other surrounding hospitals.
- Our blood bank supports Voluntary blood donation with more than 80% collection in camps, an in-house blood donor registry with more 4000 donors registered.
- Our blood bank promotes rational use of blood components and safe blood transfusion through good manufacturing practices controlled by quality standards, skilled manpower and high-end technology for component separation and Apheresis procedure.
- The blood bank also has Plasma therapy facilities, which were of immense help in treatments during the COVID time.




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LABS OF DEPARTMENTS ASSOCIATED WITH MEDICAL COLLEGE

Medical education is all about gaining the knowledge of how the human body is organized (Anatomy), how the various organs and cells function (Physiology, biochemistry and molecular biology), structural and chemical changes taking place in human system (Pathology and Clinical Biochemistry), agents of diseases (Microbiology, non-communicable diseases, genetics), diagnosis (Clinical Pathology, Microbiology, Biochemistry and molecular biology) agents used for treatment of diseases (Pharmacology) and applying it for the benefit of the society.

Pathology Lab:

- Department has 24 hours functional lab and state of art facilities for the diagnosis.
- Different sub divisions of this lab are present namely, histopathology, hematology, cyto-pathology, immunopathology.
- Department provides the facilities for routine exfoliative cytology, aspiration cytology, USG and CT guided aspiration.
- The facilities for immunohistochemistry are available for oncology department.


Microbiology Lab:

- Department is having world class facilities for the diagnosis for different kinds of viral, bacterial, fungal, parasitic diseases
- The department is working for prevention of infectious diseases in the hospital

Biochemistry Lab:

- The department has latest facilities and instruments including Electrophoresis apparatus, Chromatography chambers & Spectrophotometer, etc to carry out research in the field related to biochemistry.




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DENTAL SKILL LABS

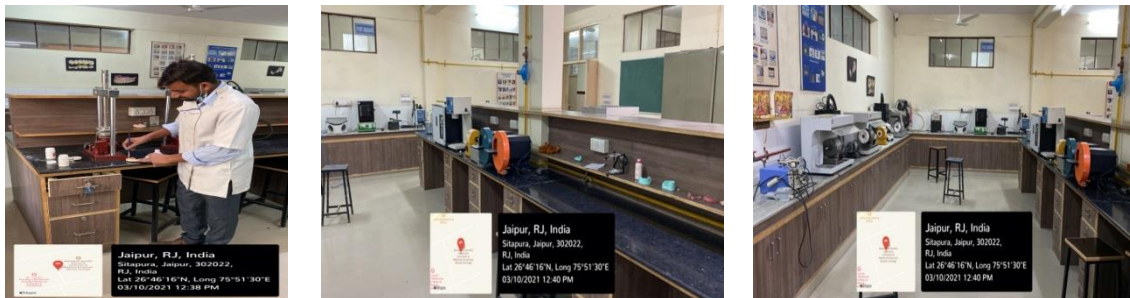
Dental Laboratory is a backbone of a good dental college and hospital, for rendering a good rehabilitation of the patient. In Dental College, separate labs and individual workstations are present for both the Under-graduates and Post-graduates.

- Different labs include Ceramic lab, casting lab, orthodontics lab, endodontics lab, pre-clinical lab etc.
- The laboratory is equipped with state of the art equipments like Vita ceramic furnace, MultiMate all ceramic furnace, induction casting machine, milling machine to name a few. The laboratory facilitates the fabrication of a variety of dental prostheses of high quality to serve the patients.
- The pre-clinical lab consists of 100 typhodont models which simulates human dentition and oral environment

Prosthodontics Lab



Ceramic Lab



Pedodontics Preclinical lab



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Conservative Pre-clinical Lab

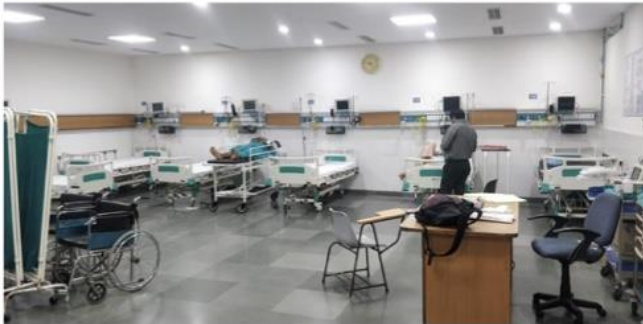



Oral Pathology Lab



OPERATION THEATERS

- The hospital is having world class operation theaters for distinctive and major transplant surgeries like liver transplant, heart transplant, bone marrow transplant, kidney transplant, etc.
- Other important surgeries being performed are Bariatric surgeries, Oncology surgeries, Hip replacement surgeries etc. in addition to the regular modalities of treatment




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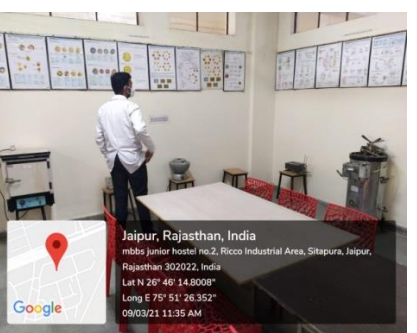
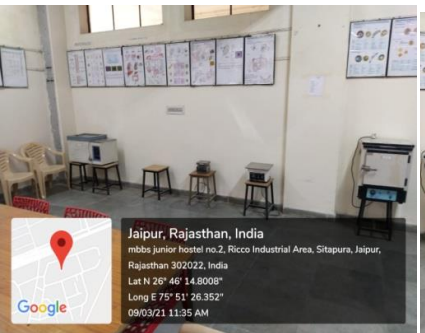
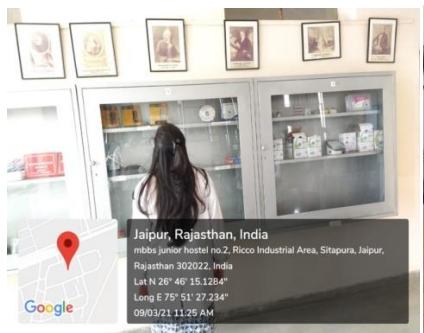
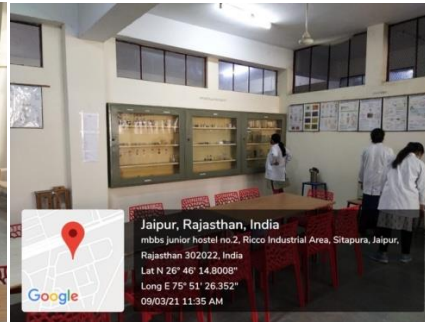
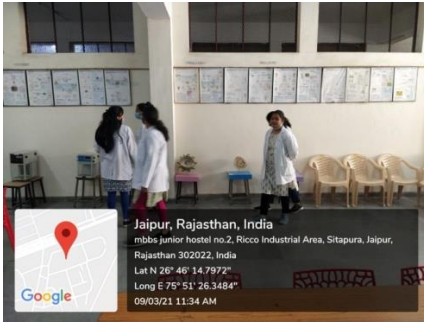
MUSEUM

- Museum of all the departments (Anatomy, Pathology, Microbiology, Pharmacology, Forensic Medicine, Community Medicine, Obstetrics and Gynecology, Community Dentistry etc) includes specimens, charts, educational articles, interesting case studies, plates & models.
- The catalogue system in museum is maintained according to MCI criteria with well-equipped demonstration rooms, which are well ventilated and spacious. Sitting arrangement are also available in the museum where faculties and students can sit and read for the museum specimens in details for knowledge & research purposes.
- The histological lab also has modern microscopes with all different types of slides for teaching purpose.
- The museum of the pathology department is the backbone of the college & hospital & boasts of a collection of specimen of the rare disease.
- The museum of the anatomy department consists of a large number of specimens, charts, models spread over all the sections viz. Dissection hall, Museum & Histology laboratory
- Forensic medicine and toxicology department has its museum, which showcases different type of weapons, toxicology samples, osteology samples for bone age and sex determination, preserved organs, to name a few.
- Various departments of dental college consist of museums consisting of models and charts describing about importance and maintenance of oral hygiene, about tooth development process, about various dental procedures and dental anomalies. These charts and models are useful for the knowledge disbursement of dental student as well as for the patient's education.

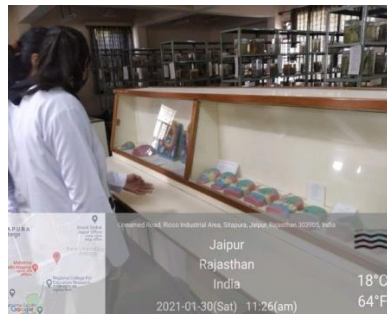


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Museum of Microbiology



Museum of Anatomy



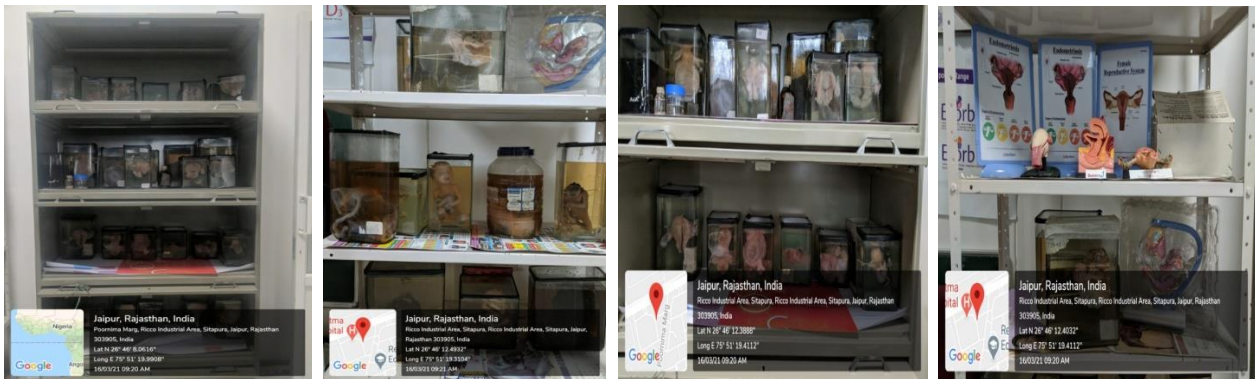
Asachol

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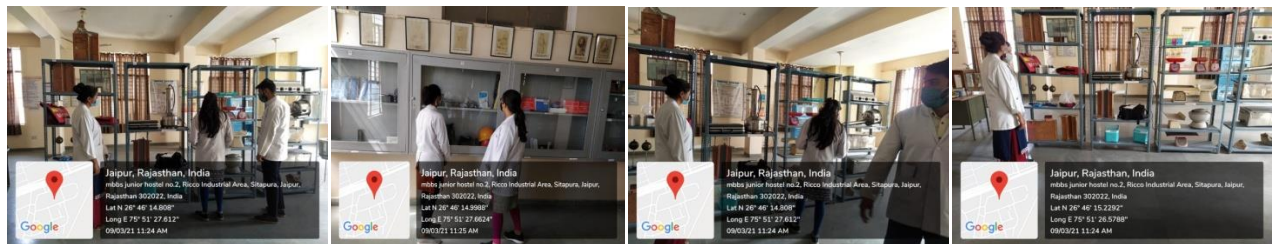
Museum of Pathology



Museum of Gynaecology



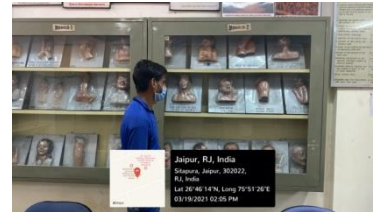
Museum of Community Medicine



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Museum of Forensic Medicine



Museum of Community dentistry



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Museum of other departments of dentistry like Pediatric Dentistry, Orthodontics, Oral Pathology



ANIMAL HOUSE

- Animal House was established in MGUMST under medical college in the year 2001. It has recently been relocated to newer premises. This is a vital area for the research aspect in animal studies.
- Animal House is divided into separate areas for storage of experimental animals, washing, storage and procedural rooms as per the norms of CPCSEA, Government of India.
- Institutional Ethics Committee (IEC) looks after the care, usage, evaluation and permissions related to the experimental studies on animals as per the guidelines.
- According to the new UG curriculum for teaching Pharmacology, the required knowledge and skill are imparted by using computer assisted module. And the animal hold area is required as per the CPCSEA guidelines, only if, research and postgraduate training is envisaged.
- The lab has 60 Computers with CAL software which have access to National Essential Drug Lists, Standard Treatment Guidelines, Banned Drug List of CDSCO, WHO and many others to impart greater knowledge.



Appendix - 2
Department of Pharmacology, MGMC, RJ, Jaipur
CAL Lab

S.No	Name of equipment	Quantity
Computer with		
1) standard configuration		
2) monitor		
3) mouse		
4) CAL software (Pharmacology) installed for teaching experimental pharmacology.		
All computers have access to:		
1) National Essential Drug List		
2) Standard Treatment Guidelines		
3) Banned Drugs List of CDSCO		
4) WHO		
5) Price Controlled Drugs List		
6) Antibiotic Guidelines		
7) Hospital Formulary		
8) Adverse Drug Reactions		

Department of Pharmacology, MGMC, RJ, Jaipur
CAL Lab


List of experiments in 3.2.3 Drugs: non-steroids

1. Study of muscle relaxant activity with the help of "Rao-Rao Apparatus".
2. Study of CNS depression & analgesia using "morphometer".
3. Study of analgesic activity with the help of "hot disk apparatus".
4. Study of analgesic activity with the help of "animal chamber".
5. Study of analgesic activity with the help of "hot plate apparatus".
6. Study of drug action on CNS using "rotarod performance".
7. To study analgesic activity using "electric cross-muster".
8. Evaluation of effect of various drugs on rabbits eye.
9. To study PZT induced convulsions in mice.
10. Effect of different drugs on frog's heart.
11. Experiments on history of histamine on the tissue of guinea pig.
12. Effect of adrenergic, anticholinergic and muscarinic on dog salivary gland.
13. Experiments on rat blood pressure.
14. Experiments on rat blood sugar.
15. Experiments on thyroid & antithyroid drug.
16. To record the heart response, record and determine the P.D. value for distribution in the above animals/organ.
17. Estimation of acetylcholinesterase in the isolated ratia, abdomen muscle of dog by measuring temperature, 1 point & point method.
18. Study of thoracic activity using metabolic traps.
19. Study of anti-inflammatory activity using arthropathy induced paw oedema model.
20. Estimation of oxytocin on the isolated rat uterine horn.
21. Estimation of acetaminophen on the isolated rat hepatic drug.
22. Rat Paraglyc Test.
23. Effect of drugs on the dog BP and Heart rate.
24. Effect of drugs on the rat temperature.
25. Study of Anticholinergic activity using pyloric spasm model.
26. Study of anticholinergic & anti-emetic activity of drugs on rat.
27. Evaluation of effect of Acetylcholinesterase inhibitor using ratia ponsium.
28. Evaluation of Anticholinergic drug using Corb's urine alkaline response.
29. Evaluation of sedative drug using Corb's urine alkaline response.

Division for Health and Education Status Upliftment
(Government of India at District Education Office)

MGMC, Jaipur, Rajasthan, India
Jalgaon, Dist. - 382002
Contact No: 0142-2641578, 0142-2641579
Email: rajpharm@rajpharm.ac.in
Website: www.mgmc.ac.in

Date: _____
By: _____
Signature


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MEDIA LAB & E-RESOURCE STUDIO

MGUMST is actively involved in the community services and the information is percolated to different strata of society via print media, social media, television, radio, etc.

All events may it be large scale or small scale all are covered by the dedicated Public Relations (PR) team. All events are updated regularly on the university website, along with the Facebook page of the university.

Live sessions are broadcasted on television and are covered by reputed news channels. Also the events are streamed on you tube channel of the university.



हिन्दुस्तान एक्सप्रेस

महाराजा गाँधी अस्पताल में दिवालिया दिवाल कार्डिनल

ब्लड प्रेशर व डायबिटीज से बह रहे हैं किडनी रोग - डॉ. सदासुखी

महाराजा गाँधी अस्पताल में दिवालिया दिवाल कार्डिनल... (Text continues with medical details)

MAHATMA GANDHI UNIVERSITY MEDICAL SCIENCES & TECHNOLOGY JAIPUR

SWARANKAR LAUDS CENTRE & STATE FOR FREE VAX FOR HEALTH WORKERS

डॉ. जगदीश चंद्र शर्मा काथिंडी विभाग... (Text continues with details about the center)

Endoscopic Spine Surgeries

Our Endoscopic Spine Surgery is a true minimally invasive procedure that has revolutionized the treatment of back and neck pain. If you're searching for long lasting pain relief, we can help.


- Tubular retractorless technique that doesn't cut through soft tissues (esp. when tubular retractor injury or damage)
- Less blood loss
- Less post-operative discomfort or pain
- Fast recovery and healing

महामा गाँधी अस्पताल, जयपुर श्री राम कैंसर एंड सुपर स्पेशलिटी सेंटर

श्री राम कैंसर एंड सुपर स्पेशलिटी सेंटर... (Text continues with details about the cancer center)

World Cancer Day!

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HEALTH INFORMATICS

- Health Informatics was established in MGUMST in the year 2019.
- Its initial goal is to establish Undergraduate and Postgraduate training in Health Informatics.
- Mahatma Gandhi Institute of Health Informatics MGUMST, is leading in the digital health care revolution in Rajasthan.
- It is a multidisciplinary field that links Health care, information technology management sciences and computer sciences with an ultimate aim to improve the quality and safety of patient care.



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