

INTRODUCTION

The Department of Health Research was created as a new Department under the Ministry of Health & Family Welfare vide Presidential Notification dated the 17th September, 2007 by an amendment to the Government of India (Allocation of Business) Rules, 1961. The Department has been allocated 9 new functions to promote health research activities, besides the ongoing work relating to the management and administration of ICMR.

Government of India, in June, 2013, vide sanction order at approved the scheme for 'Establishment of Multi -Disciplinary Research Units (MRUs) in the Government Medical Colleges/Research Institutions' during the 12th plan period as a path- breaking initiative to develop/strength the health research infrastructure in the country to fulfill the newly allocated function of the Department related to the "Promotion, Coordination and Development of Basic, Applied and Clinical Research".

OBJECTIVE OF THE SCHEME:

The objectives of the present scheme are to:

- 1. Encourage and strengthen an environment of research in medical colleges.
- 2. Bridge the gap in the infrastructure which is inhibiting health research in the Medical Colleges by assisting them to establish multidisciplinary research facilities with a view to improving the health research and health services.
- 3. To ensure the geographical spread of health research infrastructure, in order to cover un-served and under-served Medical Colleges and other institutions.
- 4. To improve the overall health status of the population by creating evidence-based application of diagnostic procedures/processes/methods

MAJOR FUNCTIONS OF THE MRU

- 1. To undertake research in **non-communicable diseases** and other need-based research as recommended by the Local Research Committee/Expert Committee of the DHR employing newer tools.
- 2. To promote and encourage quality medical research in the Institution.
- 3. To constitute the local research committees for identifying the research priorities and projects with participation of State health system officials

MRU IGMC will try to provide the highest level of patient related health research and help to bridge the barriers in diagnosis and treatment.

ORGANISATIONS:

AdministratorDr. Sita Thakur (Principal, IGMC Shimla)

Nodal Officer: Dr. PC Negi (Prof. & Head Department of Cardiology)

Lab In charge: Dr Sudarshan K Sharma (Prof. Department of pathology)

Dr. Neelam Sharma (Prof. Department of pathology)

Local Research Advisory Committee members

	Name	Designation	Email	
1	Dr. JS Thakur	Chairperson	jsthakur64@gmail.com	Department of School
				and Public health
				PGIMER Chandigarh
2	Dr. Madhu Khullar	Co-Chairperson	madhukhullar@gmail.com	Department of
				Experimental
				Biotechnology
				PGIMER Chandigarh
3	Dr. PC Negi	Member secretary-	Negiprakash59@gmail.com	Prof.&Head Department
		nodal officer MRU-		of cardiology
		IGMC		IGMC Shimla
4	Dr. Ashu grover	Nominee (ICMR)	grovera@gmail.com	Scientist E, ICMR Delhi
5	Dr. Biman saikia	Clinical/academician-	bimansiakia@gmail.com	Department of
		external		immunopathology
				PGIMER Chandigarh
6	Dr. Balbir Verma	Clinical/academician-	drbsv2000@yahoo.com	Department of
		internal		Medicine
				IGMC Shimla
7	Dr. Puneet Mahajan	Clinical/academician-	Puneetdr1@gmail.com	Department of Surgery
		internal		IGMC Shimla
8	Dr.Ramesh Chand	Nominee(state health		Department of Medical
		Department)		Education & Health
				Shimla

LRAC MRU IGMC Shimla :MEETING EVENTS

<u>Sr.no</u>	Event of LRAC	<u>Held on</u>	<u>venue</u>	<u>No. of</u> <u>members</u> <u>present</u>
<u>1</u>	<u>1st</u>	<u>23-01- 2017</u>	IGMC	<u>6</u>
2	<u>2nd</u>	<u>9-09-2017</u>	Teleconferencing	2
<u>3</u>	<u>3rd</u>	<u>7 -12-2018</u>	IGMC	<u>6</u>
<u>4</u>	<u>4th</u>	<u>14 -03 2021</u>	<u>Video conferencing-</u> Zoom app	2
<u>5</u>	<u>5th</u>	<u>3-03- 2021</u>	<u>Video conferencing-</u> Zoom app	<u>5</u>
<u>6</u>	<u>6th</u>	<u>22-7-2021</u>	<u>Video conferencing-</u> Zoom app	<u>7</u>
<u>7</u>	<u>7th</u>	<u>14th December2022</u>	<u>Video conferencing-</u> Zoom app	<u>8</u>

Research

Year-wise list of projects undertaken so far and their status:

Project title	Year of Under taking	Com plete d Yes/ no	Date of complet ion	Whether published	Department/s involved in the study
Role of elevated levels omega 6:omega 3pufa ratio and vit.d deficiency in obese metabolic syndrome; worksite based cross sectional study.	2016	yes	March 2021	yes	Cardiology Biochemistry
Identification and characterization on of putative target valvular antigen as the marker of susceptibility of RF	2016	yes	March 2021	In progress	Cardiology CTVS Forensic Pediatric
Role of sRAGE and oxidative stress as the prognostic markers in acute coronary syndrome.	2019	yes	2022	In progress	Cardiology
Role of plasma levels of srage in COPD patients a hospitals based case control study	2019	yes	2021	-	Pulmonary
Impact of school health on behavioral intervention on awareness, practice pattern of health life style and cardio matabolic risk factor among school children of Shimla (Funding other than MRU)	2018	yes	2020	published	Cummunity Health Medicine
Deficiency of G6PD in children of Indira Gandhi Medical College and hospital.	2017	yes	2018	nil	Pediatric
Multi biomarkers based correlates of extent of colorectal cancer and their prognostic significance; Tertiary care hospital based prospective observational study	2022	On goin g	-	-	Surgery oncosurgery Radiotherapy Pathology
Prognostic significance of periprocedural change in the levels of oxidative stress and inflammatory state among patients with acute myocardial infarction undergoing percutaneous coronary intervention in predicting suboptimal coronary perfusion and	2022	Ong oing	-	-	cardiology

adverse in-hospital and short-term outcomes					
Evaluation of circulating plasma cells by flowcytometer in Multiple myeloma after therapy and testing the utility of new potential alternative gating markers Vs38, CD229 & CD319; tertiary care hospital based prospective observational study	2022	Ong oing(yet to start)	-	-	Pathology
Bone-biomarkers in osteoporosis due to CoPD.	2019	Ong oing(yet to start)	-	-	Pulmonary
To assess the response rate of Rosuvastatin on lipid profile in patients of highrisk groupof coronary artery disease	2019	Ong oing (yet to start)	-	-	Pharmacology Cardiology
The levels of inflammatory cytokines in patients with RHD and its association with use of Benzathine Penicillin; case- control pilot study.	2023	ongo ig	-	-	Cardiology
MD/DM Thesis work					

Title: Anticipation of seroma formation by IL-6 levels and role of octereoide in its prevention post breast cancer surgeries ICMR financial support, December 2021 Batch Dr. Utkarsh Kumar MD Surgery

Thesis Title: Prevalance and predictors of raised high sensitivity C reactive protein (hsCRP) in coronary artery diseases: hospital based cross sectional study" Dr. Vinay Bhardwaj Department of Cardiology IGMC/AIMSS Shimla

Multicentric Projects In collaboration with ICMR, NIIH, Mumbai

A study on Innate Immune Recognition Proteins and their role in Complement Activation among Lupus Nephritis (LN) patients from India.	2022	ongo ing	-	-	Medicine Dermatology Nephrology Rheumatology Pathology Pediatrics
Geoepidemiology of Lupus: Clinico-Serological update on Systemic Lupus Erythematosus (SLE) from India	2022	ongo ing	-	-	Medicine Dermatology Nephrology Rheumatology Pathology Pediatrics
MulticentricProjectIncollaborationwithIIT,High resolution plasma proteomicand lipidomic analyses for fibrosisrelated metabolic in dilatedcardiomyopathy (DCM)patientsin India	2022	ongo ing	-	-	cardiology
With PGI Chandigarh, sample processing and storage of Two projects on chronic kidney disease funded by DBT (GoI) and Wellcome Trust India					

Divisions and Facilities

Staff

The following personnel are employed on a contractual basis as per the MRU establishment guidelines:

- Scientist C: Dr. Meenakshi Chandel.
- Scientist-I: Dr. C.K. Sharma.
- Laboratory Technician: Mr. Dinesh Kumar

Research Facilities

The Research Unit at IGMC Shimla has dedicated working areas and is in the process of procuring project need based equipments which would help in achieving the objectivesl of MRU.. The laboratory is currently being used for conducting research in the field of non communicable diseases. It supports both intramural and extramural projects carried out under different clinical researchers/faculty of the institute. Moreover, the laboratory facilities are also being used by Post-graduate students for carrying out their thesis related work.

Equipments available in MRU IGMC Shimla

Sr. No.	Name of Equipment	Quantity
1	Fluorescent Microscope	1
2	Centrifuge 3000RPM (Rotor 26x15 ml)	1
3	Centrifuge 4000RPM (Rotor 26x15 ml)	1
4	Refrigerated Microfuge	1
5	Minus 20 degree freezer	2
6	Minus 80 degree Freeze	2
7	Blood Chemistry Auto Analyze	1
8	Mini Cold Lab	1
9	Embedding Station	1
10	Manual Rotary Microtome Make: LEICA	1
11	Cryostat Microtome	1
12	Trinocular Microscope	1
13	Tissue processor with accessories	1
14	Ultra sonicator with accessories and Tissue	1
	Homogenizer	
15	Autopippets (1ml,200µl,100µl,20µl)	1
16	Spectrophotometer	1
17	Digital Magnetic stirrer With hot plate	2
18	Digital Magnetic stirrer without hotplate	1
19	Weighing machine	1
20	Liquid Nitrogen container	1
21	Multichannel pipette set	2
22	Spinix Votex shaker	3
23	Microplate reader(Elisa reader)	1
24	Ice flaking machine	1
25	Universal Hot air oven	1
26	Serve voltage stabilizer	1

27	Water bath with circulator	1
28	pH mete	1
29	2D electrophoresis with accessories	1
	a.Protean i12 IEF system	
	b. I12 sample cup holder	
	c. Mini tera cell	
	d. Protean 11 X L large system	
	e. Power point universal	
	f. Ready prep 2D cleanup kit	
	g. Protean 11 X1 and XL	
	h. Protean 11 X1 &X1L	
	i. 15 well comb teflon	
	j. Transblot turbo	
	k. Mini transblot cell	
	l. Power pac basic power supply	
	m. PD Quest basic software	
	n. Chemi doc MP imaging system	
	o. White sample tray for chemi	
	Doc MP	
	p .Computer with accesories	
	q. Gel rocker	
30	Bioplex 200 system	1
	a .bioplex 200 system with accessories	
	b. bioplex hand held magnetic P	
31	Desktop computers HP 280	1
32	Hp laptop	1

Equipment under the purchase process: 1. Flowcytometer

List of Publications

1. Negi, P. C., Sharma C.K., Sondhi, S., Merwaha, R., & Asotra, S. (2019). Prevalence and risk determinants of metabolic syndrome in obese worksite workers in hill city of Himachal Pradesh, India. *Indian heart journal*, *71*(1), 45–51.

2. Negi, P. C., Sharma, C. K., Nihjawan, R., Sharma, R., & Asotra, S. (2022). Role of omega 3 and omega 6 poly unsaturated fatty acids (PUFA) and vitamin D deficiency as risk determinants of metabolic syndrome in obesity: Worksite based case-control observational study. *Diabetes & metabolic syndrome*, *16*(4), 102467.

3. Mahajan A, Negi PC, Gandhi S, Sharma D, Grover N. Impact of School-Based Health Behavioral Intervention on Awareness, Practice Pattern of Healthy Lifestyle, and Cardiometabolic Risk Factors among School Children of Shimla: A Cluster-Randomized, Intervention Study. Indian J Pediatr. 2022 Apr;89(4):343-350. The Impact Factor of IJP is 5.319 in 2021.

PC Negi Prof.&Head, Department of Cardiology-cum Nodal Officer MRU IGMC Shimla