Seth GS Medical College Multidisciplinary Research Unit (GSMC-MRU)

A. Location: 1st & 2nd Floor, Mortuary Building, KEM Hospital Parel, Mumbai

B. Contact Tel: +91-22-24181744, +91-22-24107000 Ext. 7482 & 7046

Email: gsmc.mru@gmail.com

C. Administrative control: Dr. Sangeeta Ravat, Dean (G&K)

Dr. Sandhya Kamat, Nodal Officer &

Prof & HOD, Dept. of Pharmacology & Therapeutics

Dr. Dinesh A. Uchil, Co-Ordinator &

Research Officer, Dept. of Pharmacology & Therapeutics

D. Advisory Committees:

Local Advisory Committee

No.	Status	Name	Designation
1.	Chairman	Dr. Sangeeta Ravat	Dean
2.	Nodal Officer	Dr. Sandhya Kamat	Professor & Head, Dept. of Pharmacology & Therapeutics
3.	Member	Dr. Gita Natraj	Professor & Head, Dept. of Microbiology
4.	Member	Dr. Tushar Bandgar	Professor & Head, Dept. of Endocrinology
5	Member	Dr. Milind Nadkar	Professor & Head, Dept. of Medicine
6	Member	Dr. Ajita Nayak	Professor & Head, Dept. of Psychiatry

Research Advisory Committee

Sr. No.	Status	Designation	Speciality required as per ICMR	Names & Professional Qualifications
1	External	Chairperson	Medical Person preferably a senior Professor level / Director level Person	Dr. Niteen Karnik Professor & HOD, Medicine, LTMGH & LTMMC, Mumbai
2	External	Co- chairperson	Medical Person preferably a senior Professor / Director level Person / Academicians of expertise in NCDs	Dr. Amar Pazare, Ex-Professor & HOD, Medicine, GSMC & KEMH, Mumbai
3	Internal	Member Secretary	Nodal Officer, GSMC MRU	Dr. Sandhya K. Kamat, Professor & HOD, Pharmacology & Therapeutics, GSMC & KEMH
4	External	Member	Nominee from DHR	Dr. Deepak Modi Scientist E, Dept. of Molecular & Cellular Biology, ICMR-NIIRCH, Mumbai
5	External	Member	Principal/Dean of nearby Municipal Medical College and Professor / Head from concerned Municipal Medical College as Special invitees	Dr Shakuntala Prabhu, Medical Director & Professor, Dept of Pediatrics & Pediatric Cardiology, Bai Jerbai Wadia Hospital for Children, Mumbai
6	External	Member	Clinical / Academicians of expertise in NCDs- Gynecology	Dr. Anushree Patil Scientist E Dept. of Clinical Research, ICMR-NIIRCH, Mumbai
7	Internal	Member	Medical Person preferably a senior Professor level / Director level Person	Dr. Gita Nataraj, Professor & HOD, Microbiology, GSMC & KEMH
8	External	Member	Clinical / Academicians of expertise in NCDs- Mental Health	Dr. Sushama Sonavane, Professor & HOD, Psychiatry, TNMC & BYL Nair charitable Hospital, Mumbai
9	Internal	Member	Clinical / Academicians of expertise in NCDs- Mental Health	Dr. Ajita Nayak, Professor & HOD, Psychiatry, GSMC & KEMH
10	Internal	Member	Clinical / Academicians of expertise in NCDs- Endocrinology	Dr. Tushar Bandgar, Professor & HOD, Endocrinology, GSMC & KEMH
11	Internal	Member	Clinical / Academicians of expertise in NCDs- Medicine	Dr. Milind Nadkar, Professor & HOD, Medicine, GSMC & KEMH
12	Internal	Member	Clinical / Academicians of expertise in NCDs- Biochemistry	Dr. Anita Chalak, Professor & HOD, Biochemistry, GSMC & KEMH
13	Internal	Member	Clinical / Academicians of expertise in NCDs- Community Medicine	Dr Gajanan Velhal, Professor & HOD, Community Medicine, GSMC & KEMH
14	External	Member	Director, Medical education, and Health and Family welfare in MCGM/nominee	Dr. Sheela Jagtap Assistant Health Officer, Department of Public Health, F-South ward, BMC, Mumbai

Project Initiation, Implementation & Management Committee (PIIMC)

Sr. No.	Designation	Names	Professional Qualifications
1	Chairperson	Dr. Sangeeta Ravat	Dean (G&K)
2	Nodal officer	Dr. Sandhya Kamat	Professor & Head, Dept. of Pharmacology & Therapeutics
3	Member (Para-clinical)	Dr. Yuvaraj Chavan	Professor (Addl), Dept. of Community Medicine
4	Member (Para-clinical)	Dr. Swapna Kanade	Associate Professor, Dept. of Microbiology
5	Member (Para- Clinical)	Dr. Padmaja Marathe	Professor, Dept. of Pharmacology & Therapeutics
6	Member (Mental Health)	Dr. Ajita Nayak	Professor, Dept. of Psychiatry
7	Member (Super Specialty)	Dr. Smrati Bajpayee	Professor (Addl), Dept. of Medicine
8	Member (Super specialty)	Dr. Nithya Gogtay	Professor (Addl), Dept. of Clinical Pharmacology
9	Member (Super specialty)	Dr. Akash Shukla	Associate Professor, Dept. of Gastroenterology
10	Member (Super specialty)	Dr. Charan Lanjewar	Professor, Dept. of Cardiology

E. Staff: Research Scientist I - Two

Lab. Technicians – Two

Lab Assistant cum Data Entry Operator-One

F. Sections/Labs 1. Molecular biology laboratory

2. Biochemistry laboratory

3. Immunoassay Laboratory

4. Chromatography laboratory

G. Equipment:

Sr. No.	Name of the Equipment
1.	Automated Biochemistry analyzer
2.	Thermal Cycler
3.	Gel Documentation System
4.	Binocular-light microscope
5.	Non-Refrigerated Centrifuge
6.	Refrigerated centrifuge
7.	Spectrophotometer, Nanodrop
8.	Electrophoresis System
9.	ELISA Reader
10.	ELISA washer
11.	Water purification system
12.	pH meter
13.	Electronic Weighing Balance
14.	Ice Flaking Machine
15.	Multichannel (12) Micropipette set of 2
16	Micropipette set of 3
17.	Water bath
18.	Vortex mixer
19.	Microwave oven
20.	Hot air oven
21.	Magnetic stirrer with hot plate
22.	Incubator
23.	Desktop computer
24.	Printer + Copier + Scanner
25.	Laptop Computer
26.	Biosafety Cabinet
27.	Freezer (-30) degree
28.	Liquid Nitrogen tank
29.	Refrigerator Laboratory
30.	Gas chromatography-Mass Spectrophotometry (GC-MS) System
31.	High Performance Liquid Chromatography (HPLC) System
32.	Real Time PCR system
33.	Freezer -70 degree
34.	Micropipettes
35.	Tissue Homogenizer
36.	CO ₂ Incubator
37.	Psychometric scale
38.	Luminometer with Autoinjector
39.	Ultra - Centrifuge

H. Research Activity:

Completed Projects					
Sr. No.	1	2			
Title	Study of gonadal functions in male	Evaluation of role of Withania			
	Budd Chiari syndrome patients before	somnifera and Celastrus paniculatus in animal models of alcohol addiction. (Project Identification No. 007)			
	and after appropriate therapy				
	(Project Identification No. 002)				
PI Name	Dr. Shobna Bhatia	Dr. Padmaja Marathe			
Co-PI Name	Dr. Akash Shukla	Dr. Nirmala N Rege			
	Dr. Vinit Kahalekar	Dr. Ashwinikumar Raut			
	Dr. Hemant Deshmukh				
	Dr. Sujata Patwardhan				
	Dr. Sucheta Dandekar				
Department	1. Gastroenterology	1. Pharmacology & Therapeutics			
	2. Radiology	2. Institute of Medical Sciences, BHU,			
	3. Urology	Varanasi			
	4. Biochemistry				
Funding Source	GSMC MRU	Dept of AYUSH, GoI			
Project Cost	2.08	Nil			
(in lakhs)	(0.98+1.10)				
Study Duration	2 years	3years			
Year of	December 2016	September 2016			
Commencement	December 2010	September 2010			
Year of	March 2019	March 2019			
Completion					
Findings	Gonadal dysfunction is common in male BCS patients but after appropriate therapy (TIPSS) gonadal function improves significantly including sperm quality and hormonal levels.	Withania somnifera and Celastrus paniculatus showed positive effects on alcohol dependence, relapse, and alcohol withdrawal anxiety by virtue of their possible effects on brain neurotransmitters involved in the reward pathway.			

	Completed Projects					
Sr. No.	3	4				
Title Determination of Disease specific Epitopes to monitor disease activity in Rheumatic Fever (RF)/ Rheumatic Heart Disease (RHD) in India (Project Identification No. 016)		Evaluation of Mechanism of action of Aegle marmelos in Murine model of Dextran Sulphate Sodium (DSS) Induced Acute Colitis (<i>Project Identification No. 015</i>)				
PI Name	Dr. Mohan Karmarkar	Dr Sandhya Kamat				
Co-PI Name	Dr Gita Natraj Dr Prafulla Kerkar Dr Chandrahas Deshmukh Dr Milind Nadkar	Dr Gita Natraj Dr. Alok Nachane Mr. Manoj Radhakrishnan				
Department 1. Microbiology 2. Cardiology 3. Pediatrics 4. Medicine		Pharmacology & Therapeutics Microbiology				
Funding Source	GSMC MRU	GSMC MRU				
Project Cost (in lakhs)	7.00 (3.18+3.82)	1.00				
Study Duration	2years	1 year				
Year of Commencement	March 2017	June 2018				
Year of Completion	March 2020	March 2019				
Findings	 significantly higher antibody responses against extracellular proteins - laminin and keratin in patients with pharyngitis, ARF and with RHD compared to healthy controls. Antibody responses against intracellular proteins - cardiac myosin & tropomyosin were elevated only in patients with ARF with active carditis. While the reactivity to S2 peptides S2-1-3, 8-11, 14, 16-18, 21-22 and 32 was higher in patients with ARF, the reactivity in the RHD group was high only against S2-1, 9, 11, 12 when compared to healthy controls. The reactivity against S2 peptides reduced as the disease condition stabilized in the ARF group whereas the reactivity remained unaltered in the RHD group. By contrast antibodies against laminin and keratin persisted in patients with RHD. 	The aqueous extract of Aegle marmelos which is found to be efficacious as an anti-inflammatory, antioxidant, and probiotic. Hence planning to undertake clinical studies to test the efficacy of Aegle marmelos in patients of ulcerative colitis.				

Ongoing Projects					
G. N.					
Sr. No.	1	2	3		
Title	Estimation of	Therapeutic drug	A Study of Psychiatric		
	Environmental exposure	monitoring (TDM) of	Co-morbidities and		
	to Volatile Organic	Levetiracetam to	personality traits and		
	Compounds (VOCs) in	individualized drug	disorders in patients		
	residential population of	therapy in patients with	posted for renal and liver		
	Mahulgaon, Chembur	epilepsy.	transplant surgery.		
	(Project Identification	(Project Identification	(Project Identification		
~~~	No. 004)	No. 021)	No. 028)		
PI Name	Dr. Amita Athavale	Dr. Mamta Muranjan	Dr. Ajita Nayak		
Co-PI Name	Dr. Dr. Leena Shardul	Dr. Nithya Gogtay	Dr. Akash Shukla		
	Dr. Satyaprakash Rane	Dr. Rajwanti Vaswani	Dr. Tukaram Jamale		
	Dr. Sadhana Sakhalkar	Dr. Sangeeta Rawat	Dr. Kaneenica Ninawe		
	Dr. Satyaprakash Rane	Dr. Tukaram Jamale			
		Dr. Urmila Thatte			
		Ms. Aishwarya			
		Gangurde			
Department	1. Chest Medicine &	1. Pediatrics	1. Psychiatry		
	EPRC	2. Clinical	2. Gastroenterology		
	2. Biochemistry	Pharmacology	3. Nephrology		
		3. Neurology			
		4. Nephrology			
Funding Source	GSMC MRU	GSMC MRU	GSMC MRU		
<b>Project Cost</b>	7.50	1.5	0.70		
(in lakhs)	(2.5+2.5+2.5)	(0.5+1.0)			
Study Duration	3years	2years	1.5year		
Year of	February 2017	February 2019	February 2019.		
Commencement	,	-	•		
Clinical Utility	Assessment of	1 2	Effective management of		
Application	Respiratory morbidity	_	psychiatric illnesses will		
	due to environmental	comprehensive TDM	improve patient's mental		
	exposure to Volatile	services for the institute	health and wellbeing,		
	Organic Compound	and garnering	which in turn will improve		
	(VOC) will be useful to	information specific to	adherence to medical		
	facilitate for adoption of	Western Indian and to	treatment, healthy		
	control measures for the	obtain Pediatric and	lifestyle, coping with		
	population at large,	Chronic Kidney	illness and outcome of the		
	which in turn will help	Disease population data	surgery.		
	reduction in Respiratory	for the Indian setting			
	morbidity and improve	for the first time.			
	quality of life.				

	Ongoing Projects				
Sr. No.	4	5	6		
Title	Evaluation of the role of Capsaicin on intestinal permeability, visceral hypersensitivity and gut TRPV1 receptors in patients with irritable bowel syndrome.  (Project Identification No. 030)	Association of CYP3A5 polymorphism with trough levels of tacrolimus and graft outcomes in Indian renal transplant recipients. (Project Identification No. 029)	Study of mutations in mt DNA in Urothelial Carcinoma of Bladder ( <i>Project Identification No. 022</i> )		
PI Name	Dr. Akash Shukla	Dr. Tukaram E. Jamale	Dr. Sujata Patwardhan		
Co-PI Name	Dr. Aditya Kale Dr. Nirmala. N. Rege Dr. Sandhya Kamat Dr. Raakhi Tripathi Dr. Dinesh Uchil Dr. Vikas Dighe	Dr. Divya Bajpai Dr. Nithya Gogtay	Dr. Bhushan Patil Dr. Tarun Rochlani Dr. Dhanjit K. Das Dr. Gwendolyn Fernandes		
Department	<ol> <li>Gastroenterology</li> <li>Pharmacology &amp;         Therapeutics     </li> <li>NIRRH</li> </ol>	<ol> <li>Nephrology</li> <li>Clinical Pharmacology</li> </ol>	<ol> <li>Urology</li> <li>ICMR-NIRRCH</li> <li>Pathology</li> </ol>		
<b>Funding Source</b>	GSMC MRU	GSMC MRU	GSMC MRU		
Project Cost	8.40	1.5	3.16		
(in lakhs)	(4.34+4.06)	(0.5+1.0)	(1.66+1.50)		
<b>Study Duration</b>	2years	2years	2years		
Year of Commencement	May 2019	May 2019	December 2020.		
Clinical Utility Application	Non-invasive tests like urinary lactulose-mannitol ratio and sucralose concentration for intestinal permeability and rectal balloon distension test for visceral hypersensitivity will improve diagnostic profiling of the IBS patients. In addition, it will also help in identification of targets for specific treatment of IBS.	The findings on the association between CYP3A5 genotypes on tacrolimus trough levels and graft outcomes in renal transplant patients will help in better prognosis after renal transplant The study would help to set up the technology in house and in future could be provided as a service for patient care at almost half the cost.	This study may help to highlight the types of mutations in bladder cancer and their association with pathological variables. The results of this study may assist in prognostication and hence identify patients who would benefit from early cystectomy vs those who would not require radical surgery		

	Ongoing Projects					
Sr. No.	7	8	9			
Title	A proof – of - concept investigation into Withania somnifera as a pharmacological treatment for alcohol dependence: study protocol for a randomized controlled trial.  (Project Identification No. 031)	A study of clinical features, laboratory parameters and genotype-phenotype correlation in patients of Distal Renal Tubular Acidosis. (Project Identification No. 032)	A phase III, randomized, double blind study to compare the efficacy of Pioglitazone (7.5mg) and Pioglitazone (15mg) on glycemic control in patients with Type II diabetes Mellitus with Metformin failure (Project Identification No. 033)			
PI Name	Dr. Padmaja Marathe	Dr Sayali Thakare	Dr. Tushar Bandgar			
Co-PI Name	Dr. Ajita Nayak Dr. Sandhya Kamat Dr. Shilpa Adarkar Dr. Raakhi Tripathi Dr. Harshad Kesari Dr. Ashwinikumar Raut	Dr. Anurag Lila	Dr. Shruti Bhide Dr. Vyankatesh Shivane Dr. Anurag Lila Dr. Virendra Patil Dr. Shrusti Thakre Dr. Saba Memon Dr. Neelam Jaguste			
Department 1. Pharmacology & Therapeutics		<ol> <li>Nephrology</li> <li>Endocrinology</li> </ol>	Endocrinology     Pharmacology &  The state of the s			
	2. Psychiatry 3. KHS MRU		Therapeutics			
<b>Funding Source</b>	GSMC MRU	GSMC MRU	GSMC MRU			
<b>Project Cost (in</b>	3.78	4.86	4.95			
lakhs)	(2.53 +1.25)	(2.46+2.46)	(3.25 + 1.70)			
Study Duration	2years	2years	2years			
Year of Commencement	March 2022	March 2021	February 2021.			
Clinical Utility Application	Study would confirm the positive effects of aqueous extract of <i>Withania somnifera</i> on alcohol dependence, relapse, and alcohol withdrawal anxiety, by virtue of its probable role in brain neurotransmitters dependent reward pathway, observed in a GSMC-MRU supported preclinical study to the clinics as an add-on therapy for 3 months	Increase the core understanding of DRTA (a less studied disease in Indian Population) including the genetic causes responsible to resolve the grey areas in the treatment of the disease would stimulate more studies on DRTA which may in future may have effect on health practices or health indicators.	In view of the No. of diabetes patients in the country and the way antidiabetic drugs are failing every 2-3 years, the proposed study which has been aimed at effect of changing/lowering the dose of Pioglitazone despite having multiple alternative options for metformin failure, has public health relevance and would have impact on health practices			

	Ongoing Projects					
Sr. No.	10	11	12			
Title	Paracentesis induced circulatory dysfunction in patients with Budd Chiari syndrome (BCS) (Project Identification No. 034)	Evaluation of genotyping and TDM v/s only TDM as a strategy for risk randomization in epileptic patients on carbamazepine therapy: a randomized controlled trial'  (Project Identification No. 035)	Mass spectrometry based early detection of potential markers for cervical cancer in Indian women (Project Identification No. 036)			
PI Name	Dr. Aditya Kale	Dr. Mahesh Belhekar	Dr. Sandhya Kamat			
Co-PI Name	Dr. Sidharth Harindranath Ms. Kashmira Kawli Dr. Tukaram Jamale	Dr. Sangeeta Ravat Dr. Bhaskar Krishnamurthy Dr. Shruti Agrawal Ms. Sanchita Ambre Ms. Swati More	Dr. Padmaja Samant Ms. Akshata Karekar Dr. Mayuri Gandhi			
Department	1. Gastroenterology	1. Clinical	1. Pharmacology &			
	2. Nephrology	Pharmacology 2. Neurology	Therapeutics 2. Obstetrics & Gynaecology 3. SAIF, IIT Bombay			
<b>Funding Source</b>	GSMC MRU	GSMC MRU	GSMC MRU			
<b>Project Cost (in</b>	2.80	2.34	3.60			
lakhs)	(1.40+1.40)	(0.82+0.82+0.70)				
Study Duration	2years	3years	1.5years			
Year of Commencement	March 2021	March 2021	March 2021			
Clinical Utility Application	Study is aimed at knowing the difference in hemodynamic profile of Budd Chiari syndrome patients and Cirrhosis patients with respect to the circulatory changes occurring following paracentesis and the findings of the study can help to decide the need for Albumin in BCS patients prior to Large Volume paracentesis.	Uncontrolled seizures due to inadequacy of a drug or toxicity of any drug are major public health problem and knowledge of genetic polymorphisms in an individual which influence the therapeutic action, metabolism and elimination of drug for treating a disease would decrease adverse events and hence would have impact on healthcare practices.	Benefits of screening based on metabolomics over the limitations of conventional (cytological & amp; HPV) tests in early detection of cervical cancer could have an impact on health care practices or health indicators.			

#### **Publications**

- 1. Ramani N, Kawli K, Karad A, Kale A, Kahalekar V, Sundaram S, Bhatia S, Shah R, Bandgar T, Deshmukh H, Patwardhan S, Shukla A. Gonadal dysfunction in male patients with Budd Chiari syndrome and its reversibility with treatment. Hepatology International. 2022 Mar 17; 16:640-8.
- 2. Surve NZ, Kerkar PG, Deshmukh CT, Nadkar MY, Mehta PR, Ketheesan N, Sriprakash KS, Karmarkar MG. A longitudinal study of antibody responses to selected host antigens in rheumatic fever and rheumatic heart disease. Journal of Medical Microbiology. 2021 May 26;70(5):001355.
- 3. Marathe PA, Satam SD, Raut SB, Shetty YC, Pooja SG, Raut AA, Kale PP, Rege NN. Effect of Withania somnifera (L.) Dunal aqueous root extract on reinstatement using conditioned place preference and brain GABA and dopamine levels in alcohol dependent animals. Journal of Ethnopharmacology. 2021 Jun 28; 274:113304

#### **Presentations in conference & workshops**

- Mohan Karmarkar, Gouri Hule, Nuzhat Surve, Preeti Mehta, Uday Khopkar, Chandrahas Deshmukh, Kadaba Sriprakash. Demonstration of Antibody Dependent Enhancement (ADE) like phenomenon in cases of pyoderma & pharyngitis caused by Group A Streptococci (GAS) & Streptococcus dysgalactiae subspecies equisimilis (SDSE). Paper presented at: 20th Lancefield International Symposium on Streptococci and Streptococcal Diseases (LISSSD); 16-20th October 2017; Fuji.
- 2. Satam SD, Mulkalwar A, Marathe PA, Shetty YC, Raut SB, Rege NN. Effect of *Celastrus paniculatus* in animal models of alcohol addiction. Paper presented (Oral) at: South Asian College of Clinical Pharmacology, 11thannual conference "Clinical Pharmacology contributing to Global Health and policies";29th April 2nd May 2018; Mumbai. (**Dr. Arun Sanghani award First Prize for the Best paper in preclinical oral presentation**)
- 3. Mulkalwar A, Satam SD, Marathe PA, Shetty YC, Raut SB, Rege NN. Effect of *Withania somnifera* in animal models of alcohol addiction. Paper presented (Oral) at: Apophenia, paper presentation competition at confluence, 2018 undergraduate medical conference organized by Seth GS Medical College & KEM Hospital; 2018; Mumbai. (Second prize for oral paper)
- 4. Alok Nachane, Sandhya Kamat, Gita Natraj, Manoj Radhakrishnan. "Evaluation of Mechanism of action of Aegle marmelos in Murine model of Dextran Sulphate Sodium (DSS) Induced Acute Colitis". Paper presented at: SRIPSCON 2018; Dec 2018; Hyderabad.
- **5.** Maurya M, Konwar M, Bose D, Gogtay NJ, Thatte UM, Jamale T, Bajpai D, Hase NK. Association of CYP3A5 polymorphism with trough levels of tacrolimus and graft outcomes in Indian renal transplant recipients. Paper Presented (Oral) at: 12th International Annual Conference SAC ACCP -2019; 15th -18th April 2019; Mumbai. (**Dr. S.M. Karandikar prize**)

- **6.** Gangurde A, Muranjan M, Gogtay NJ, Vaswani R, Jamale T, Ravat S, Iyer K, More S, Thatte UM. Therapeutic Drug monitoring (TDM) of Levetiracetam to individualize drug therapy in patients with epilepsy. Paper presented at: 12th Annual International conference SAC ACCP-2019; 17th 18th April 2019; Bandra, Mumbai.
- 7. Maurya M, Konwar M, Bose D, Gogtay NJ, Thatte UM, Jamale T, Bajpai D, Hase NK. Association of CYP3A5 polymorphism with trough levels of Tacrolimus and graft outcomes in Indian Renal Transplant recipients. Paper presented at: Paper presentation competition at confluence, 2019 undergraduate medical conference organized by Seth GS Medical College & KEM Hospital; August 2019; Mumbai. (First Price, oral presentation)
- **8.** Bajpai D, Saxena N, Jamale T, Hase NK, Maurya M, Gogtay NJ, Thatte UM. Association of CYP3A5 polymorphism with trough levels of Tacrolimus and graft outcomes in Indian Renal Transplant recipients. Abstract Paper Presented at: World congress of Nephrology 2020-virtual conference; 2020.
- **9.** Kawli K, Shukla A. Gonadal dysfunction in male patients with Budd Chiari syndrome and its reversibility with treatment. ISGCON 2021;  $10^{th} 13^{th}$  Feb 2022; Pune.
- **10.** Karekar AK, Kamat SK, Dandekar SP, Samant PY and Uchil DA. Genomic and Genetic counselling in cervical cancer. Poster presented at: 6th Annual international conference of Board of genetic counselling India-Genomic and Genetic counselling: Value in Healthcare [Eposter]; 2nd 4th July 2021.
- **11.** Saxena N, Jamale T, Bajpai D, Hase NK, Maurya M, Gogtay NJ, Thatte UM. Association of CYP3A5 polymorphism with trough levels of Tacrolimus and graft outcomes in Indian Renal Transplant recipients. Paper presented at: TAC summit 2022; 27th August 2022; Ahmedabad.