



JSS Academy of Higher Education & Research (JSS  
AHER), Mysore ,India

## Compendium

SDG Goal 17

*Partnerships for the goals*

## **SUSTAINABLE DEVELOPMENT GOAL 17: PARTNERSHIPS FOR THE GOALS**

### **Introduction to the goal:**

Goal 17 strengthens the means to implement and revitalize the global partnership for sustainable development. Globalization has made the world more interconnected in terms of technology, knowledge sharing, sharing resources, man power, financial support, etc. Cooperative work is an important way to share ideas and nurture innovation. To achieve the 16 Sustainable goals partnerships in all dimension becomes more important by promoting inter-sectoral and international collaborations. Coordinating policies to help developing countries manage their debt, as well as promoting investment for the least developed, is vital for sustainable growth and development.

Today with globalization, the world is more interconnected than ever. Collaborative work is an important way to share ideas and foster innovation. Coordinating policies to help developing countries manage their debt, as well as promoting investment for the least developed, is vital for sustainable growth and development. Goal 17 is one of the most important goals in promoting equitable trade across borders.

It aims at such collaborations that assists developing countries to attain financial stability, that would create international co-operation on science technology, innovation and would provide opportunities for knowledge sharing. The goal also aims to help developing nations in capacity building, increase their export and enhance policy coherence for sustainable development.

### **A glance at efforts:**

- Strategic and long-term partnerships with international institutions of eminence
- Research collaborations with international organizations
- Encouraging faculty to visit the foreign institutions to exchange ideas and develop advanced skills
- Organizing scientific conferences and workshops in collaboration with global partners
- Publishing the collaborative research activities in scientific journals
- Joint academic programmes for PhD scholars with foreign universities
- Encouraging students to participate in student exchange programmes
- Providing short term mentorship opportunities for students of Foreign Universities



## Activities of JSS Academy of Higher Education & Research aligning to SDG 17

### National & International Collaborations & Memorandum of understanding (MoU/MoA)

#### Academic Year 2019-2020 ( till July 2020)

To nurture research and academic excellence, the University has developed and maintained wide range of collaborations. The written agreements for collaboration basically originate for mutual benefit of the organization (University/college and the partnering organization) with the intent of sharing their expertise for the overall development of the organizations and society at large. List of collaborations (MoU) are shown below.

#### Innovations with collaboration

Sl. No.	Name of the students	Name of the University/Industry/ Organization	Coordinating person & duration	Present status / outcome of collaboration
1	Dr. Surajit Dey	Associate Professor, Roseman University of Health Science, Las Vegas, USA.	Mr. Hemanthkumar June 2020	Identification of PGlycoprotein in Human and Rabbit Cornea and Its role in Restricting Ocular Drug Absorption
2	Dr. Suresh Madhavan	Dean, UNTHSC, Texas, USA	Dr. Sri Harsha C January 2020	Pharm.D Programme in UNT
3	Students from University of Minnesota, USA	University of Minnesota, USA	Dr. Rekha January 2020	Understand Pharmacy program in India & Pharmaceutical Industry in India
4	Dr. Habibur Rahman	USCI, Malaysia	Mr. Mahendran January 2020	MoU signed earlier Students exchange

### MOU's With International Organizations

SI No	Organisation with which MoU is signed	Year of signing MoU	Duration	List the actual activities under each MoU year wise
1	South Asian Society of Oral Maxillofacial Implantology (SASOMI) #134, 42 <sup>nd</sup> Cross, 3 <sup>rd</sup> Main, 7 <sup>th</sup> Block, Jayanagar, Bengaluru-560082	15.7.2020	14.7.2021	<ol style="list-style-type: none"> <li>1. Study Tours &amp; Meeting with Japanese Dental Universities</li> <li>2. MOU /Co-operative arrangements with Japanese Dental Universities/Institutions</li> <li>3. Student Exchange</li> <li>4. Opportunity to host SASOMI symposiums/Conferences/ events at the respective university/institution</li> </ol>
2	Kingdom of Saudi Arabia Ministry of Education King Khalid University	30.12.2019	30.11.2020	Collaboration of funded research project Titled "Association between bone mineral density and periodontal disease: A cross sectional clinical & radio-grammetry study"

### Collaborative Research Projects

Sl. No	Collaboration with Institution name	Area	Financial details	MOU/MOA	Remarks
1	King's College London ( Radiology)	Cognitive assessment	ICMR/ MRC-UK	NIMHANS	Data collection Ongoing
2	iMERA.AI (UK)	Efficacy of deep learning algorithms in reporting MSK Radiographs	10Lakshs Grant	Collaborative Research Agreement	Research Ongoing
3	LaTrobe University, Australia	Life Sciences (Microbiology)	11,04,000/- (in the form of stipend)	Available at JSSAHER	
4	iMERA.AI (UK)	Efficacy of deep learning algorithms in reporting MSK Radiographs	10Lakshs Grant	Collaborative Research Agreement	Research Ongoing
5	Latrobe University, Melbourne, Australia	Spatial mapping of microbial population in soil surrounding the hospital/industry	Integrated PhD programme	Collaborative Research Agreement	Ongoing
6	Imperial College London	BOLD II (Burden of obstruction Lung Diseases Follow-up in low/middle income countries BOLD II	13,17,131.00/-	Collaborative Research Agreement	Ongoing
7	UNICEF	Gap assesment of Health and Wellness Clinic in Aspirational district of Karnataka (Yadgir)	7,74,000.00/-	Research Agreement	Completed
8	Swedish Heart Lung Foundation	Molecular patho-mechanism of biomass smoke induced chronic obstructive pulmonary disease among women: Population based- and in vitro exposure studies	14,76,000.00	Research Agreement	Completed

9	Latrobe University, Melbourne, Australia	The role of air pollution and pollen exposure on asthma Mysore, India	Integrated PhD programme	MOU	Ongoing
10	SPARC	Targeting Hydroxyprostaglandin Dehydrogenase (HPGD) Pathway Using Novel Derivatives of Hydroxychloroquine (Hcq) for the Treatment of Cervical Cancer	49 lakhs	MOU	Under review
11	University of California	Empowering community level health workers on family planning counselling through video game base approach	5.75 Lakh	Research collaboration	Concept proposal accepted

**Ph.D. Scholars Fellowship/Collaborations :**

Sl No	Title	SRF/JRF/RA	Departments involved	Funding agency	Date of sanction	Durati on
1	Spatial mapping of microbial populatioon in soil surrounding the hospital/industry	Ms. Shalini Kunhikannan JRF	Microbiology	Latrobe University, Melbourne, Australia at New Delhi	18.01.2020	3 .6 Yrs
2	BOLD II (Burden of obstruction Lung Diseases Follow-up in low/middle income countries BOLD II	Mr. Sathish Chandran M Research Supervisor Mrs.Lingambika Spirometry Technician	Respiratory Medicine	Imperial College London	11.10.2019	1 Yr.
3	Molecular pathomechanism of biomass smoke induced chronic	Sri. Raju M Ms. Vidyashree Research Assistant	Respiratory Medicine	Swedish Heart Lung Foundation	20.05.2019	3 Yrs.

	obstructive pulmonary disease among women: Population based- and in vitro exposure studies					
4	The role of air pollution and pollen exposure on asthma Mysore, India	Dr. Sowmya N Malamardi JRF	Respiratory Medicine	LTU	01.05.2019	5 Yrs.
<b>Sl. No</b>	<b>Collaboration with Institution name</b>	<b>Area</b>	<b>Financial details</b>	<b>MOU/MOA</b>	<b>Remarks</b>	
1	King's College London ( Radiology)	Cognitive assessment	ICMR/ MRC-UK	NIMHANS	Data collection Ongoing	
2	iMERA.AI (UK)	Efficacy of deep learning algorithms in reporting MSK Radiographs	10Lakshs Grant	Collaborative Research Agreement	Research Ongoing	
3	LaTrobe University, Australia	Life Sciences (Microbiology)	11,04,000/- (in the form of stipend and contribution from JSSAHER as per MOU)	Available at JSSAHER		
4	iMERA.AI (UK)	Efficacy of deep learning algorithms in reporting MSK Radiographs	10Lakshs Grant	Collaborative Research Agreement	Research Ongoing	
5	Latrobe University, Melbourne, Australia	Spatial mapping of microbial population in soil surrounding the hospital/industry	Integrated PhD programme	Collaborative Research Agreement	Ongoing	
6	Imperial College London	BOLD II (Burden of obstruction Lung Diseases Follow-up in low/middle income countries BOLD II	13,17,131.00/-	Collaborative Research Agreement	Ongoing	
7	UNICEF	Gap assessment of Health and Wellness Clinic in Aspirational	7,74,000.00/-	Research Agreement	Completed	

		district of Karnataka (Yadgir)			
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11	University of California	Empowering community level health workers on family planning counselling through video game base approach	5.75 Lakh	Research collaboration	Concept proposal accepted



<b>S.No</b>	<b>Name of the University/Industry/Organization</b>	<b>Nature of collaboration</b>	<b>Coordinating person</b>	<b>Present status / outcome of collaboration</b>
1	KwaZulu Natal University, South Africa	Academic Research	Dr. S. N. Manjula	Ongoing
2	Teresian College, Mysuru	Academic Research	Dr. S. N. Manjula	Ongoing
3	JSS Academy of Technical Education, Bengaluru	Academic Research	Dr. S. N. Manjula	Ongoing
4	Govt. Ayurvedic Medical College, Mysuru	Academic Research (RGUHS Sponsored research project)	Dr. K L Krishna	Ongoing
5	Govt. Ayurvedic Medical College, Mysuru	Academic Research (RGUHS Sponsored research project)	Dr. K L Krishna	Ongoing
6	Teresian College, Mysuru	Academic Research	Dr. K L Krishna	Ongoing
7	Texas State University	Academic Research	DVG/MB	Ongoing
8	JSS Science & Technology	Academic Research	DVG	Ongoing

## The India –UK Water Centre on collaborative priorities on NERC – MoES water security research.

**16**

**Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management: State of Art Approaches**

एकीकृत ताजे पानी के संसाधन प्रबंधन के लिए सुरक्षित एवं सतत प्रौद्योगिकी तथा रणनीतियाँ: अत्याधुनिक दृष्टिकोण

**CITATION**  
Shivaraju H Puttaiah & Jenkins, DF (2020). Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management: State of Art Approaches : State of Art Approaches. Water Brief 16 . The India-UK Water Centre; Centre for Ecology & Hydrology, Wallingford and Indian Institute of Tropical Meteorology, Pune. 19pp

शिवाराजू एवं जेन्किंस (2020)। एकीकृत ताजे पानी के संसाधन प्रबंधन के लिए सुरक्षित एवं सतत प्रौद्योगिकी तथा रणनीतियाँ: अत्याधुनिक दृष्टिकोण। जल संज्ञान 16। भारत-यूके जल केंद्र, वॉलिंगफोर्ड और इंडियन इंस्टीट्यूट ऑफ ट्रोपिकल मेटियोलॉजी, वॉलिंगफोर्ड एवं भारतीय उष्णकटिबंधीय मौसम विज्ञान संस्थान, पुणे। 19pp

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All other photos: Unsplash and Pixabay

**UK** Natural Environment Research Council

**MoES** Ministry of Earth Sciences Government of India

The India-UK Water Centre (IUKWC) promotes cooperation and collaboration between the complementary priorities of NERC-MoES water security research.

भारत-यूके जल केंद्र एम.ओ.ई.एस - एन.ई.आर.सी (यूके) जल सुरक्षा अनुसंधान की परिपूरक प्राथमिकताओं के बीच सहकार्यता और सहयोग को बढ़ावा देता है।

This Knowledge Exchange Water Brief was produced as an output of the IUKWC workshop on "Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management" held in Mysuru, India in June 2019.

ज्ञान आदान प्रदान का यह जल संज्ञान आईयूकेडब्ल्यूसी द्वारा 2019 में मैसूरु, भारत में आयोजित कार्यशाला "एकीकृत ताजे पानी के संसाधन प्रबंधन के लिए सुरक्षित एवं सतत प्रौद्योगिकी तथा रणनीतियाँ" का प्रतिफल था।



The India –UK Water Centre on collaborative priorities on NERC – MoES water security research.



## International Student exchange programme

Dr. Ranjitha Shankare Gowda (M.B.B.S, M.D Medical Microbiology, Assistant Professor) has been a Visiting Scholar at The School of Public Health, University of California, Berkeley, USA. She has been recognised by the CEND ( Center for Emerging and Neglected Diseases) as a Global infectious diseases fellow under the Fogarty grant supported by NIH, USA. During her Fellowship she worked with Prof. Lee W. Riley in analysis of whole genome sequencing (WGS) of Mycobacterium tuberculosis isolates from diabetic and non-diabetic Pulmonary Tuberculosis patients.

Lee W. Riley in analysis of whole genome sequencing (WGS) of Mycobacterium tuberculosis isolates from diabetic and non-diabetic Pulmonary Tuberculosis patients.

Dr Smitha M C, Assistant Professor, Department of Community Medicine, JSS Medical College, attended an orientation programme at National Institutes of Health, Bethesda, Maryland, United States for the Post Doctoral Fellowship. She is Pursuing in 2019-2020

Dr Shilpa Avarebeel, worked at the Royal Bournemouth and Christchurch hospital, NHS trust for a year from 26 th April 2019 to June 2020 as a Registrar in Geriatric Medicine. She was sponsored by Medical training Initiative programme through Royal college of physicians, London. She has successfully completed Fellowship in Geriatric through RCP, London



S.No	Title of the Project	Principal Investigator with department name	Agency & date of submission	Amount(Rs)	Duration of the Project
1	A study on the effect of cAMP specific PDE-4 and PDE-10 inhibitors against sleep induced alterations in cognitive functions and neural plasticity in mouse model	Dr. C. Saravana Babu (PI) Abid Bhat (Research Scholar)	Under IBRO short term training at Macquarie University, Australia.	8500 USD	6 months
2	International students exchange program from Ministry of Primary and Secondary Education, Lomé, Togo	Dr. S.N. Manjula (PI) Mr. Poyadi Kola Research Scholar from Lome University	The World Academy of Sciences (TWAS)	Rs.40,000/month	3 months

Holland University 02, La Trobe University 04, SIUE 02, UNC 02, Oman 6 or 10

## VSLO (Visiting Student Learning Opportunities)

### American Association of Medical College's - Visiting Student Learning Opportunity

- The AAMC's Visiting Student Learning Opportunities™ program is designed for medical and public health students to pursue short-term learning opportunities in locations away from their home institutions
- Its members are 147 accredited U.S. Medical Schools, 17 accredited Canadian Medical schools nearly 400 major teaching hospitals and health systems and more than 80 academic societies.
- The Global Network comprises institutions located in the United States or another country that either send their students to international locations or receive students from international locations.
- Participating as Host Institution (Receiving Visiting Students)- We uploaded the elective catalog Home Institution (Sending Students Abroad) - we Provide students with access to the VSAS application service
- The program's centrepiece is its Visiting Student Application Service (VSAS®)
- As Host institution:

### List of Electives offered from JSS Medical College and Hospital, JSS Academy of Higher Education & Research

S.No	List of Electives
1	Hands on experience - Dissection
2	Electrophysiology & Cardiopulmonary fitness tests
3	Psychosexual Medicine
4	Basics of Musculoskeletal Trauma
5	Otolaryngology
6	Clinical approach to epistaxis
7	Economical HIC Practices in developing countries (Hospital Infection Control)
8	Antibiotic Stewardship programme through innovative teaching learning methods (Antibiotic Stewardship)
9	HIV Medicine
10	operation theatres and intensive care
11	Experimental Pharmacology using Computer Assisted Simulation Lab
12	Biostatistics
13	Medicolegal Autopsy

14	Diagnosis & Management of Anterior Segment Diseases of the eye with special emphasis upon acquired Cataracts
15	Retina in Systemic Diseases: A Clinical Approach
16	Clinical Neurology
17	Clinical Psychology
18	Hands on experience in "Molecular Methods in Biomedical Research"
19	Diagnostic Radiology
20	Medical Gastroenterology
21	Histopathology-perinatal autopsy
22	Nephropathology
23	Oncopathology
24	Haematology
25	Dermatopathology
26	Fundamentals of Health Research

## ***Research Publications as part of Sustainable Development Goals***

SNo	Research Publications as part of sustainable development goals
<b>Department of Pharmaceutics</b>	
1.	Reinforcing Nanomedicine using graphene nanoribbons (Review). H.C. Kiran, H.V. Gangadharappa, Journal of Drug Delivery Science and Technology/ISSN: 1773-2247, 2019; 49:334–344
2.	Formulation, development, and characterization of drug delivery systems based telmisartan encapsulated in silk fibroin nanosphere's. Shahid Ud Din Wani, Gangadharappa H. V, Ashish N P. International Journal of Applied Pharmaceutics/ISSN- 0975-7058, 2019;11(1): 247-254.
3.	Development of valsartan floating matrix tablets using low density Polypropylene foam powder: in vitro and in vivo evaluation. Mohamed Rahamathulla, S. Saisivam and H. V. Gangadharappa. AAPS PharmSciTech /ISSN: 1530-9932 (electronic version). 2019; 20:35.
4.	Vitamin C: Properties, function and application in cancer therapy (Review), Satish Shilpi, Roshni Shivvedi, Amrita Singh, Gaurav K. Saraogi, Vikas Jain, Kapil Khatri, Advance Pharmaceutical Journal/ISSN-2456-1436 2018; 3(5): 130-135.
5.	Development and evaluation of Eudragit coated environmental sensitive solid lipid nanoparticles using central composite design module for enhancement of oral bioavailability of linagliptin. D. Krishna Veni& N. Vishal Gupta. International Journal of Polymeric Materials and Polymeric Biomaterials/ISSN: 0091-4037, Published Online.2019. DOI: 10.1080/00914037.2019.1570513.
6.	Procedure for preparing, issuing, movement, retention and destruction of batch history record in sterile manufacturing site (Review). B. K. Yashas and S. Hemanth Kumar. European Journal of Pharmaceutical and Medical Research/ISSN 2394-3211,

	2019;6(4):256-263.
7.	Quality by Design: The Tool for Regulatory Compliance (Review). M. P. Venkatesh, Angela Philip and H. V. Gangadharappa, International Journal of Pharmaceutical Sciences and Research/ISSN- 0975-8232, 2019; 10 (2): 1095-1100.
8.	Recent developments in the treatment of Scalp Psoriasis: A review (Review). M. P. Venkatesh and Govind Uday. International Journal of Pharmaceutical Sciences and Research/ISSN- 0975-8232, 2019; 10 (1): 29-46
9.	Pharmaceutical Patenting: An Overview. (Review). Akash Dambal, Balamuralidhara V, T.M. Pramod Kumar. The Pharma Review/ISSN- 0973-399X, 2019: 38-47.
10.	Implementation of design of experiments in development and optimization of transdermal carrier system of tacrolimus for the dermal management of psoriasis in albino wistar rat. Ved Parkash, Saurabh Maan, Vandana Chaudhary, Vikas Jogpal, Girish Mittal and Vikas Jain. Journal of Bioequivalence & Bioavailability/ISSN: 0975-0851, 2018;10(5): 99-106 /DOI: 10.4172/0975-0851.1000385
11.	Injectable in situ gels of Methotrexate for Rheumatoid Arthritis: Development, in vitro and in vivo evaluation. Tanmoy Das, M. P. Venkatesh, T.M. Pramod Kumar. Journal of Applied Pharmaceutical Science, 2019; 9(5): 40-48.
12.	Formulation and investigation of polymeric multiple unit pellet systems consisting of sustained release glimepiride and immediate release atorvastatin calcium. Bharat Bijapur, Gowda DV, Vishal Gupta N, Shailesh Thirumaleshwar, Praveen Sivadasu, Manjunath M. Asian Journal of Pharmaceutical and Clinical Research/ISSN: 0974-2441, 2019; 12(5): 142-150
13.	Development and validation of a UPLC-MS method for determination of atazanavir sulfate by the “analytical quality by design” approach, Chandni Saha N. Vishal Gupta and R. S. Chandan. Acta Pharmaceutica/ISSN 1330-0075, 23019; 69: 63–74
14.	Regulatory Filing of a Medicinal Product in Saudi Arabia & its Navigation Pathway (Review) (Intercollegiate Publication) Venkateshwara C. Reddy, Abhishek B.V, M P Venkatesh, Shehnaz Z Khaleeli. Journal of Global Trends in Pharmaceutical Sciences/ISSN: 2230-7346 2020;10(4);6984 – 6998
15.	Recent review on Nano sponge (Review) Ananya KV, Preethi S, Amit B Patil, Gowda DV. International Journal of Research in Pharmaceutical Sciences/ISSN: 0975-7538.2020;11(1):1085-1096
16.	SLN based alendronate in situ gel as an implantable drug delivery system – A full factorial design approach (Intercollegiate Publication) Tanmoy Das, M.P. Venkatesh, T.M. Pramod Kumar, Marina Koland. Journal of Drug Delivery Science and Technology/ISSN: 1773-2247.2020;55(2): 101415/https://doi.org/10.1016/j.jddst.2019.101415
17.	A Review on qualification of the tablet compression machine (Review). Avinasha S, Gangadharappa H V Mr Hemanth Kumar S, Gowrav MP. International Journal of Research in Pharmaceutical Sciences/ISSN: 0975-7538..2020;11(2):1961-1967/DOI: 10.26452/ijrps.v11i2.2124
18.	A Review and Analysis of Data Integrity: Pharmaceutical Industry Perspective (Review) Sumukha Krishna P, Hemanth Kumar S, Gangadharappa H V. International Journal of Pharmaceutical Research/ISSN:0975-2366.2020;12(1):940-948



19.	A review of the preparation, characterization and application of nanostructured lipid carriers. (Review) (Intercollegiate Publication).AshaSpandana K M, Jawahar Natarajan, Shailesh Thirumaleshwar, Hemanth Kumar S.International Journal of Research in Pharmaceutical Sciences/ISSN: 0975-7538.2020;11(1):1130-1135
20.	A Review on candidiasis resistance current drug development process in its prevention and treatment (Review).Guruprasad BM, Gowda DV, Famna Roohi.International Journal of Research in Pharmaceutical Sciences/ISSN: 0975-7538.2020;11:1073 1079
21.	Mitochondrial Drug Delivery for the Liver Diseases: Comprehensive Review (Review) Gowda D V, FamnaRoohi N K, Mahendran Bhaskaran, Sathish Babu.International Journal of Research in Pharmaceutical Sciences/ISSN: 0975-7538.2020;11:1172-1181
22.	Alcohol-induced dose dumping: A comparative study of generic and innovator product Safvana Fava, M. P. Gowrav, V. Balamuralidhara, T. Shailesh. Drug Invention Today/ISSN: 0975-7619, 2020;13(1): 189-194
23.	Topical delivery of curcumin and caffeine mixture-loaded nanostructured lipid carriers for effective treatment of psoriasis.Padminilriventi, N. Vishal Gupta.Pharmacognosy Magazine/ISSN : 0973-1296, 2020;16:S206-17
24.	Development of biodegradable silkworm cocoon derived silk membrane for GTR in the treatment of grade II furcation (Intercollegiate Publication).Archana R Sankar, Sheela Kumar Gujjari, Kulkarni PK, Akhila AR.International Journal of Research in Pharmaceutical Sciences/ISSN: 0975-7538, 2020;11(2):1551-1561
25.	Annual Product Quality Review. (Review).Manjunath D.N., Shailesh T., Gowrav M.P, International Journal of Research in Pharmaceutical Sciences..2020; 11(2): 1862-1869
26.	Development and evaluation of nanosponge loaded topical herbal gel of wrightiatinctoria. Iriventi P, Vishal Gupta N. International Journal of Applied Pharmaceutics/ISSN:0975-7058, 2020;12(1):89-95
27.	Formulation and evaluation of antifungal agent in a hydrogel containing nanoparticle of low molecular weight chitosan.Deekshitha H.M., Saraf N.S., Kulkarni P.K., Akhila A.R., Jayaprakash J.S. International Journal of Research in Pharmaceutical Sciences/ISSN:.0975-7538.2020;11(1):247-259
28.	Formulation and evaluation of cream for treatment of scabies.Sanjay A, Kulkarni P.K, Gowda D.V, Suryateja J, Ravikumar A.A..International Journal of Pharmaceutical Research/ISSN: 0975-2366.2020;12(2):445-459
29.	Direct Brain Targeted Nanostructured lipid carriers for sustained release of schizophrenic drug: Formulation, characterization and pharmacokinetic studies (Intercollegiate Publication), Praveen Sivadasu., DevagowdaVishakante Gowda., NithinKundachira Subramani., Bhavya MalgurVishweshwaraiah, Sachhidananda Shivanna., Siddaramaiah Hatna. Indian Journal of Pharmaceutical Education and Research/ISSN:.0019-5464.2020;54(1):73-84
30.	Nano-sponges: A novel carrier for delivery of chemo-therapeutic drugs (Review). Palesh S Rajkondawar, Amit B Patil. International Journal of Research in Pharmaceutical Sciences/ISSN:.0975-7538.2020;11(1):1040-1044.
31.	Importance of quality assurance in effective improvement of technologytrnsfer Raghuprakash P and GowravMP.Journal of Global Trends in Pharmaceutical Sciences/ISSN:

	2230-7346.2020;11(1):7155-7163
32.	Vendor Qualification and Evaluation in Pharmaceutical Industry (Review). Borra Vamsi, Hemanth Kumar S, Patel P R, Gowrav M P..International Journal of Research in Pharmaceutical Sciences /ISSN:.0975-7538..2020;11(2):1987-1994.
33.	Triple-negative breast cancer: challenges and treatment options (Review) Nithish Shekar, Pooja Mallya, D V Gowda, Vikas Jain.International Journal of Research in Pharmaceutical Sciences /ISSN:.0975-75382020;11(2):1977-1986.
34.	Insights into Gastric Cancer (Review). Arun Kumar Vadikari, Vishakante Gowda D, Mahendran Bhaskaran, Vikas Jain.International Journal of Research in Pharmaceutical Sciences/ISSN:0975-7538.2020;11(2):2151-2166.
35.	Drug recall procedure in United Kingdom and Australia: a regulatory overview (Review). Nandhini B, Balamurlidhara V, Aniket Anant Gulumkar, Sridhar S.International Journal of Research in Pharmaceutical Sciences /ISSN:0975- 7538.2020;11(2):1457-1466
36.	A comprehensive review of nano drug delivery system in the treatment of CNS disorders (Review) (Intercollegiate Publication).AshaSpandana K M, Mahendran Bhaskarana, V.V.S.N.ReddyKarrib, Jawahar Natarajan.Journal of Drug Delivery Science and Technology. /ISSN:1773-2247.2020; 57; 101628
37.	MDUFA and its Impact on Medical Device Sector (Review). Anjana B, Naga Gouri T, Pramod Kumar T M, Venkatesh M P.International Journal of Research in Pharmaceutical Sciences /ISSN:.0975-7538.2020;11:.2109-2116.
38.	Six sigma: an embellished exploration in the field of.pharmaceutical industry (Review) Sohnikandar, GangadharappaHV.International Journal of Pharmaceutical Research /ISSN:0975-23662020;12(3):13-22.
39.	An overview on workplace hazards and safety management system (Review) Amith KR, Gangadharappa H V, Sohini Kandar.Journal of Global Trends in Pharmaceutical Sciences/ISSN:2230-7346.2020;11(1):7496-7504.
40.	Development of biodegradable scaffolds loaded with vancomycin micropartricles for the treatment of osteomyelitis.Souvikchakraborty, Gowda D V, Vishal Gupta N.International Journal of Research in Pharmaceutical Sciences/ISSN:0975- 7538.2020;10: 2612-2621.
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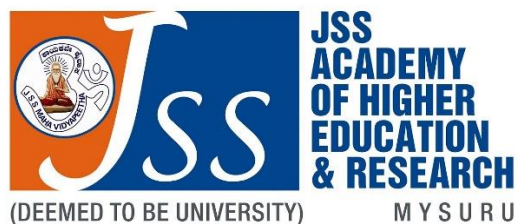
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182.	Assessment of antibiotic utilization pattern in hospital settings (Review) Reshmi Raju, Ann Vazhayil Kuruvilla, Madhan Ramesh. International Journal of Research in Pharmaceutical Sciences/ISSN:0975-7538.2020;11(3):2963-2967.
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<b>Department of Pharmacognosy</b>	
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185.	Phytochemistry and therapeutic potential of Bauhinia Racemosa Lam. - A Concise Review (Review).Ann Maria Alex, Suresh Joghee.International Journal of Research in Pharmaceutical Sciences/ISSN:0975-7538.2020;11(1):1045-1050.

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## **Programmes/Workshops/training/Seminars organized by JSSAHER supporting to SDG 17**

1

Dept. of Pharmacology conducted Guest Lecture on South African Botanical and a Compound for Antimelanoma and Anti-Angiogenic activity by Dr.Namrita Lal, Professor & Research Chair, Medical Plant science, University of Pretoria, South Africa at Dept. of Pharmacology, JSS Medical College, Mysuru and around 25 participants participated in the programme.

2

Dept. of Biochemistry conducted Guest Lecture on Quantitative Imaging Biomarkers in Cancer Care by Dr.Amita Shukla-Dave, Director Quantitative Imaging, Deputy Service Chief Predictive Informatics, Attending Physicist, Member, Memorial Sloan-Kettering Cancer Center, New York, USA at SIG- CBCSC and Board Room, JSS Medical College, Mysuru in and around 50 participants participated in the programme.

3

Dept. of Biochemistry conducted Guest Lecture on South African botanical and a compound for antimelanoma and anti-angiogenic activity by Dr. Namrita Lal Professor and Research Chair; Medicinal Plant Science, University of Pretoria, South Africa, and Adjunct Faculty, JSSAHER, Mysuru at SIG- CBCSC and Board Room, JSS Medical College, Mysuru and around 50 participants participated in the programme



4  
Dept. of Paediatrics conducted Guest Lecture on Update on Universal Immunization & Vaccine Preventable Disease (VPD) Surveillance by Dr.Sudhir Nayak Surveillance Medical Office, National Polio Surveillance Project, World Health Organisation, Mysuru Unit at Paediatric Seminar Hall, JSS Hospital, Mysuru and around 50 participants participated in the programme

5  
**Dept. of E.N.T. organized a lecture on** Surgical techniques for keratosis obturan &Surgical Management of meniere's diseases " by Dr.Sreeshyla Basavaraj ( JSS Alumini) St Marys Hospital – Isle of Wight England . 30 delegates attended the programme

6  
**Dept. of Psychiatry organized a lecture on** Bioethics in Clinical Research by Dr Emily Benning, Bangor University of Sashi, Dr.Rebecca Mcphilips, University of Manchester, UK 20 delegates attended the programme

7  
**Dept. of Emergency Medicine organized a lecture on** Trauma system Management by Dr. Emily Bebbington, EM Registrar Bangor University, UK . 20 delegates attended the programme

8  
Dept. of Anaesthesia conducted Guest Lecture on Recent advances in Cancer pain Management by Dr.Lakshmi Koyalagunta, University of Texas, USA at JSS Hospital, Mysuru and around 75 participants participated in the programme

9  
Dept. of Biochemistry conducted Guest Lecture on Quantitative Imaging Biomarkers in Cancer Care by Dr.Amita Shukla-Dave, Director Quantitative Imaging, Deputy Service Chief Predictive Informatics, Attending Physicist, Member, Memorial Sloan-Kettering Cancer Center, New York, USA at SIG- CBCSC and Board Room, JSS Medical College, Mysuru and around 50 participants participated in the programme

10  
Dept. of Pharmacology conducted Guest Lecture on South African Botanical and a Compound for Antimelanoma and Anti-Angiogenic activity by Dr.Namrita Lal, Professor & Research Chair, Medical Plant science, University of Pretoria, South Africa at Dept. of Pharmacology, JSS Medical College, Mysuru and around 25 participants participated in the programme.



11

Dept. of Biochemistry conducted Guest Lecture on South African botanical and a compound for antimelanoma and anti-angiogenic activity by Dr. Namrita Lal Professor and Research Chair; Medicinal Plant Science, University of Pretoria, South Africa, and Adjunct Faculty, JSSAHER, Mysuru at SIG- CBCSC and Board Room, JSS Medical College, Mysur and around 50 participants participated in the programme

12

Dept. of Paediatrics organized a lecture on “Interpretation of monitoring parameters in neonatal and pediatric ICU” by Dr.Sandesh Shivananda, Associate Professor in Pediatrics & consultant neonatologist, Vincor Canada& 70 delegates attended the programme.

13

Dept. of E.N.T. organized a lecture on Surgical techniques for keratosis obturan &Surgical Management of meniere’s diseases ” by Dr.Sreeshyla Basavaraj ( JSS Alumini) St Marys Hospital – Isle of Wight England . 30 delegates attended the programme

14

Dept. of Psychiatry organized a lecture on Bioethics in Clinical Research by Dr Emily Benning, Bangor University of Sashi, Dr.Rebecca Mcphilips, University of Manchester, UK . 20 delegates attended the programme

15

Dept. of Emergency Medicine organized a lecture on Trauma\_system Management by Dr. Emily Bebbington, EM Registrar Bangor University, UK . 20 delegates attended the programme

16

Dept. of Emergency Medicine organized a lecture on Clinical Research Ethics by Dr. Rebacca Mcphillips, Research fellow, Manchester University . 30 delegates attended the programme

17

The Department of Anaesthesiology, JSS Medical College and Hospital in association with The University of Minnesota, USA had organized a workshop on Transthoracic Echocardiography in Jan 2020 in the Department of Anaesthesiology, JSS Hospital Mysuru. Dr C L Gurudatt, Professor and HoD Department of Anaesthesiology, JSSAHER welcomed the gathering and the workshop was inaugurated by Dr Guruswamy, Medical Superintendent JSS Hospital. Dr Sudarshan Setty, Assistant Professor from the University of Minnesota was the workshop

director and Dr Anup N R, Assistant Professor Department of Anaesthesiology, JSSAHER coordinated the workshop. 25 post graduate students of Anaesthesiology and Emergency medicine were trained in perioperative uses of

transthoracic echocardiography and lung ultrasound. Dr Srikanth Rao from Penn State University USA, Dr Ashok Kumar from Apollo Hospital Mysuru, Dr Mohan from Mission Hospital Mysuru, Dr Chetana and Dr Varun from Jayadeva Institute of Cardiovascular sciences Mysuru were the resource faculty for the workshop. All the participants will be receiving a certificate of participation from the University of Minnesota

18

Academic society of JSS Medical College had organized Guest lecture on Quantitative Imaging Biomarkers in Cancer Care at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Dr. Amita Shukla Dave. Director Quantitative Imaging, Deputy Service Chief Predictive Informatics Attending Physicist, Member, Memorial Sloan Kettering Cancer Centre, New York delivered the talk.

19

Academic society of JSS Medical College had organized Guest lecture on Stem Cells and Regenerative Medicine – Newer frontier in Medicine at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Prof.A.A.Shetty Hunterian Professor Royal College of Surgeons of England, Adjunct Faculty Apollo Hospitals Educational & Research Foundation (AHERF), India delivered the talk

20

Academic society of JSS Medical College had organized Guest lecture on Overview of approach to comprehensive epilepsy care on at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Dr.Kumar Sannagowdara MD, Asst. Prof., Child Neurology, Epilepsy, Medical College of Wisconsin, Milwaukee, Wisconsin, USA delivered the talk.

21

Academic society of JSS Medical College had organized Guest lecture on A Nutrigenetics approach to study the impact of genetic & dietary factors on Obesity at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Dr.Kumar Sannagowdara MD, Dr.Vimal Karani S. Asso.Prof. in Nutrigenetics & Nutrigenomics, Programme Director for Food & Nutritional Sciences degree programme University of Reading, UK delivered the talk

22

Academic society of JSS Medical College had organized Guest lecture on The Digital Patient at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Dr.C.Donald Combs, Vice President and Dean, School of Health Professions, Eastern Virginia Medical School. Virginia, USA, delivered the talk.

23

Academic society of JSS Medical College had organized Guest lecture on Tilt Table test – Joint Hypermobility and their association with syncope in adolescentin at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Dr.Natraj N.Balla, Asst.Prof. of Paediatrics, USF, Florida, delivered the talk

24

Academic society of JSS Medical College had organized Guest lecture on Surgical techniques for Kerotosis Obturans & Surgical Management of Menieres Disease at Sri Rajendra Centenary Auditorium, JSS Hospital, Mysuru. Dr.Sreeshyla Basavaraj, St. Marys' Hospital – Isle of Wight, Queen Alexandra Hospital - Portsmouth delivered the talk.



### International visits by the faculty:

1

Dr.Vidya.C.S., Asso.Prof. presented a paper titled Primitive neuroectodermal tumor of kidney and its review Dr.Vidya.C.S. in Dubai

2

Dr.Rajeshwari L, Associate Professor visited School of Medicine, University of Oakland, Detroit as visited to understand their best practices

3

Mr. B. Venugopal Reddy Paper presented titled Targeting Nrf2- mediated redox signaling inhibits cancer cells growth in vitro and in vivo , Univ ersitie, Pierre et M arie Curie, Paris, France. Had received Travel award from CSIR

4

Dr.Hemapriya presented a paper titled "Is Automated Blood Pressure monitoring Reliable in Pregnancy? , at Amsterdam, Netherlands Organized by Inter-national Society of Hypertension in Pregnancy.

5

Dr Roopa Seshadri presented papers titled unexpected outcome in a ruptured Basilar top Aneurysm- Post Coiling, Hidinggaint, Acute stroke within 3.5 hours at ABC WIN 2019 Val d'Iserre, France, Europe

6

Dr.Veeranna .S and Dr.Ranugha.P.S.S Assistant Professor presented paper titled Melanogenesis Markers Expression in premature graying of hair –a-cross-sectional study" and "Facial involvement in Indian psoriatic patients and its association with disease severity and metabolic syndrome- a cross-sectional study" at Milan, Italy organized by international league of Dermatological Society of India

7

Mr. Prashanth Kumar M.V, Ph.D. Scholar, Dept. of Biochemistry presented a paper titled "Testing the efficacy of vitamin d3 and metformin to retard the development of subcutaneous ehrlich ascities carcinoma In vivo" at 2 International conference on cancer research and pharmacology, Singapore .



8

Mr.Chinnappa A U, Ph.D Scholar, Dept. of Biochemistry presented a paper titled Targeting Mitochondrial Activity Through NQO1 Inhibitor Dicoumarol Retards Breast Cancer Cells Growth in Vitro and In Vivo” at Berlin, Germany.

9

Dr.Chandrakanth H.V, Prof. & HOD, Dept. of Forensic Medicine presented a paper titled “Profile of poisoning cases in JSS Medical college & Hospital - A two year prospective study” at Birmingham, UK

10

Dr.Roopa Seshadri – Assistant Professor, Dept. of Radiology presented a paper titled “Complex Basilar Thrombectomy” at Neuro Summit, Shanghai, China

11

Dr. Roopa Seshadri – Assistant Professor, Dept. of Radiology presented a paper titled “Venous Stenting in Idiopathic Intracranial Hypertensi at WFITN (World Federation of Interventoinal and Therapeuric Neuroradiology) at Naples, Italy.

12

Dr. Roopa Seshadri – Assistant Professor, Dept. of Radiology presented a paper titled “Multiple aneurysms- whose the culprit? at LINNC, Asia Edition (Live Interventional Neuroradiology, Neurology, Neurosurgery Conference at National Museum of Singapore and has **received best presentation award**

13

Dr.Bharathi M.B., Professor, Dept. of E.N.T. presented a paper titled “Coblation in laryngology & moderated a session on posterior Glottic stenosis at Inaugural Congress of The Asia-Pacific Laryngology Association, 8th International Annual Conference of Laryngology & Voice Association& 6th Asia Pacific Paediatric Airway Course” at Singapore

14

Dr Prakash BG of ENT Department, JSS Medical College, India has attended 2nd World Congress on ENT and Craniofacial Surgery and presented paper on titled" A Comparitive Study between Temporal is fascia graft and and cartilage garft in type 1 Tympanoplasty"

15

Dr. Babu A. R of ENT Department JSS Medical College Mysuru India has attended 2nd World Congress on ENT and Craniofacial Surgery and presented paper titled on "Endoscopic repair of CSF leak from lateral recess of splenoid sinus and its surgical outcome- our experiences" held in November at Mandarin hotel, Bangkok, Thailand.

16

Soumya H V, Asso.Prof. Dept. of Ophthalmology presented a paper at International Ophthalmic Conference at Sydney, ICC organized by RANZCO- Royal College of Australia & Newzealand Ophthalmologist

17

Dr.Jayadev B. Betkerur, Professor, Dept. of Dermatology participated in Panel discussion on topical steroid abuse in SAARC countries at SARCD – 11<sup>th</sup> Conference of South Asian Regional Association of Dermatologists in Nepal

18

Dr.Poojitha.R, PG Student, Dept. of Dermatology presented a paper on Impact of Chronic urticaria on quality of life of Patients and its Association with Depressive Symptoms at SARCD – 11<sup>th</sup> Conference of South Asian Regional Association of Dermatologists 2019 in Nepal

19

Dr.Shaziya Kalam, PG Student, Dept. of Dermatology presented a paper on the Resurgene of the Great imitator at SARCD – 11<sup>th</sup> Conference of South Asian Regional Association of Dermatologists 2019 in Nepal

20

Dr.TSS Rao, Professor, Dept. of Psychiatry attended 132nd Anniversary International Medical Congress of the Sri Lanka Medical Association, as resource person for SEMINAR- Pornography & Sexuality

21

Dr.TSS Rao, Professor, Dept. of Psychiatry presented a paper titled Sexual Workshop, Male Sexual Dysfunction, Female and Sensate Focus, Neuro Bio Chemistry of Sex and Love, Complexities of Classifying Sexual Diversity, Deviance and Dysfunctions at SAARC Conference, Colombo, Sri Lanka

22

Dr. Chirag Doshi, PG Student, Dept. of Urology presented a paper on Novel technique of transurethral resection of ureteric orifice in case of obstructive uropathy secondary to carcinoma cervix at International – Urological Asian Association Congress at Malaysia and has received 1<sup>st</sup> Prize for podium presentation (oral presentation)



23

Dr. Ranjitha Shankare Gowda (M.B.B.S, M.D Medical Microbiology, Assistant Professor) has been a Visiting Scholar at The School of Public Health, University of California, Berkeley, USA. She has been recognised by the CEND ( Center for Emerging and Neglected Diseases) as a Global infectious diseases fellow under the Fogarty grant supported by NIH, USA. During her Fellowship she worked with Prof. Lee W. Riley in analysis of whole genome sequencing (WGS) of Mycobacterium tuberculosis isolates from diabetic and non-diabetic Pulmonary Tuberculosis patients.

24

Lee W. Riley in analysis of whole genome sequencing (WGS) of Mycobacterium tuberculosis isolates from diabetic and non-diabetic Pulmonary Tuberculosis patients.

Dr Smitha M C, Assistant Professor, Department of Community Medicine, JSS Medical College, attended an orientation programme at National Institutes of Health, Bethesda, Maryland, United States for the Post Doctoral Fellowship. She is Pursuing in 2019-2020

25

Dr Shilpa Avarebeel, worked at the Royal Bournemouth and Christchurch hospital, NHS trust for a year from 26 th April 2019 to June 2020 as a Registrar in Geriatric Medicine. She was sponsored by Medical training Initiative programme through Royal college of physicians, London. She has successfully completed Fellowship in Geriatric through RCP, London





## Visit of International experts to various Departments

1  
Dr. Namrita Lal, Professor and Research Chair; Medicinal Plant Science, University of Pretoria, South Africa visited Biochemistry laboratory and discussed about research collaboration.

2  
Dr. Namrita Lal, Professor & Research Chair, Medical Plant Science, University of Pretoria, South, Africa. Visited department of Pharmacology and Biochemistry and discussed about South African Botanical and a Compound for Antimelanoma and Anti-Angiogenic Activity

3  
Delegates from Scopus int. agencies visited Pathology Laboratory

4  
Dr Satish R Rao, Instructor of Medicine, Thomas Jefferson University, USA & Adjunct faculty JSS AHER visited the department to discuss the strategies to improve the activities of JSS MC students research cell and MPH programme

5  
Mr Koustav Ganguly, from Sweden visited Pulmonology Department to discuss Research Project

6  
**Prof. Dhavendra Kumar**, Director- The Genomic Medicine Foundation, Cardiff University, United Kingdom visited clinical Biochemistry Laboratory, JSS Hospital and gave a talk on Impact of human genomics in medical practice & Outcome

7  
Dr Parminder Sachadev, Scientific Prof & Co-Director, CEeBA, Eurora centre, prince of Wales Hospital, Australia and Dr Bhagyashree prof Ele & Eng ATME college of Engineering, Dr Goswamy, AIISH pro of Speech Pathology, Dr Murali visited the Department of Psychiatry to Discuss on Geriatrics & Psychiatry



Programs or

1	<p>Guest lecture on forensic odontology by Dr Murtaza Ansari, DMD, Orangeburg, USA at Board room, JSS Dental College and hospital.</p>	
2	<p>Guest Lecture on - Safe guarding vulnerable children and adult from abuse and neglect dentists role in detection and referral - Fluoride prescription for practicing dentist in India an evidence based guidance and selection of drug and dose in dental practice by Dr. Chittaranjan Chowdhury, Adjunct faculty, Professor De Monfort University, UK at JSS Dental College and hospital</p>	
3	<p>Guest Lecturer on Regenerative Endodontics by Dr Kavitha Doddamane DMD, MS., Consultant Endodontist Allen Endodontics, Texas, USA at JSS Dental College and Hospital</p>	
4	<p>SIG - Dental Cariology - Seminar and Demonstration on Translational research titled Management of Dental Fluorosis - Bleaching, direct composite veneering by Dr Chris Chen, Professional Consultant Ultradent, Taiwan at JSS Dental College and Hospital</p>	
5	<p>Guest Lecture By Dr Stephen Chu Department Of Orthodontics From Dallas, USA at JSS Dental College &amp; Hospital</p>	
6	<p>SIG - Dental Cariology - SMART Dental Caries Diagnosis and Preventive Restorations for Preschool children by Dr Prathip Phantumvanit Thammasat University, Thailand at JSS Dental College and hospital</p>	

7	<p>Guest Lecture on Special Care Dentistry in a Multidisciplinary Setting by Dr Mohit Kothari, Associate Professor, Department of Clinical Medicine, Aarhus University Hammel Neurocenter, Denmark at JSS Dental College and hospital</p>	
8	<p>Guest Lecture titled Decoding School Oral Health Program by Dr. Jitendra Ariga, Director, School Oral Health Program, Ministry of Health, Kuwait at JSS Dental College &amp; Hospital</p>	
9	<p>International Seminar on Advances in Technology QLF TM Fluorescent imaging in oral diagnostics by Dr Elbert de Josselin de Jong Director, Inspektor Research Systems BV (Ltd) Amsterdam, Netherlands at JSS Dental College and hospital</p>	
10	<p>International Guest Lecture on - Preventive strategies, Quality of life and oral health in older adults - Career pathways for students in The United States of America by Dr Ashwini Kanade Doctor of Philosophy - Communication Sciences and Disorder, Master of Arts Aging studies Graduate Certificate in Public Health - Wichita State University, Wichita Kansas, USA at JSS Dental College and hospital</p>	
11	<p>TAD'S and its clinical application in variety of malocclusion and clinical management of TMJ in orthodontics by Dr Eiji Tanaka, Professor and Chair, Department of Orthodontics and Dentofacial Orthopedics, Institute of Biomedical Sciences, Tokushima University Graduate School. Adjunct Faculty at King Abdullah University of Science and Technology Thuwal, Saudi Arabia at JSS Dental College and Hospital.</p>	

<p><b>12</b></p>	<p>Guest Lecture on Career opportunities in United States of America by Dr Rooh Afza (DDS), University of Nebraska Medical Center at JSS Dental College and Hospital.</p>	
<p><b>13</b></p>	<p>Guest Lecture on Esthetic Dentistry by Dr Les R Prasad, DDS, Cranston Cosmetic Dentistry, Cranston, USA &amp; Adjunct faculty (Dental),JSS AHER, Mysuru at JSS Dental College and hospital</p>	
<p><b>14</b> Webinar on Diagnosis &amp; Treatment Planning by Dr Eiji Tanka, Professor and Chair, Department of Orthodontics and Dentofacial Orthopedics, Institute of Biomedical Sciences, Tokushima University Graduate School. Adjunct Faculty at King Abdullah University of Science and Technology Thuwal, Saudi Arabia at JSS Dental College and Hospital</p>		
<p><b>15</b></p>	<p>Indo-Japan Multidisciplinary Symposium On Oral Oncology, Maxillofacial Trauma And Implantology by Dr Srilatha Bhargava, Vice President of SASOMI, Japan Dr. KanichiSeto, President International Foundation, Director of Oral Cancer centre Southern Tohoku Research Institute, Japan Dr. Jun Shimada, Meikai University, School of Dentistry, Sakado, Japan Dr TakahihoKanno, Japan Dr Kazutoshi Nakaoka, Yokohama, Japan Dr Yutaka Kitamura, Japan at JSS Dental College and Hospital.</p>	
<p><b>16</b> Online Webinar on Cario Innova AI in Dental imaging Enamel biomineralization &amp; Biomimetics Pathways of research in oral hygiene Pathways to oral hygiene in pregnancy by Dr Elbert de Josselin de Jong QLF Inspector, Netherland Dr Kaushik Mukherjee Research Assistant, University of Minnesota, School of Dentistry Dr Prem Sreenivasan, Adjunct Faculty, Ruttgers University Dr Stefanie Russell, Associate Professor, Dept. of Epidemiology &amp; Health promotion, NYU College of Dentistry at JSS Dental College and hospital</p>		
<p><b>17</b> Online Webinar on Salivomics by Dr Nagamani Narayana, Asso. Prof. Dept. of Oral Biology, UNMC, College of Dentistry, USA, at JSS Dental College and Hospital.</p>		



**18**

Online Webinar on Occlusal appliance to stabilize the masticatory system in centric relation by Dr Mahidhar S.A.N, Alumni of JSSDCH & Practicing Prosthodontist at JSS Dental College and hospital

### **Remote access**

Due to the COVID 19 pandemic, the learning environment has changed, class room teaching has been substituted by online teaching. Our library has a rich collection of e resources. The access to these sources is through our institution IP only. Only the faculty (i.e those who have an official jssuni email id) have the remote access facility by registering in the subscribed databases from the institution IP. The students do not have this facility at present.

To overcome this limitation, we have enabled a software 'Knimbus' which is on trial for two months. This software not only provides remote access from anywhere but from any device through its mobile app. Currently 165 faculty and students across JSS AHER are using it and the feedback is good. This software along with providing remote access, it also has federated search and uploading of our institutional repository.



Additional Credit Hours for B. Pharm Students from Namibia: A total of Eight students from Namibia and one student from Zimbabwe completed the B. Pharm course. A total of 99 Credit hours were taught during this period, which was well over the credit shortage that was mentioned by the Health Professions Councils of Namibia. After completion of the course, a certificate of completion was provided to the students by the Principal, JSS College of Pharmacy, Mysore.



### **Programs organized to achieve the goal**

Workshops/seminars/training programs conducted to improve the quality of education and Research

Guest lecture on: Synthesis and molecular modification of bioactive compounds

Dr. B K Bettadaiah senior scientist in the department of spices and flavours, CFTRI, Mysuru gave a brief lecture on " Synthesis and molecular modification of bioactive compounds " on 8th August in which he emphasized the isolation of bioactive components of spices like turmeric, ginger, mint. Dr. B.K Bettadaiah expressed, as the isolated bioactive components are unstable and irritant, they choose to synthesize these compounds in their lab

**Curcumin:** As curcumin and curcuminoids are active constituents of turmeric having neuroprotective activity but the drawback is that it has poor solubility and stability problems because of its pH, which is more than 7. In order to improve its solubility and stability they have synthesized curcumin amino acid conjugates, tetrahydrocurcumin amino acid conjugates like curcumin glycine, curcumin proline, tetrahydracurcumin glycine and tetrahydracurcuminproline which shows better neuroprotective activity on Parkinson disease by decreasing the amyloid-beta deposition.

**Ginger:** Gingerols are the active pharmacological compound which are less stable, and they degrade under heat and acidic condition to shogaols. Dr. B K Bettadaiah and his team synthesized gingerol, shogaol, aza-shogaol, and zingerone by using Eugenol as raw materials which are synthesized through Quorum-Sensing Inhibitors(QSI).

**Mint:**Mint itself is essential as flavoring agent for candies, toothpaste, tea, and cigarettes. Menthol is a major active constituent which is having cooling activity along with irritation Dr. B K Bettadaiah and his team is working on modifying that irritation effect. The resource person presented extensive research work being carried out in their lab which kindled interest in the students

Guest lecture on the topic: How to choose a research problem and Statins induced Diabetes

### **First session:**

Dr. Nandakumar. K, professor, Department of Pharmacology Manipal college of pharmacy presented a very insightful talk. The session which was on "How to choose a research problem". A handout with schematic flow chart of the steps to be followed for the same was provided. The very first question

of what is research followed by its types namely, descriptive, associative, interventional/ experimental and Quasi experimental was widely discussed. Identification of research gaps and the various inputs that should be made to solve the PROBLEM i.e., Press and media, Research expert discussion, Own observation, Brain storming sessions, Limitations of the study to be analyzed, Events that follow, Mobility parameters and collaborative research and Data organising/discussions was also discussed. Finally, fine tuning of the entire process keeping in mind Feasibility, Interest and enthusiasm, Novelty in research, Ethics and Researchable outcome was emphasized.

### **Second session**

The session started with Dr.Nandhakumar discussing on the use of Statins to induce diabetes. The focus of one of his study was related to the concept that Statins cause insulin resistance. The primary target of statins for Diabetes mellitus included pancreatic  $\beta$  cells, adipocytes and muscle cells. Therefore, their prime focus is targeting either of these pathways by replacing Statin with Phyto molecules. Invitro studies on differentiated L6 myotubules and MIN6 pancreatic  $\beta$  cells and invivo studies using high fat diet and statin treatment with 8-10 Phyto molecules are in pipeline in research carried out by Dr. Nandakumar and his team at Dept of Pharmacology, Manipal.

Guest lecture on the topic: Design and Discovery of Novel Kinesin spindle proteins (KsP) Inhibitors as Potential Anticancer Agents

Dr. Rajshekhar Karpoornath, from College of Health Science, University of Kwazulu- Natal presented a guest lecture on the topic “Design and Discovery of Novel Kinesin spindle proteins (KsP) Inhibitors as Potential Anticancer Agents”.

### **Guest lecture on: Quality Management Systems**

Mr. A G Raghu Director, Strategy & Quality control Arkgen Pharma private Ltd, Bangalore delivered a guest lecture on Quality Management Systems. He delivered a lecture on Quality management systems with an in detail discussion on contents of change control, Deviations, Out of specifications (OOS), Out of Trend (OOT), Corrective and Preventive Actions (CAPA).

He discussed the importance of the Change control, Deviation management, Reasons for deviation, Classification of deviation, Deviation Investigation. Example and Differences between OOS and OOT, Tools for OOS investigation and Related Corrective and Preventive action. He also taught about determination of Root causes. At last he concluded the seminar by giving a brief introduction on Role of CAPA in the Quality System. This seminar was attended by 33 students belonging to departments of pharmaceutical Quality assurance, Regulatory affairs, Pharmaceutics and Industrial pharmacy

Mr. A G Raghu Director, Strategy & Quality control, arkgen Pharma private Ltd, Bangalore delivered a guest lecture on “**Good manufacturing practices (GMP)**” . He delivered a lecture on the evolution of the concept GMP in the aftermath of Thalidomide disaster and the development of GMP to cGMP. He discussed the needs and necessity of the documentation, material safety data sheets, line clearance, labelling and placing of all the materials used in their designated places.. He

concluded the speech by describing about the 10 basic principles to be followed in every industry in order to maintain good manufacturing practices.

#### One Day National Seminar: **Bio printing in life sciences**

A one-day seminar was organised by JSS college of pharmacy, Mysuru in collaboration with Accreate Additive Labs, Bengaluru on “**Bio printing in life sciences**” at JSS college of pharmacy, Mysuru.

The seminar started with an audio visual of basic introduction about bio printing. Dr T M Pramod Kumar, Principal of JSSCP who is also chairman of special interest group of 3D printing, JSSCP delivered a presentation on “**Personalized medicine**” and mentioning Ayurvedic medicine as an ancient personalised medicine

He also discussed about various 3D printing technologies used for manufacturing of personalised medicine of which zip dose technology was discussed in detail. Later he emphasised on various innovations in personalised medicine like polypill, spritametc.

Dr. Ravishankar S.N, managing director of Accreate Additive Labs, Bengaluru discussed about “**breaking bio printing barriers in life sciences**” specifying revelation of bio printing technology in the field of life sciences. He concluded his talk by listing out latest researches done by universities around the globe

Around 12:15pm the session was resumed by Mr. Jitendra Singh who gave information about the manufacturing site, equipment and laboratory facilities used for bio printing in Accreate Additive Labs. The equipment used for bio printing are metal printer, 3D printer, reverse engineering scanner, UV crosslinking system etc.

Post lunch session was taken by Mr. Uma Shankar who came from the company called Dassault Systemes which is a 3D experience company that provides business and people with virtual universes to imagine sustainable innovations. They help in Improving personalised health, Reducing the risk of noncompliance.

#### **Laboratory Quality Management and Internal Audit: ISO/IEC 17025:2017 Training**

Faculty members of JSS College of Pharmacy Mysuru, were deputed to undergo “Laboratory



## Quality

Management and Internal Audit: ISO/IEC 17025:2017” training by Brainwave consultants, Chennai at Hotel Trinity ISLE, Bangalore

The training course module included basic Quality concepts, understanding management and technical requirements, documentation – structuring and developing Quality Manual / procedures, Internal Audit, Process of accreditation as per ISO/IEC 17025:2017. The training was fruitful and helped in acquiring preliminary knowledge on the process and procedure for NABL accreditation of JSS Drug Testing Laboratory, JSS College of Pharmacy, Mysuru.

The participants from JSS College of Pharmacy, Mysuru with resource persons

A report on **Case study on cGMP** Mr. A.G Raghu Director, Strategy and Quality Control Arkgen Pharma private Ltd, Bangalore delivered a guest lecture **Case study on cGMP** on 2<sup>nd</sup> August. During the first session he presented some of the video clips informative regarding the case study of the good manufacturing practice in pharmaceutical industry for maintaining the specified quality of a product. In the second session, importance of documentation in Pharmaceutical industry was taught. The following contents: documentation of QMS, records, procedure, policy, data, documentation and records. Good documentation practice [GDP] depends on ALCOA's i.e. Attributable, legible or longlasting, complete, original and accurate. At last he concluded the seminar by giving lecture on Data integrity, Data life cycle and breach of Data integrity.

One Day National Seminar: **“QbD in Analytical Method Development and Validation”** at Sri Rajendra Auditorium, JSS College of Pharmacy, Mysuru

The objective of the seminar was to bring together students, research scholars, academicians and experts on the seminar topic on to one platform to promote QbD software in analytical method development and validation. The first session was started by Mr. Narayana Patil, Marketing Manager, Waters India Pvt. Ltd. on “Modernization of Pharmacopoeia and how will your chromatography workflow benefit” and video was on monograph information

Second session was delivered by Dr. Padmakar Wagh, Head-Technical Support, Waters India Pvt.

Ltd. Bangaluru, on implementation of QbD to develop analytical methods. He presented about new types of high performance liquid chromatography and design of experiment software in analytical method development..The last session was resumed by Mr. Somashekar B. Goal-Product Specialist, who discussed about i-series plus HPLC methods and their workflow and how to develop HPLC methods by using iseries plus HPLC with inbuilt design of experiment software.

**Hands on training on eCTD was organized in collaboration with NAVITAS Life Science's Take Solutions \**



Mr. Vijaykumar Srinivasan (Associate Program Manager) Bengaluru, Mr. Bharanitharan Boominathan (Senior Implementation and Support Engineer) and Mr. Ajay (Senior Implementation and Support Engineer) gave a brief overview on how eCTD submissions happen and briefed about NAVITAS and their eCTD submission software. He also explained about the Common Technical Document and its importance in regulatory documentation submission in the Pharmaceutical industry

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Mr. Vijaykumar Srinivasan started the morning session by giving the overview of Pharma Ready eCTD software. He briefed about the need of regulatory submission, their structure and difference between the various submission formats (comparison between Paper, NeeS, eCTD formats and the ACTD formats.

He discussed on the fundamentals of eCTD & its benefits, Global perspective into the market requirements; also deliberated on various Tools and Technologies for eCTD submission and explained about the components of RIMS. A demonstration on the Pharma Ready software was made

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The session started by detailing the steps to login to the Pharma Ready website (IP address, login ID and password on the sandbox). Later, the students had a practical and interactive session, where Mr. Bharanitharan Boominathan assisted students in the filing an US submission The NAVITAS team also

expressed their support to attend the queries/ issues related to eCTD submissions for the complete learning. They also shared the stepwise procedure about eCTD submissions.

### **A Guest lecture on :Regulatory framework: Recent initiatives by Govt. of India**

A guest lecture was arranged from Dr.A.Ramkishan, Deputy Drugs Controller (CDSCO), East Zone, Kolkata on the topic **Regulatory framework: Recent initiatives by Govt. of India** \.He presented the vision and mission of the CDSCO, proceeding with the drugs definition according to D and C Act and evolution of the Indian Drug Legislation; organization of the Indian Drug Regulatory System and different departments falling under them; various roles played by the CDSCO in the perspective of Drugs and its role in various organizations. He also provided notable information on the NRA Assessment, its objectives and WHO developed assessment tool also called as Benchmarking Tool'. Levels of Maturity based on the functionality of NRA namely 1-5 levels. He also shared his experience as being a CDSCO officer and the level of integrity that is expected from the regulators viz., USFDA, WHO etc .He updated us with the current steps taken by the CDSCO for the development of Pharmacovigilance in India; importance of Patient Safety was stressed as the main part in the Global level. Recent advancements in Indian Regulations were brought to the notice like e-Governance program in India, clinical trials, new regulation in India for medical devices, upgradation of schedule M and Development of intelligence cell at the CDSCO Headquarters. Amendments made to the D & C Act and Rules 1945 i.e., the establishment of the Public Relation Office and Salient features regarding the New Drugs Clinical Trial were provided.

Guest Lecture on: Identification of P-Glycoprotein in Human and Rabbit Cornea and Its role in Restricting Ocular Drug Absorption

A guest lecture on **“Identification of P-Glycoprotein in Human and Rabbit Cornea and Its role in Restricting Ocular Drug Absorption”** at

seminar hall, JSS College of Pharmacy, Mysuru. The Speaker for the lecture was **Dr. Surajit Day**, Associate Professor, Roseman University of Health Science, Las Vegas, USA. Dr. Surajit Day gave insight on Identification of P-Glycoprotein in Human and Rabbit Cornea. He had delivered a highly impressive and detailed lecture covering topics on Anatomy of eye, Challenges in ocular drug

delivery Detailed research data related to in vivo absorption data of P-gp in the cornea, Future aspect

for designing of better ocular drug delivery system to bypass P-gp for better management of ocular diseases.

Dr. Surajit Day, Associate Professor, Roseman University of Health Science, Las Vegas, USA. giving detailed Lecture on Injectable Liposomes

Department of Pharmacy Practice, JSS College of Pharmacy, Mysuru, had organized a Guest Lecture on '**Legal and Ethical Aspects of Medicine – Interface between Law and Medicine**' at Seminar Hall of JSS College of Pharmacy. The Guest Speaker was Dr. Nataraju, Principal of JSS Law College, Mysuru.

He started off his talk by explaining difference between policies and laws and gave a brief introduction to various policies, guidelines, and laws that pertain to provision of Health care in India. He enumerated the different principles of medical ethics and duties and obligations of health care professionals towards patients and public. He spoke about the various articles in the constitution that pertain to public health like Right to Health and Environment and Right to Health and Medical Assistance with examples of case studies where the Supreme Court imposed a positive obligation upon the state to take steps for improving medical care in the country.

#### **Guest lecture on Prior Art For supporting innovative research pathways**

**Dr. N. S. Chandrashekar**, research scientist, RUSAN Pharma Pvt. Ltd. Visited the JSS College of Pharmacy Mysuru Campus, to give a guest lecture on "**Prior Art For supporting innovative research pathways**". He spoke during his lecture about the significance of "scientific company" (patent filing and patent process) compared to papers published. He spoke of the steps engaged in obtaining a patent from filing the request to the patent grant. He gave examples of other patents already on the market. First, he described us why the cover was important and why it was out of the market. He clarified to us with this instance that very imperceptible items can also be patented. He also shared his insights into an innovator's mindset and current status, as well as

the qualities a business aims from an aspiring fresher. He highlighted the significance of personal abilities that are deemed important compared to book understanding in most pharmaceutical industries.



Faculty Development Program on Student Induction, Graphic Era Hill University (GEHU), Bhimtal, Uttarakhand, India

All India Council for Technical Education organized a three day faculty development program on student induction for the teaching staff across India. About 62 participants from nearly 12 states had registered and participated. Introducing values in education is a way to reach all human beings. Human values course is an attempt to teach about values. However, for it to be effective, the teaching method is not based on dos and don'ts. For understanding of ones expectations, it would require clarity of ones goals, besides knowledge about living in family, society and nature. Apart from that other topics which were covered was about difference between competition and excellence, gratitude, anger management, peer pressure, prosperity, self confidence, relationships, identity and assumptions, naturalness and originality etc were some of the important things discussed. The overall idea of the workshop was to create self confidence among students

### **Guest lecture on Basics of Dossier compilation – CTD Format**

A guest lecture was organized by Mr Krishna Chaitanya, Asst. Manager – Regulatory Affair, Dr. Reddy's Labs, Hyderabad on the topic **Basics of Dossier compilation – CTD Format**. Mr. Chaitanya started the session by giving information about the responsibilities of regulatory Affairs personnel in drug registration, audits and other activities in the industry. He discussed about the objective

of regulatory submission, General regulatory scenario, global market segregation, stability conditions in different climatic zones, and certain mandatory regulatory requirements to be full filled by the pharmaceutical industry for filing for the market authorization approval in different countries. He explained about CTD and its organizational setup and in particular about module 3 which deals with quality aspect of the Pharmaceutical product. He shared his personnel experience as a student and also about his working experience in industry. He explained about the drug substance and drug product sections of quality module, the open and closed part of DMF submitted to regulatory authorities and the challenges faced by the pharma company during the process of approval.

### **Guest Lecture on Regulatory Status of Herbal Drugs in India – An overview**

A guest lecture was organized by Mr Nishith M.C, District Drug Inspector, Drug Control Department, Govt. of Kerala on the topic **Regulatory Status of Herbal Drugs in India – An overview**. Mr. Nishith delivered a talk on the Regulatory status of herbal drugs in India. He started the session by giving information on traditional system of medicine and its classification, organizational set up in the country and described about AYSUH which is included in The Drug and Cosmetic Act, 1940.

He highlighted few examples, defined, and differentiated the terms like misbranded drug, adulterated drug, and spurious drugs and also informed us about the provisions of regulation for manufacturing, packaging, labeling and sale of Ayurveda Siddha and Unani drugs. He explained about different rules, forms, and standards of regulations for traditional medicines and briefed about the history of herbals products.

### **Guest Lecture: The Drugs and Magic Remedies (Objectionable Advertisements) Act and Rules**

A guest lecture was organized on the topic Mrs. Mahalakshmy R. Inspector, Ernakulam, Kerala delivered a talk on “The Drugs and magic remedies (Objectionable Advertisements) act and rules”. She explained about the objectives like controlling the advertisement of drugs in certain cases, to prohibit the advertisement of remedies alleged to possess magic qualities structure of an act and about the Prohibition of advertisement of certain drugs for treatment of certain diseases, disorders, prohibition of misleading advertisements relating to drugs, ideas of offenses and

Penalties were given.

She highlighted few examples and defined the terms exempted and prohibited advertisement along with its different classes. She also informed us about the Power to exempt from application of Act and Power to make rules and the information about the Schedule and the importance of amending this act. She concluded the session by updating the students about the scope of their profession, clarifying our doubts and also advising the students to be passionate about their profession.

Guest Lecture on “Transdermal Drug Delivery System” ]

A guest lecture on “**Transdermal drug delivery system**” ] in seminar hall, JSS college of pharmacy, Mysuru. The Speaker for the lecture was **Dr.Sreenivasa Reddy**, General Manager, Formulation, INM Technology Pvt.Ltd., Bengaluru. Dr. Sreenivasa explained about basics of transdermal drug delivery system. He emphasized beautifully how transdermal patches are working currently in drug delivery and what potential they possess in order to meet the current challenges in delivering various drug molecules across the skin. He also prompted the audience to interact and discuss the challenges they use to face during their routine experimentations. The speaker also emphasized on the practices followed at the industrial scale and challenges faced in the routine operation during development of transdermal patches. All the students and faculties provided positive feedback on the talk and resolved their queries in an interactive session, at the end.

Dr. Sreenivasa Reddy, General Manager, Formulation, INM Technology Pvt. Ltd., Bengaluru explaining basics and advancement in Transderman Drug Delivery System

**Guest Lecture on “Injectable Liposomes” Held at JSS College of Pharmacy, Mysuru ]**

A guest lecture on “**Injectable liposomes**”] in seminar hall, JSS College of Pharmacy, Mysuru. The Speaker for the lecture was **Mr.Kiran K Jadhav**, AGM ,Formulation, INM Technology Pvt.Ltd., Bengaluru. Mr. Kiran gave insight on Injectable liposomes. He had delivered a highly impressive and detailed lecture covering topics on Basics of liposomes, Approved liposomes products, Liposome composition Issues in liposome formulation, How to assure quality, Manufacturing process of liposome Regulatory aspects of liposomes. All the Students and faculties, who were

present over there gave positive feedback and expressed their thanks for this wonderful lecture.

Mr. Kiran K Jadhav, AGM, Formulation, INM Technology Pvt. Ltd., Bengaluru giving detailed lecture on Injectable Liposomes

#### **Guest lecture on: SOP on SOP**

Mr. Raghu Director, Strategy & Quality control, Arkgen Pharma private Ltd, Bangalore delivered a guest lecture ] on the topic SOP on SOP. He delivered a lecture on SOP and contents of SOP in detail discussion on contents of sop as follow, Purpose, Scope, Responsibility, Definitions, Procedure, Abrevation, Related document, Annexure. He discussed the importance and necessity of the SOP in pharmaceutical industry with giving a reference with various SOP of instruments used in production and quality control department and necessity of the SOP in industry with an explanation on parts of SOP. He also taught procedure of filling SOP and he gave many examples of consequences faced without knowing or unknowingly without following the procedure of SOP.

#### **Inter Professional Education (IPE) – Academic Year 2019-20, Report of IPE on Thyroid Disorders**

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The Second Inter-professional Education for the year 2019-2020]at JSS Hospital Mysore.

The topic chosen for discussion was “**Thyroid disorders**”. A group of medical students presented the various aspects of thyroid disorders including the anatomy of thyroid gland, etiology, and pathophysiology of hypo-and hyper- thyroidism. Management of these disorders was also discussed including doses of drugs usedand monitoring of therapy. Pharmacy Practice student discussed on the adverse effects associated with thyroid drugs and their management.

College. Dr. Sneha stressed upon the diagnosis of hyperthyroidism based on clinical examinations and correlating physical signs with the laboratory data, Dr. Divakar spoke about the indications of surgery in hyperthyroidism, carcinoma of thyroid and criteria to be looked into before deciding on surgery. Dr. Hemapriya L highlighted the diagnosis and management of hypothyroidism during pregnancy and effects of untreated hypothyroidism in pregnancy affecting the foetus and the newborn. Dr. Chandrashekar addressed the issues concerning detection of thyroid disorder in new born. The discussion was followed by summarizing of key points.



### **Inter Professional Education**

Inter Professional Education for the year 2019-2020 at Lecture Hall– 1 at JSS Hospital, Mysore. Eighth term students of MBBS and Pharm D interns attended the session. The topic for discussion was Chronic Kidney Disease (CKD). Eighth term students presented various topics on CKD that included the definition, epidemiology, causes, pathophysiology, complications and treatment aspects. The Pharm D student discussed about the management of various complications of CKD which included hypertension, anemia, mineral bone disorders, hyperkalemia and importance of glycemic control. Management of each complication based on evidences from KDIGO guidelines along with its dose, advantage of one therapy over the other, treatment algorithms, newer therapies and drugs currently under trials were discussed. The treatment options were presented.

### **Two days National seminar on “Recent trends in Phytochemistry” Organised by Dept. of Pharmacognosy**

**Dr. Babu UV**, Head, Phytochemistry R & D, at Himalaya Dug Company, spoke on the topic: **“The Cutting-Edge research in Phytochemistry; For the next generation Herbal supplements”**. He explained about the importance of AYUSH in modern medicine. He then concluded his speech by mentioning about the innovative technology in identifying plants using DNA barcoding.

Speaker was **Dr. Akash Navilebasappa** A quity Labs. Pvt. Ltd. and he spoke on **“Identification natural products by liquid chromatography and mass spectrometer”**. He started off by mentioning about the importance of LC/MS and HPLC in identification of natural constituents of herbal products. He also explained about the working of various ionization sources and types of fragmentation patterns.

Speaker was **Dr. Deepak Mundkinajeddu**, Head, Phytochemistry R & D, Natural Remedies, Bengaluru and he spoke on **“Application of Phytochemistry in different areas in Herbal industry”**. His talk was initiated by mentioning about the regulatory agencies for monitoring herbal drugs in India, Korea, the U.S.A., and Europe. He explained about the product development approaches which are classified into three main types.

#### **Session 4:**

Speaker was **Dr.B. Duraiswamy**, Professor and Head, Department of Pharmacognosy, JSS College of Pharmacy, Ootacamund. He spoke on “**Natural leads in the Drug Discovery Process**”. He initiated his presentation by introducing Natural leads in drug discovery in which the success rates are based on the strategies used in extracting and isolating the sample compounds. He explained about the use of herbal remedies and the WHO reports of the turnover in the U.S.

**Session 5:**Speaker was **Dr. Hrishikesh Damle**, Founder, CEO, ATRIMED Pharma, Bengaluru and he spoke on the topic “**Advanced Computing for developing a pain killer from plants**”. He started his talk by briefing about how traditional medicine system is to be looked at. He has a different view on plants, in overall plant species, only 1% of plants are edible. He mentioned about the types of plants and its ratio which has been incorporated in human diet, about secondary plant metabolites, its importance and various toxicities associated with them.

Speaker was **Dr.K.T.Chandrashekar**, Principal Scientist, Institution of Excellence, Vijnana Bhavan, University of Mysore, Mysuru and he spoke on “**Plant: A Miracle in Human Aging research**”. He started by mentioning about the importance of plants and the root causes of aging. He also mentions about the oxidative stress which is responsible for the aging process. He then explained about the various pathways involved in aging.

Workshop on “Life Skills and Professional Skills” Held at Shri Ramakrishna Math, Mysuru

Sri Ramakrishna Ashram on occasion of 125<sup>th</sup> Anniversary of Swami Vivekananda’s Chicago address, conducted a yearlong programs for students and citizens of our country to highlight the contribution of Swami Vivekananda. In connection to this Sri Ramakrishna Ashram organized a one day workshop on “**Life Skills and Professional Skills**”.

The session started with Swami Atmanandaji Maharaj motivational speech about how we can identify our strengths and weakness’ and how to focus energy towards our goals. He emphasized on developing good professional and inter personnel skills to bring out our talents in the professional world. The next motivational speaker was Mr.D.T.Ramanujan, who has given inspiring speeches all over India and it was a privileged to have him with us. He had mentioned about 10 principles of leadership which were are Self-belief and self-love, Self confidence, Positive mental attitude, Emotional intelligence, Humanity and Humility, Empathy, Time and stress management, Creativity and problem solving ability, Conflict management

## SEMINAR REPORT

### **Dr. Habibur Rahman delivered a lecture On Lipid Based Drug Delivery System on**

He perused his undergraduate degree from JSS College of Pharmacy Ooty, post graduate degree from Ramachandra institute of higher education and research. The seminar began by giving an introduction about lipids and explained about the factors to be considered before choosing the project, explained about the research by using curcumin from turmeric and ghee. A brief introduction about the BCSclassification,interaction of excipients in the formulation.Graphical representation about the current and future trends in formulation development.

### **Dr. Krishna Kumar's visit and guest lectures, JSS College of Pharmacy - Mysuru**

Dr. Krishna Kumar , professor of Biopharmaceutics and Pharmacokinetics at the College of Pharmacy, Howard University, Washington DC and Adjunct Faculty, JSS Academy of Higher Education & Research (JSS AHER), Mysuru. He has visited JSS College of Pharmacy, JSS AHER, Mysuru, to deliver series of guest lectures in Programmatic Assessment, Curriculum Mapping and career opportunities.

Dr. Krishna Kumar delivered a talk on the topic "How to Become a Good Communicator– Civility in Work Place". Wherein, the civility of the work place, its hindrances and facilitators were discussed with case based studies.

On day two Dr. Krishna Kumar explained process of curricular mapping to the faculty at RA seminar Hall, JSS College of Pharmacy. The completed curriculum map becomes a tool that helps teachers keep track of what has been taught and plan what will be taught. He also described the process programmatic evaluation. Evaluating and improving the college performance is essential for the continuing success. Programmatic evaluation analyses the extent to which the college achieves its overall mission and goals, including research and other scholarly activities, service and practice. This is complemented by educational assessment which analyses outcomes of the program, focusing on assessment of student learning and evaluation of curricular effectiveness. Both are undertaken as part of systematic improvement efforts. In the afternoon, Dr. Krishna Kumar has travelled to Department of Clinical Pharmacy, JSS Hospital and interacted with the Pharm D Interns and Post Graduate – Pharmacy Practice students. In this one to one interaction session, Dr. Kumar spoke about career opportunities

with the Pharm D and Pharmacy Practice courses.

### CAHO (Consortium of Accredited Healthcare Organization)



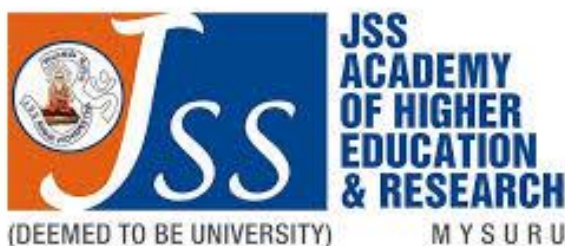
With the increasing of healthcare organizations achieving NABH, NABL and JCI accreditation, there has been a need for a common platform that will facilitate communication amongst accredited HCOs, shared best practices and provide benchmarking, while promoting and continuously improving the quality and safety of healthcare services provided by HCOs across India, in collaboration with stakeholders

The program has been designed to train the students in association with CAHO in quality and accreditation. The participants will be empowered with the knowledge and skills to handle quality and accreditation process in healthcare organizations in future.

The Program is titled "Certificate Program in Quality & Accreditation (CPQA)

- Target Audience- students from MBA Healthcare, PGDM-Healthcare, Nursing, Dentistry
- Certification will be Jointly done by both the Organizations

### Beyond the Syllabus workshop for dental interns in Collaboration with KSDC



The Department of Health System Management Studies, JSSAHER in association with Karnataka State Dental Council organised workshop for dental intern graduates across various districts in Karnataka. The workshop was carried out at 6 different districts of Karnataka where around 4000 interns were benefitted.



### **Personality Development & Communication Skills**

The Department organized a Workshop on Personality development & Communicational skills for MBA and BBA students from 29<sup>th</sup> November to 19<sup>th</sup> December 2019. The workshop was conducted by Mr. H.V.Vishvesh , Founder Director of **'ARIVU'** ,.

**'ARIVU'** follows the pedagogy of experiential learning with ideas of

- 'Knowledge & wisdom' to face the challenges of competitive employability
- Activity based learning
- Rediscovering the joy of learning





The interactions helped the students, in building self-confidence, enhancing self-esteem and improve overall personality of the participants

### **Placement Training**

A Guest lecture on the topic '**Market Data Analyst**' was jointly organized by the Training and Placement Cell of JSS College of Pharmacy, Mysuru, and **Department of Health System Management Studies, Mysuru** with the objective to conversant students registered for IQVIA campus placement, with marketing Data Analyst Position. A total of 48 Students actively participated from various Post Graduate programs, including students from MBA in Pharmacy Administration .

The speaker Mr. Bharath NK, currently working as an Associate Manager, Medical Affairs, Indigene, based in Bengaluru, was invited to share his knowledge of the designated job role and to convey his experience as an employee working in the same area



**Mr. Bharath MK, Associate Manager, Indegene, Bangalore delivering a guest lecture**

## Internships

The students of the department are encouraged to take up an internship in various health care organisations. The students work on real time projects which could pose as challenges in their future career. Various the health care organization where our students have worked as interns have been absorbed by the organisation itself.



## Interactive learning

Industrial visit program is spread across the curriculum at regular intervals where the students are taken to various health care set to understand the various organization, their approaches, mission, vision, organization plan, problems and their prospects which an administrator be aware off.



## **Students and Staff visit to various health care organisations**

Strengthening public engagement and participation in addressing the SDGs; initiating and facilitating cross-sectoral dialogue and action; ensuring higher education sector representation in national implementation; helping to design SDG based policies; and demonstrating sector commitment to the SDGs etc., are important and partnering with other universities, industries, policy makers both nationally and internationally will ensure that we achieve the SDGs.

The role of institute towards collaboration and partnership briefly

- Encourage and promote the SDGs as a topic of research within the university
- Support the full spectrum of research approaches needed to address the SDGs, including interdisciplinary and trans-disciplinary research
- Support and incubate innovation for sustainable development solutions
- Actively support national and local implementation of the SDGs
- Advocate for national support and coordination of research on the SDGs
- Support capacity building for developing countries to undertake and use research on the SDGs
- Sustainability science – or more broadly research for sustainable development – a new branch of research which seeks to understand how interactions and emergent properties between natural, social and economic systems shape sustainable development challenges, and how to create transformations towards more sustainable outcomes.
- Interdisciplinary and trans-disciplinary approaches that bring different disciplines, sectors, and types of knowledges (traditional, practitioner, expert, citizen, and so on) together to help illuminate all aspects of complex social, environmental, and economic challenges.
- Co-design and co-production approaches, which work closely with policy makers and users of knowledge from the start to define the problems, plan the research methodology, and carry out the research.
- Inclusive approaches that recognize and engage with important groups – such as women, indigenous people, and diverse cultures, worldviews, and ideologies – and forms of knowledge – such as traditional knowledge – that are often under-represented in research.
- Policy-relevant advice that uses existing knowledge and research to assist policy makers understand the implications of different policy options and design new policies.
- Students and Teachers are encouraged to participate in inter-disciplinary research and teaching with international universities.



### Activities conducted by the institution

1. PG Pharmacology Students underwent training in Department of Clinical Pharmacy, JSS Hospital, Mysuru for a period of two weeks from 1st – 15th February 2020.
2. Staff & students from Abhinav college of Pharmacy, Pune, Maharashtra visited the Department of Clinical Pharmacy, JSS Hospital, Mysuru and oriented them on Pharm. D Clerkship and Internship program on 26th February 2020
3. Basic Computer training was arranged for Lab Attenders from 16/05/2020 to 30/05/2020.
4. Lab attenders have undergone training in English & computer literacy.
5. Dr. M. Ramesh attended Investigators Meeting for TIPS 3 trial 2019 at Phnom Phen, Cambodia.
6. Team from Astrazeneca visited Department of Clinical Pharmacy, JSS Hospital, to discuss on the Placement options for PharmD graduates in Medical Affairs Division.
7. Immunization campaign (Hepatitis B – zero dose) to vaccinate the staff and students (Pharm.D, M.Pharm and Research Scholars) of Pharmacy Practice department was held at JSS hospital premises.
8. Self Study Report of Accrediation Council for Pharmacy Education (ACPE) International Service Program for Pharm.D.
9. Hosted “Nanojatha”, an initiative of IISc & Govt. of Karnataka, Bengaluru to bring awareness of Nanotechnology for school students.

## A COVID 19 Pandemic Awareness Program



A COVID 19 pandemic awareness program was organized by the Department of Oral Pathology & Microbiology on July 3rd for non-teaching staff- house-keeping, ayahs, security and attenders of JSS Dental College & Hospital. The resource person was Mr. Bopanna Pattada, life skill & sports motivator from ARIVU school. The program started with an inaugural function followed by a very informative and interactive session by the resource person and the audience. Awareness videos regarding spread of COVID 19, symptoms, precautions to be taken, preventive measures were some of the topics covered.



for **SDG 3 – Good Health and wellbeing** had strategized its efforts to support the global initiative for research to prevent the spread and impact of Coronavirus pandemic in three ways 1. Technological advancements that can support / decrease the risk to life for patients and health workers; 2. Discovery of new drugs and 3. Modelling studies that can support and predict the progress of the pandemic.

In the initiative relating to the technological advancements that can support / decrease risk to COVID infection and that will even be valuable even in post pandemic quality of life changes has developed five technologies / products that will indigenously support and make available low cost interventions / applications and be valuable to humanity. These are:

**1. Isolation – ICU on wheels** – an application that will enable the mobilising of the isolation and ICU facility to remotest site of disaster and support the golden hour of treatment in any given situation be it pandemics or disasters. With increased hospitalisation costs, isolation and intensive care may become available at homes with this new advancement.

**2. The Low-cost ventilator** – This Low cost ventilator is portable, has a disposable ambu- bag and adjustable respiratory rate, and adjustable tidal volume and provides positive end expiratory pressure (PEEP) which is not found in other low cost ventilators.

**3. Denti Safe** – an application that will ensure the practice of dentistry safe for both patients and dentists. The Denti Safe application is scientifically developed mobile device that can sterilise dental chairs and treatment areas in less than 20 minutes using a non-chemical intervention and relies on the specific wavelength of UV light that ensures the safety. The application is movable and can be used in multiple locations in a large dental hospital and will ensure the safety of patient and the dentist.

**4. Multi-Mode Air Sanitizer** – This Multimode air sanitizer has a three-step sanitisation process, UV treatment at a specific wavelength to kill the virus, Ionisation that kills all microbes including virus and lastly a HEPA filter that reduces the particulate matter in the air.

**5. Hand held UV Surface sanitiser** – This lithium ion battery operated device is a handy surface sanitiser that can be charged by a mobile charger uses UV radiation for sanitising small surfaces that are frequently used by others for example lift buttons, Key boards, Operating instruments etc. This personalised sanitiser can be carried by individuals in their pockets with ease. This will give the comfort of personal safety to individuals while using public places.

These technologies that support the patient and healthcare provider safety and well-being will be valuable even beyond the pandemic and in peaceful times. JSSAHER will continue to work on these technologies and make them more cost effective, robust, and highly efficient. JSSAHER will continue to endeavour its research initiatives that are impactful to the society and benefit humanity.

These projects were fully funded by the Research Development Fund of JSS Academy of Higher Education and Research, Mysuru and powered by Sparkle CINE the innovation arm of JSSAHER.





## Isolation-ICU on Wheels

### About JSS Academy of Higher Education & Research

JSS Academy of Higher Education & Research, is a Deemed to be University located in Mysuru, Karnataka, established in 2008 under Section 3 of the UGC Act 1956 and is part of JSS Mahavidyalapeetha, which runs a variety of educational institutions. This Deemed-to-be University is recognized by MHRD and accredited by NAAC with A+ Grade (3.48 CGPA). JSS AHER has been graded as Category-I Deemed-to-be University by UGC in the Year 2018.

The Deemed to be University has been focusing on teaching, research and health services since its inception. Under the leadership and gracious Patronage and Blessings of His Holiness Jagadguru Sri Shivarathri Deshikendra Mahaswami, the Chancellor of JSS Academy of Higher Education & Research, Pro Chancellor, Dr. Suresh, a noted multifaceted leader of repute and Vice Chancellor, Dr. Srinidhi Singh, an acclaimed leader who was the former Drug Controller General of India and former Director of National Institute of Biologics. The organization has made great progress in grooming graduates, postgraduates, and Ph.D. researchers by providing effective value based education across our institutions by focusing on overall development of an individual through state-of-art facilities to make the learner a useful citizen to the society.

In the field of innovation the institution has been ranked 4th among the private institutions in INDIA by Atal Ranking of Institutions on Innovation Achievements (ARIIA) based on the impact that the organization created with its innovation model.

The Current health crisis with the COVID outbreak requires that organizations like ours take up the lead role in developing indigenous models that can help the society and the common man by creating technologies that are reliable, effective and yet affordable. JSS AHER has always strived hard towards quality and excellence and the biomedical devices developed to combat the COVID 19 crisis is an impactful & responsible step toward touching millions of life and to create affordable medical care available to our society.



### About Ideas Unlimited, Mysuru

Ideas Unlimited, Mysuru is an R&D lab founded in 2010 focused on turning ideas into products. Ideas Unlimited specializes in defence technologies, bionics, robotics, animatronics, simulators, wearable electronic systems, medical and hospital devices, consumer electronics and more. We have developed unique model of developing ideas into products in the lab. A separate manufacturing entity, Ideas Manufacturing Mysore Private Limited - manufactures products developed at the lab. Website: [www.ideas-unlimited.in](http://www.ideas-unlimited.in)



How about a full fledged ICU reaching a sick Covid-19 patient in a remote area? "I-ICU on wheels" does it for you!

#### Salient Features

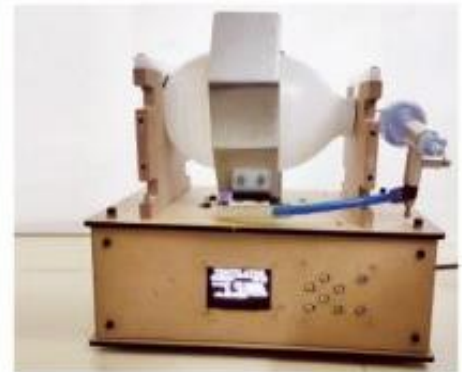
- Oxygen & Ventilator
- Critical Medication Infusion
- Patient Isolation
- Vitals monitor
- Temperature regulated cabinet
- Head end access
- Can be transported in a box and assembled on site
- ... All this on wheels!

#### Applications

Epidemics, Disaster Management and Capacity Expansion in existing hospitals.



## Low-Cost Ventilator



Low cost ventilator is the need of time during Covid-19 Pandemic!

#### Salient Features

- Portable
- Disposable AMBU bag
- Adjustable Respiratory rate
- Adjustable tidal volume
- Provides PEEP (Positive End Expiratory Pressure - Not present in other Low Cost ventilators)

## Hand-held UV Surface Sanitizer



Sanitize any surface, now in hand held form factor!

#### Salient Features:

- Chargeable Lithium Ion Battery inside
- Can use any mobile charger
- 2 Wafts of UV Radiation
- Safe Design - Master Power button

• DO NOT EXPOSE SKIN/EYES

## Proud Moments Of JSSAHER About Dr. Shalini Nalwad

### Injured engineer airlifted from Afghanistan

Described as first-of-its-kind operation in the ongoing lockdown

BENGALURU, DHNS

In an operation described as the first of its kind during the ongoing lockdown, a Bengaluru-based air ambulance service brought a critically injured Indian engineer from Afghanistan to Hyderabad. International Critical Care



The critically injured Indian engineer was airlifted from Afghanistan to Hyderabad on April 21.

The 1990 batch of JSS Medical college seem to be full of 'Wonder Women'. First it was Dr Uma Madhusudhan who exhibited courage and selflessness. Now it's Dr. Shalini Nalwad , co-founder and Director of ICATT Air Ambulance services who took upon herself to do yet another exemplary selfless act. The International Critical-Care Air Transfer Team (ICATT) picked up Hyderabad based young man who suffered Hip fracture from Bargam airport, Afghanistan in in their air ambulance and landed at the Hyderabad international airport. The man while working in Afghanistan had sustained an injury which resulted in a fracture of his hip. Bargam doesn't have facilities to treat and delaying his treatment could leave him permanently disabled or even lead to death. The injury would have led to pulmonary thrombo or fat embolism. ICCAT had to get permission from five different ministries to evacuate the patient from Afghanistan. It took them four days to do so. Dr. Rahul Singh and Dr. Shalini Nalwad both trained in UK have launched these air ambulance services in Bangalore, Chennai and Hyderabad. Dr Shalini is yet another outstanding example of courage, innovation and dedication that students at JSS Medical College, Mysuru get during their studies here. We are proud of you Dr Shalini . Keep up the good work. JSS Medical College, Mysuru is the constituent college of JSSAHER.

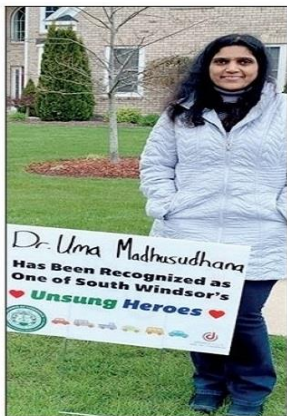
# Proud Moments Of JSSAHER About Dr. Uma Madhusudan

## *Patients give drive-by salute to Mysorean doctor in US*

**Shrinivasa M & R Uday Kumar | TNN**

**Mysuru:** Dr Uma Rani Madhusudana, a physician at the MidState Medical Centre of South Windsor Hospital in Connecticut, US, and an alumna of JSS Medical College in Mysuru, was in the headlines across the globe on Tuesday after she was honoured in front of her house with a drive-by parade of her patients who had recovered from Covid-19 and a convoy of police cars and fire engines honking and blaring their sirens in appreciation.

A video clip of the incident has gone viral on social media. Dr Madhusudana can be seen standing in her front yard and waving at the drive-by parade. While her batchmates and the medical fraternity hailed her service in the



**COVID WARRIOR:** Dr Uma Rani Madhusudana

cognise the selfless services of thousands of Covid warriors in our country who work day and night for our safety. Let us also salute them for the same," he added.

Dr TS Rekha, associate professor, department of pathology, JSS Medical College, and Dr Madhusudana's MBBS batchmate, said: "Uma used to reside in Saraswathipuram when she was in Mysuru. She pursued her primary and secondary education in Mysuru itself. She attended Marimalappa College for secondary education and had been a very dedicated, hardworking student since then."

"In her student life itself she had set a few goals. She is part of our batch's WhatsApp group of 200 members. She often shares her experience in treating Covid-19 patients with us. We are all very proud

JSS Medical College, Mysuru not only trains students to be excellent doctors but also socially responsible leaders. Dr Uma Madhusudan, 1990 batch graduate from JSS Medical Colleges is one such shining star who has made us all proud with her selfless service at South Windsor Hospital, USA. In recognition of her extraordinary service treating Corona patients in South Windsor Hospital, Dr Uma Madhusudan, was honoured this way in front of her house in USA. You can see her receiving salute!! We are proud of you Dr Uma Madhusudan and your teachers and friends from JSS Medical College, Mysuru send their greetings to you. JSS Medical College, Mysuru is the constituent college of JSS Academy of Higher Education and Research, Mysuru .

<https://jssuni.edu.in/jssaher/activities-and-events/ActivityAndEventList.aspx?&CATCODE=COVID>

## **War Against COVID 19 - Manufacturing Hand Sanitizers**

JSS College of Pharmacy, Ooty , a constituent college of JSSAHER joined hands with the district administration in the war against Coronavirus pandemic by manufacturing hand sanitizers with their expertise and capabilities. The District Collector directed the Govt. Hospital, Ooty to manufacture the hand rub sanitizer with the help of facilities and expertise of JSS College of Pharmacy, Ooty to meet the local needs.

The Department of Pharm. Biotechnology, JSS CP Ooty is preparing the sanitizer as per their current requirement of 50 L batches everyday for next one week followed by 90 L per month for next three months. These sanitizers are tested as per the recommended guidelines and only then delivered.

## **Post-Covid Rehabilitation Centre inaugurated at JSS Hospital**

### **Service par excellence!!!**

Dr. K. Sudhakar, Medical Education, Minister, Govt. of Karnataka inaugurated the Post Covid Rehabilitation Centre, at the JSS Hospital in Mysuru, in the divine presence of His Holiness Paramapujya Jagadguru Sri Shivarathri Deshikendra Mahaswamiji, on October 5, 2020. The Centre provides physical and psychological support to patients recovering from COVID-19.

## **Covid medical equipment worth Rs.51 lakh handed over to JSS Hospital by Lions Service Foundation**

The Lions Service Foundation handed over COVID medical equipment worth Rs. 51 lakhs, sponsored by the TATA Educational and Development Trust, to JSS Hospital, in the divine presence of His Holiness Paramapujya Jagadguru Sri Shivarathri Deshikendra Mahaswamiji, at the Sri Suttur Math, in Mysuru. On this occasion, the President's Civil Defence Gallantry (Shaurya) Medal Awardee Dr. PRS Chethan was felicitated by His Holiness and Dr. K Sudhakar, Minister for Medical Education. Other dignitaries from Lions Club and JSS Mahavidyapeetha were present.