



## Content

### Part I

- A. Details of research activities during the period **Jul-Sep 2017**
  - a. Total number of publications in scientific journals (in Scopus/Web of Science indexed and/or impact factor journals)
  - b. Ongoing research projects
  - c. Research and training programs conducted
  - d. Number of collaborations established
  - e. Total number of grants received
  - f. Patents applied
- B. Faculty and institution achievements
- C. Achievements by research scholars
- D. Awards and accolades

### Part II

- a. Featured Scientist of Manipal University
- b. Top publications for the period Jul-Sep 2017

### Part III

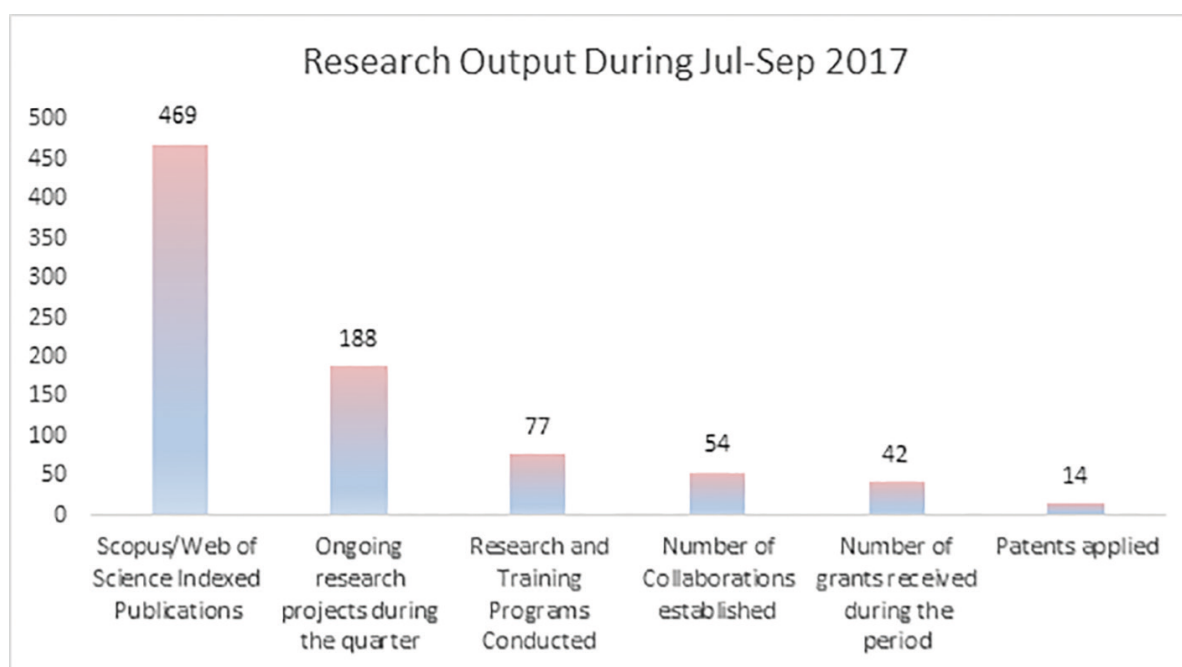
Activities of Manipal University Students' Research Forum (MUSRF)

# Part I



Manipal University (MU) is one of the premier universities in India. MU considers both academics and research, equally important for the betterment of the institution. The faculty members and the research scholars at MU have embraced the research culture. They publicize their research work in scientific publications, through presentations in various conferences, by obtaining patents and research grants, etc. In this report, we present to you an overview of the research activities by Manipal University, during the period **Jul-Sep 2017**.

## A. Details of the research activities of Manipal University for the period Jul-Sep 2017



## B. Faculty and institution achievements

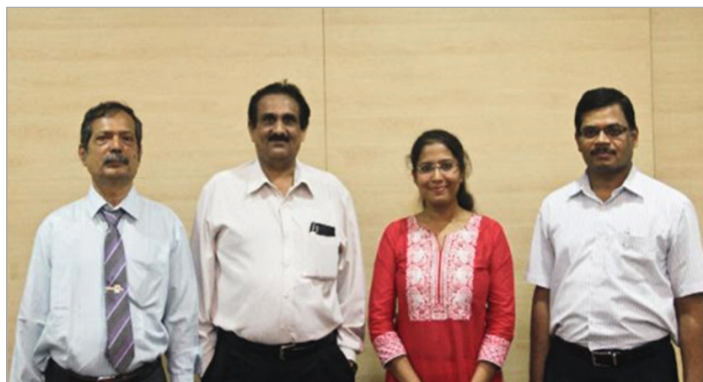
1. Dr Prasanna L C, Associate Professor, Kasturba Medical College (KMC), Manipal was sanctioned International travel grant by Science and Engineering Research Board (SERB), Govt of India to attend 23rd World Congress of Neurology 2017 organized by Japanese Society of Neurology, Asian Association of Neurology, Kene International, Kyoto, Japan from 16 to 21 September 2017.
2. Dr Shankar M Bakkannavar, Associate Professor, KMC, Manipal received travel grant towards attending and presenting a research paper titled "Correlation of cellular autolytic changes with postmortem interval" at 21st Triennial Meeting of International Association of Forensic Sciences held at Toronto, Canada from 21 to 25 August 2017.

3. Dr Ravindra Prabhu, Professor, KMC, Manipal attended Global evidence summit 2017 Cape Town, South Africa as a invitee and a member of selection committee for Kenneth Warren Award 13 to 16 September 2017.
4. Dr Girish Menon, Professor, KMC, Manipal was awarded the title "Fellow of the Royal College of Surgeons," England at an award ceremony held on 11 July 2017 at London.
5. Dr Sebestina Anita D'souza, School of Allied Health Sciences, Manipal received research grant from Indian Council of Medical Research for her Indo-Sweden research title "Managing time in dementia."

6. An Indian patent has been granted to MCOPS, Manipal University by the Indian Patent office for the invention entitled "The Compression Coated Tablet Composition for Chronotherapy of Hypertension" (Patent number 286353). The inventors are Dr Usha Y Nayak, Associate Professor, Dept of Pharmaceutics, Manipal College of Pharmaceutical Sciences, Dr N Udupa, Director Research (Health Sciences), Manipal University; Professor, Dept of Pharmacy Management, Manipal College of Pharmaceutical Sciences and Dr P D Gupta, Former Scientist, the Centre for Cellular and Molecular Biology (CCMB), Hyderabad.



7. A group of scientists lead by Dr B S Satish Rao, Professor, School of Life Sciences and his doctoral student Dr Suma Prabhu in collaboration with Dr N Udupa, Dr Srinivas Mutalik from Manipal College of Pharmaceutical Sciences, Dr Sharada Rai, KMC, Mangalore, as well as Dr Jayant Sastri Goda, Dr Pardeep Chaudhari, Mr Bhabani Shankar Mohanty from Advanced Centre for Treatment, Research and Education in Cancer (ACTREC), Mumbai have carried out an innovative investigation in the field of nanomedicine and Nanotechnology Based Targeted Drug Delivery to Brain Tumor.



8. Dr Anish Kumar Warriar, Assistant Professor (Sr Scale), Department of Civil Engineering, MIT, Manipal University, is one of the recipient of the travel assistance for the 5th PAGES Open Science Meeting (OSM) from the PAGES scientific program committee. The PAGES Open Science Meeting is a quadrennial event, wherein leading scientists and researchers from around the world come together and discuss the research on past climatic variations and its impact on the Earth's future. PAGES also supports the participation of young scientists and early career researchers from



developing countries to participate and present their research finds in this meeting. The meeting was held in Spain during 9 to 13 May 2017. Dr Warriar presented his work titled "Late Quaternary paleo-environmental reconstruction using sedimentological parameters and quartz grains from lacustrine sediments of Schirmacher Oasis, East Antarctica."

### C. Achievement by Research Scholars and Students

1. Ms Sri Lakshmi Bhavani received "John M Opitz Young Investigator Award" for the year 2017 from John Wiley & Sons for the article "Clinical and mutation profile of multicentric osteolysis nodulosis and arthropathy. American Journal of Medical Genetics, Part A 2016 Feb; 170A (2):410-7."



2. School of Life Sciences, Manipal Alumnus Mr Vishnu Mohan met Prime Minister of India at Israel as a part of student delegation during 4 to 6 July 2017 during PM's visit to Israel. Mr Vishnu was impressed by the PM's message to the youth and the short interaction left a lasting impression, as the PM explained his vision.

3. Mrs Renuka Suresh Managuli, DST INSPIRE Senior Research Fellow, Manipal College of Pharmaceutical Sciences, Manipal has been awarded Newton Bhabha Fellowship by Joint India-UK Panel for short-term PhD Placement 2016-2017 at King's College London, UK. The program is sponsored by British Council in collaboration with Department of Science and Technology (DST) and Department of Biotechnology (DBT). She is working under the guidance of Dr Srinivas Mutalik.



### D. Awards and accolades

1. Dr Apoorva Reddy, Student of Kasturba Medical College, Manipal received second prize in poster presentation Dr Samir M P, Assistant Professor, KMC, Manipal was awarded the best e-poster award for the poster titled "Common and Uncommon ankle and foot impingements" presented at the 5th Annual conference of Musculoskeletal Society (MSS) held from 15 to 17 September 2017 at The Spring Club, Kolkata.

2. Dr Jagadish Rao P P, Associate Professor, KMC, Mangaluru was awarded the BEST research paper for the E-poster titled "Congestive cardiac failure following colchicine Toxicity- a rare complication," at the 11th Annual National conference of the Indian Society of Toxicology, TOXOCON-11, organized by Indian Society of Toxicology, at Germinus Springs, Kodaikanal, Tamil Nadu from 11 to 13 August 2017.

3. Dr Meena Anand, Associate Professor, Manipal College of Dental Sciences, Manipal received best paper award for her presentation on "Geriatric oral health care" at National Conference "Indian dental research and review, Edudent" held at Bangalore, from 22 to 23 July 2017.



4. Mr Rahul P Kotian, Asst Prof SI scale, School of Allied Health Sciences, Manipal was awarded first prize in oral presentation in 4th National conference of Indian Society of Radiographers and Technologist held on 7 to 9 September 2017 at Berawtlang, Aizwal, Mizoram.
5. Ms Tatiyana Mandal, Senior Grade Lecturer in Pharmacology, MMMC was awarded Best Poster Presentation at "Golden Jubilee International Conference of Indian Pharmacological Society Southern Region," organized by the Department of Pharmacology, Mahatma Gandhi Medical College and Research Institute (MGMCRI), Puducherry held on 4 and 5 July 2017.
6. Dr Arul Amuthan, Senior Grade Lecturer in Pharmacology, MMMC was awarded Best Presentation award at FeTNA 2017 International Symposium on Traditional Siddha Medicine, organized by Federation of Tamil Sangams of North America (FeTNA) and Minnesota Tamil Sangam held between 30 June and 3 July 2017.
7. Dr Barathi S Subramaniam, Professor, Department of Physiology, MMMC was awarded Eminent Educationist at Indo-Global Education Summit and Expo 2017 held in Bangalore on 24 July 2017.
8. The Paper titled "Implementation of Various Edge Detection Filters Using Different Thread Distributions" by Hezil Dsouza, Jayashree Ballal, Pooja S, Dept of I&CT, Manipal Institute of Technology, Manipal has been awarded the Best Paper Award at International Conference on Innovative Research in Engineering and Science, Thailand, during June 2017.
9. Dr Dinesh Acharya U and Mr Roshan David Jathanna, Manipal Institute of Technology, Manipal were awarded Inspire Faculty Excellence Awards 2017 in National Level Content Guru event by Infosys Campus Connect held on 20 September 2017.
10. Dr Sampath Kumar, Associate Professor, Manipal Institute of Technology, Manipal received Rs 10.26 Lakhs grant from Science and Engineering Research Board (SERB) of the Department of Science and Technology (DST) under "Fast track scheme for young scientists."
11. Dr N S Mohan, Professor, Manipal Institute of Technology, Manipal has won the Certificate of Appreciation at the International Joint Conference on Science and Technology (IJCST) held at Nusa Dua, Bali, Indonesia on 28 September 2017.



## Part II



### A. Featured scientist of Manipal University

#### **G Arun Maiya**

Associate Dean and Professor, School of Allied Health Sciences

Dr Arun Maiya completed his Diploma in Physiotherapy (1990), Bachelor of Physiotherapy (1997), MPT (1999), and PhD Diabetic Foot (2004), from KMC, Manipal. Soon after his post-graduation, he joined the Department of Physiotherapy, KMC, Manipal as Assistant Professor in the year 1999. Since then, he has served the institution in various academic and administrative positions as head of the department and Associate Dean. In addition, he served as the Associate Director, Alumni Relations Manipal University and was awarded with prestigious Dr TMA Pai Endowment Chair in Exercise Sciences and Health Promotion. Currently, he is leading the prestigious research grant funded by World Diabetes Foundation (WDF) “Diabetic Foot care: Stepping ahead as Chief of Diabetic foot clinic and Chief Co-ordinator for Centre for Diabetic Foot care and Research, Manipal University, Manipal. Dr Maiya also participated and completed Synergic Manipal Integrated Leadership Engagement (SMILE) program conducted by Manipal University.



He has published more than 126 research articles including three systematic reviews in peer reviewed indexed journals. He is the Principal Investigator/Co-Investigator for many research projects funded by Indian Council of Medical Research (ICMR), Ministry of Health and Family Welfare, Govt of India, Bangalore Bio Innovation centre, Govt of Karnataka, International Training and Research in Environmental and Occupational Health-National Institutes of Health (ITREOH-NIH), USA, Department of Biotechnology, Ministry of Education Iran, Department of Scientific and Industrial Research, Board of Research in Nuclear Sciences, World Diabetes Foundation. He is the external expert for ICMR extramural research projects and a recognized PhD Guide. He is the member of National Assessment and Accreditation Council (NAAC), University Grant Commission (UGC) and Board of Studies and Advisory members of Universities in India and Malaysia. He is the recipient of fellowships from Sparkman Centre for Global Health, the University of Alabama at Birmingham School of Public Health, USA, UK-India Education Research Initiatives (UKIERI), Clinical Fellowship in the field of rehabilitation and Diabetic Foot at Nice-Antipolis University, France, Expert member in consensus meeting on “ICF Core Sets for Head and Neck Cancer” a joint project between Ludwig-Maximilian University of Munich, Germany, World Health Organization at Notwil, Switzerland and Central Bureau of Health Intelligence, and Ministry of Health and Family Welfare Government of India for ICF.

An excerpt from what Dr Maiya said:

“When I started my career as a teaching faculty immediately after post-graduation, due to my keen interest in diabetic foot, I registered for PhD and also submitted grant proposal for Indian council of medical

research and was successful in procuring grant. Later I started collaborating with other researchers from clinical specialties especially in the field of orthopaedics, cardiovascular surgery, oncology, medicine, and surgery. Initially there were few hindrances that I had to face, but somehow, I managed them. We then initiated a research mentorship program in the institution for postgraduate students and were successful in incorporating research into both undergraduate and postgraduate programs. This has led to increase in student's conference presentations and publications in journals of repute. Since beginning, I had a strong belief in collaborative research work and working together with people as a team, whether it was interdepartmental, inter-institutional, or international."

Dr Maiya is of the opinion that young researchers should emphasize on inculcating the best practices in research and look at entrepreneurship and innovative projects also. His plans include collaboration with international and national institutes of repute especially in the field of diabetic foot and convert the centre as "centre of excellence." He wishes to mentor young PhD scholars, thereby enhancing quality research and scientific publication.

Talking about MU research bulletin, he said, "MU Research bulletin is an excellent platform for giving opportunity to research and researchers of MU and also to strengthen the interdisciplinary research."

## B. Top publications for the period Jul-Sep 2017

Title of the Publication	Author Name (Manipal University Affiliated)	Institution	Department	Journal	Month and Year of Publication	1-Yr Impact Factor
The promise of discovering population-specific disease-associated genes in South Asia	Nathan Nakatsuka, Dr Girisha K M, David Reich, Kumarasamy Thangaraj, Sri Lakshmi Bhavani G, Dr Satyamoorthy Kapaettu, Dr Saadi Abdul Vahab	KMC, Manipal, Harvard Medical School, Boston, Massachusetts, USA, Harvard Medical School, Boston, Massachusetts, USA, CSIR-Centre for Cellular and Molecular Biology, KMC, Manipal, School of Life Sciences, School of Life Sciences	Department of Genetics, Department of Medical Genetics, Department of Genetics, CSIR-Centre for Cellular and Molecular Biology, PhD, Biotechnology, Biotechnology	Nature Genetics	Sep	27.959





<b>Title of the Publication</b>	<b>Author Name (Manipal University Affiliated)</b>	<b>Institution</b>	<b>Department</b>	<b>Journal</b>	<b>Month and Year of Publication</b>	<b>1-Yr Impact Factor</b>
Use of the GeneXpert tuberculosis system for HIV viral load testing in India	Madlen Nash, Dr John Thomas Ramapuram, Ramya Kaiya, Sophie Huddart, Madhukar Pai, Dr Shrikala Baliga	McGill University, KMC, Mangalore, KMC, Mangalore, McGill University, KMC, Mangalore, McGill University	Department of Microbiology and Immunology, General Medicine, Microbiology, Department of Microbiology and Immunology, Department of Epidemiology, Microbiology	The Lancet Global Health	Aug	17.686
Fast Transport of Water Droplets over a Thermo-Switchable Surface Using Rewritable Wettability Gradient	Theneyur Narayanaswamy Banuprasad, Thamarasseril Vijayan Vinay, Cherumannil Karumuthil Subash, Soney Varghese, Dr Sajan D George, Subramanyan Namboodiri Varanakkottu	National Institute of Technology, Calicut, National Institute of Technology, Calicut, National Institute of Technology, Calicut, National Institute of Technology, Calicut, Department of Atomic and Molecular Physics (DAMP), MU, National Institute of Technology, Calicut	School of Nano Science and Technology, School of Nano Science and Technology, School of Nano Science and Technology, School of Nano Science and Technology, CAMP, School of Nano Science and Technology	ACS applied materials and interfaces	Sep	7.504
A polymeric temozolomide nanocomposite against orthotopic glioblastoma xenograft: Tumor-specific homing directed by nestin	Suma Prabhu, Jayant Sastri Goda, Dr Srinivas Mutalik, Bhabani Shankar Mohanty, Pradip Chaudhari, Dr Sharada Rai, Dr Nayanabhirama Udupa, Dr Satish Rao B S	School of Life Sciences, Tata Memorial Centre, Manipal College of Pharma Science, Tata Memorial Centre, Tata Memorial Centre, KMC, Mangalore, Manipal College of Pharma Science, School of Life Sciences	PhD, Advanced Centre for Treatment, Pharmaceutics, Advanced Centre for Treatment, Advanced Centre for Treatment, Pathology, Pharmacy Management, Radiation Biology and Toxicology	Nanoscale	Aug	7.367

<b>Title of the Publication</b>	<b>Author Name (Manipal University Affiliated)</b>	<b>Institution</b>	<b>Department</b>	<b>Journal</b>	<b>Month and Year of Publication</b>	<b>1-Yr Impact Factor</b>
Amikacin Inhibits miR-497 Maturation and Exerts Post-ischemic Neuroprotection	Mr Shaik Mohammad Abdul Fayaz, Sinoy S, Charles K D, Suvanish V K, Josef P Kapfhammer, Rajanikant G K	MIT Manipal, NIT Calicut, NIT Calicut, University of Basel, NIT Calicut	Biotechnology, Biotechnology, Biotechnology, Biotechnology, Department of Biomedicine, Biotechnology	Molecular Neurobiology	Jul	6.19
Later school start times for supporting the education, health, and well-being of high school students (Review)	Robert Marx, Emily E Tanner-Smith, Colleen M Davison, Lee-Anne Ufholz, John Freeman, Ravi Shankar, Lisa Newton, Robert S Brown, Alyssa S Parpia, Ioana Cozma, Shawn Hendrikx	Vanderbilt University, Vanderbilt University, Queen's University, University of Ottawa, Queen's University, Toronto, Manipal-University Office, District School Board, Toronto District School Board, Queen's University, Queen's University, Western University	Department of Human and Organizational Development, Peabody Research Institute, Department of Public Health Sciences, Health Sciences Library, Social Program and Evaluation Group, Statistics, Research and Information Services, Research and Information Services, Department of Public Health Sciences, Department of Public Health Sciences, Western Libraries	Cochrane Database of Systematic Reviews	Jul	6.124
A parametric reconstruction of the deceleration parameter	Dr Abdulla Al Mamon, Sudipta Das	Manipal University Office, Visva-Bharati	Natural Sciences, Physics	European Physical Journal C	Jul	5.331

## Part III

### Manipal University Students' Research Forum (MUSRF)

#### 1. "Summer Training Program-2017"

The program was organized through Manipal University Students' Research Forum (MUSRF), under the aegis of Directorate of Research (DoR), MU, Manipal from 18 to 24 August 2017. The training program involved three different modules under the categories, namely; Health Sciences, Technical Sciences and Basic Sciences. The Health Sciences Module was held at KMC, MU, Manipal on 18 and 19 August 2017; the Technical Sciences Module at MIT (Manipal Institute of Technology), MU, Manipal on 21 and 22 August 2017, and the Basic Sciences Module at School of Life Sciences, MU, Manipal on 23 and 24 August 2017.

The training program was inaugurated on 18 August 2017 by the respected Vice-Chancellor of MU, Dr H Vinod Bhat, in the presence of Pro-Vice Chancellor (Health Sciences), Dr Poornima Baliga, Pro-Vice Chancellor (Technical Sciences), Dr G K Prabhu along with Dr N Udupa, Director-Research, Health Sciences and Dr Satish Shenoy B, Director-Research, Technical Sciences. The training program of Health and Technical Sciences involved lectures by eminent faculties of MU, Manipal and the Basic





Sciences Module included a workshop along with the lectures on Recombinant DNA Technology. The themes under the Health Sciences Module included Infectious Diseases and the Progress towards the Awareness along with Oral Manifestations of Systemic Diseases. The themes under the Technical Sciences Module included Artificial Intelligence and Healthcare; Cryptography and Advances in the age of Quantum Computing, Embedded Systems, and the Internet of Things (IOT); Advancements in Hardware: GPU's and Parallel Computing; Nanotechnology and its Applications in various Disciplines; Tribology; Bioinformatics; Big Data Analytics and Applications; Energy and Energy Systems; Biomechanics and Haemodynamics; Earthquake Engineering and Concrete Technology; Biofuels; Process Intensification; and Printed Electronics. The themes under the Basic Sciences Module included Description of Cloning Technology; Bacterial Transformation; Plasmid Characterization; Restriction Digestion; Polymerase Chain Reaction; Gene Cloning; and TA Cloning. In total, the Summer Training Program-2017 involved the participation of 58 students (UGs, PGs, and Research Scholars) within and outside MU.





### **Editorial Team**

1. Dr N Udupa, Director Research (Health Sciences)  
Manipal University, Manipal
2. Dr Satish Shenoy, Director Research (Technical)  
Manipal University, Manipal
3. Dr Raghu A R, Deputy Director Research (Health Sciences)  
Manipal University, Manipal
4. Dr Santhosh K V, Deputy Director Research (Technical)  
Manipal University, Manipal
5. Dr Rekha R Shenoy, Associate Professor,  
Department of Pharmacology, Manipal College of  
Pharmaceutical Sciences, Manipal University, Manipal
6. Dr Manthan D Janodia, Associate Professor,  
Department of Pharmacy Management, Manipal College  
of Pharmaceutical Sciences, Manipal University, Manipal