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Part I

Manipal University (MU) is one of the premier universities in India. MU considers both research and academics as equally important for the betterment of an institution. The faculty members and the research scholars at MU have embraced the research culture and publicize their research works in scientific publications, through presentations at various conferences and obtaining patents, research grants, etc. In this report, we present to you an overview of the research activities of the Manipal University held during Jan-Mar 2015.

A. Details of Research Activities of Manipal University during Jan-Mar 2015

SI No.	Research Activities	Total no
1	Publications in Indexed Journals	336
2	PhD degrees awarded	10
3	Ongoing Research Projects	265
4	Research and Training Programs	25
5	Collaborations established	33
6	Grants received	31
7	Papers presented in conferences	409
8	Total Conferences/Seminars/Workshops conducted	82
9	Patents applied	03

B. Manipal Research Colloquium 2015

A three-day Manipal Research Colloquium was hosted by Manipal University from Apr 6 to 8, 2015. The event was organized under the aegis of Directorate of Research, MU with an objective of bringing together all the researchers of various institutions of MU to a common forum to discuss and share their research work. The faculty members, research scholars, the post graduate and under graduate students from various MU campuses like Dubai, Jaipur, Sikkim, Nepal and Malaysia including Manipal attended, presented posters, and participated in oral presentations. Approximately, 96 poster and 80 oral presentations (Health Sciences and Technical) were made by the participants. About 90 research scholars presented their research work on various topics. Besides, eight eminent speakers delivered plenary lectures on various topics related to Health and Technical Sciences. By and large, the colloquium immensely benefited all the participants.



A team of Springer Publications, an internationally reputed publication house, conducted a half-day workshop on publication of articles in scientific journals for the benefit of participants. A team from Philips conducted a half-day workshop on intellectual property rights and patents. Large number of participants had registered for both the workshops.

Dr K Ramnarayan, Vice Chancellor, MU, inaugurated the Manipal Research Colloquium. Dr H Vinod Bhat, Pro Vice Chancellor, and Dr V Surendra Shetty, Pro Vice Chancellor, MU, were the guests of honour. The valedictory function was held on Apr 8, 2015. The chief Guest Dr G K Prabhu, Registrar, MU, awarded the prizes to the winners of poster and oral presentation.

The details of the winners of Health Sciences and Technical for oral presentations are given below:

Health Sciences

Prize	Title	Authors
First	The clinicopathologic spectrum of 20 cases of Fibromatosis – Interesting facts about rare tumour	Radha R Pai, Deepa Adiga, Hema Kini, Pooja KS, Janardhan Aithal, S U Kamath
Second	Investigation of Epigenetic Mechanisms During Inflammation Induced Vascular Insulin Resistance	A Balakrishnan, K Satyamoorthy, M B Joshi
Third	Integrated Analysis of Common Genetic Variants Can Determine Significant Risk of Type 2 Diabetes and Therapeutic Response to Metformin and Sulfonylurea Therapy	Nagaraja M Phani , Padmalatha S Rai, Prabha Adhikari, Shivashankara K Nagri, Sydney C D'Souza, Gopinath P Mundyat, Kapaettu Satyamoorthy



Technical Sciences

Prize	Title	Authors
First	Biodegradable Nano-materials for sustained release of drugs for inflammation	Bharath Raja Guru, Madiha Ahmad and Anusha Prabhu
Second	Validation of Feature Based 3D Reconstruction of Scoliotic Spin	Sampath Kumar, K Prabhakar Nayak, Hareesha K S
Third	Automatic Analysis of Breast Cancer	Dayakshini et al.

C. Faculty Achievements

Judges' Choice Award won by Faculty of Architecture, Manipal University

Ar Pradeep Kini , Associate Professor, Faculty of Architecture, MU, proposal on "COFA: Climate Optimized Fenestrations for Buildings in Developing Nations", won the Judges' Choice Award in the 2014 MIT Climate Co Lab "Buildings" contest conducted by Massachusetts Institute of Technology, Cambridge, USA. The research proposal discussed the impacts of rapid urbanization and how energy efficient building envelopes can be used to combat climate change in developing nations. He received the award at the Crowds and Climate Conference: From Ideas to Action held at Massachusetts Institute of Technology, USA from Nov 5 to 7, 2014. He also presented a paper in the conference.

Best Paper Awards

1. Dr Lewlyn L Raj Rodrigues and Mr Mahesh Prabhu won the Best Paper award for the paper "The Advantages of Just in Time (JIT) Supplies from a Supplier – A System Dynamics Simulation Analysis" at the 29th International Business Research Conference held in Sydney, Australia on Nov 24 and 25, 2014.
2. Dr Hareesha K S, Sampath Kumar and Dr Prabhakar Nayak received Best Poster Award for "Validation of futures based 3D reconstruction of scoliotic spine" from Manipal University for the Year 2014 – 15.



3. Dr Adarsh S, Assistant Professor, Department of E&E, Manipal Institute of Technology, received Excellent paper award for the paper titled “Increasing the efficiency of a PV system using dual axis solar tracking” in the 11th IRF International Conference (ICECSME – 2015) held in Bangalore on Feb 15, 2015.

Best Research Paper Award

Dr Swati, Reader in Periodontology received Dr T M A Pai Gold Medal for the Best Research Paper for the year 2014 on March 13, 2015.

Fellowship from World Business Institute

Dr H C Shiva Prasad, Professor, Department of Humanities and Management, was awarded fellowship from World Business Institute, Australia on March 1, 2015.

Erasmus Mundus Scholarships

Name	Designation/occupation and Institute of MU	Level of mobility	Destination
Neeta Inamdar	Professor and Head – Department of European Studies (DES)	Faculty	HSB Bremen
Smita Nayak	Associate Professor – Manipal Institute of Management (MIM)	Postdoc	ESB Reutlingen
Shubha H S	Assistant Professor – SOC	PhD	HSB Bremen
Divya Rani Pradeep	Student of MA, European Studies – DES	Masters	HSB Bremen
Akash Poovath	Student of MA, European Studies – DES	Masters	HSB Bremen
Rahul Wagh	Student of MA, European Studies – DES	Masters	HSB Bremen
Sanjay Pawar	Student of MA, European Studies – DES	Masters	ESB Reutlingen

Other Erasmus Mundus Scholarship

Name	Designation/occupation and Institute at MU	Level
Varsha Chawla	Student of MA, European Studies – DES	Masters

Part II

Board of Management, MU, had approved the establishment of Dr T M A Pai Endowment Chairs for the research and education in 2012 under the aegis of Dr Ramdas M Pai, Chancellor, MU. The Endowment chair facilitates research promotion activities and conduct programs like symposia, workshops, read and share sessions, etc., to keep the academicians and scholars updated with the latest development.

A. Recent Dr T M A Pai Endowment Chair recipients

Sl No	Name of Dr T M A Pai Endowment Chair	Name, Designation and Institution of the awardees
1	Emerging Tropical Bacterial Diseases	Dr Chiranjay Mukhopadhyay Professor, Department of Microbiology Kasturba Medical College, Manipal
2	Clean Energy	Dr Ashok Rao Professor and Head, Department of Physics Manipal Institute of Technology Manipal

B. Featured Scientist of Manipal University:

*Dr G Arun Kumar, Professor and Head,
Department of Virology, Manipal University*



Dr T M A Pai endowment chair gave unique opportunity to work in the selected field i.e., translational virology and at the end of the second year, Dr Arun Kumar and his team established a unit for translational work which involved creating and strengthening a system for antiviral screening and development of diagnostic assays. Dr Arun's projects are listed below:

a. Collaboration with Centers for Disease Control and Prevention (CDC), Atlanta, USA for the research project "Surveillance of Acute Febrile Illness (AFI) in Western Ghat region of India". This is a five-year project initiated in 2013 to identify the aetiology of AFI in India and to study its epidemiology in order to inform the policy for case management and prevention.

b. Collaboration with Public Health England through the UK India Education and Research Initiative (UKIERI) Tri later partnership (TRIP) mobility grants "Conduct research and training in public health virology" which is focused on research in Haemorrhagic Fever Viruses.



This project involves student mobility from Department of Virus Research (DVR) to UK and vice versa.

c. Collaboration with Department of Epidemiology, school of Public health the UK India Education and Research Initiative (UKIERI) Tri later partnership (TRIP) mobility grants "Conduct research and training in public health virology" which is focused on research in use of Geographical Information system (GIS) in arbo-viral epidemiology. This project involves student mobility from DVR to USA and vice versa.

d. Collaboration with Department of Virology, University of Lille-2 through International University Lille-2 mobility grant, involving research on Entero virus pathogenesis. A student is doing part of her PhD work at the University of Lille-2 under this collaboration.

e. Collaboration with Health Services of district, state and nation for providing laboratory support for disease surveillance and outbreak investigation.

When asked about his journey, Dr Kumar said, "We have started exploring the fields of scientific research and gradually entering into scientific publication. Patents may be applied in the future. Aspiring scientists should think out of the box, adopt interdisciplinary approach to translate knowledge and be more open, sensitive and responsive to people's needs." His plans include:

- a. Generating evidence to inform Public Health Policy in order to prevent and mitigate viral diseases in India
- b. Working towards global health security through early detection of emerging infections, coordinating evidence based public health response and support implementation of preventive measures.



In a short span of time, DVR has emerged as one of the best public health laboratory in India not only for viral diseases but also as a centre of excellence in infectious disease diagnosis especially for Acute Febrile Illness and Emerging Viral Diseases. DVR currently hosts DHR/ICMR Grade-1 Virus Diagnostic laboratory, IDSP Regional laboratory for Influenza Viruses and the NVBDCP Apex Referral Laboratory for arbo viruses supported by Ministry of Health and Family Welfare, Govt of India. This is one of the best public private partnerships in public health sector of India. DVR has initiated a postgraduate course in Clinical Virology and given opportunities to many young researchers, thereby facilitating work force development in the field of Virology in India. DVR provides public health services to the region (Kerala, Karnataka and Goa) regularly and nationally, whenever it is required.

A. Manipal University Students' Research Forum (MUSRF)

Activities by MUSRF during Jan - Mar 2015

Transcendence 2015 held on Feb 26, 2015

MUSRF held its first event for the year 2015, 'Transcendence' on Feb 26, 2015 at MCOPS (Manipal College of Pharmaceutical Sciences), Manipal University.

The event primarily focused on seven landmark research projects of the year 2014. Seven teams (of three members each) gave presentations and exhibited the models of the projects. Each presentation was followed by a three minute question and answer session.

The judges of the event were Dr N Gopalan Kutty, Professor, Department of Pharmacology, Manipal College of Pharmaceutical Science, MU, Manipal and Dr B H S Thimmappa, Professor and Head, Department of Chemistry, Manipal Institute of Technology, MU, Manipal.

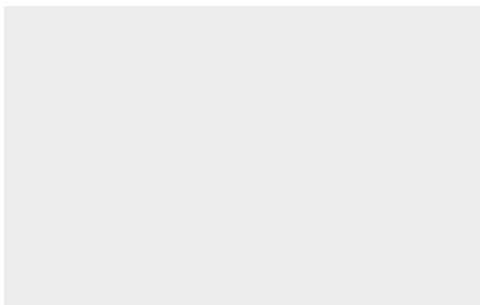
The presentations were interesting, informative and interactive.

The following teams won:

- First Prize : Ms Khushboo Agarwal, Mr V Siddharth, Mr Kartik, Kasturba Medical College, MU, Manipal
- Second Prize: Mr Aadarsh Mehndiratta, Mr Fateh Singh Aurora, Mr Mayank Gupta, Manipal Institute of Technology, MU, Manipal
- Third Prize: Mr Anant Kakar, Ms Anna Kovilakanth, Mr Abhineet M, School of Life Sciences, MU, Manipal

Student Research Poster Competition during April 6 to 8, 2015

The Student Research Poster Competition (SRPC) was organized by Manipal University Student Research Forum (MUSRF). This was a



three-day poster competition for the student researchers from various scientific disciplines of Manipal University. The competition was a part of Manipal Research Colloquium.

The categories for the poster competition were:

1. Health Sciences (HS)
2. Pharmaceutical Sciences (PS)
3. Life Sciences (LS)
4. Technical Sciences (TS)
5. Humanities, Management, and Social Sciences (HM)

SRPC witnessed 120 posters during the three-day event where the students from undergraduate courses, postgraduate courses and the research scholars participated and showcased their projects.

The prize-winners for various categories were:

Health Sciences

Prize	Title	Authors
First	Role of Protein Supplementation in Modulating the Sperm Genetic Integrity	Sooryagayathri Neeliyath, Shubhashree Uppanagala, Guruprasad Kalthur, Satish kumar Adiga
Second	Gold Nanoparticles for the Rapid and Sensitive Detection of Adenosine Deaminase Activity in Body Fluids	Sambit Dash, V Siddharth, Dr Pragna Rao
Third	Digit Ratio as an Index of Personality and Behavioural Differences	Nuthari Haniffa, Valinie Rajapoopathy



Technical Sciences

Prize	Title	Authors
First	3D Biomedical Modelling of Human Spine and Deformity Quantification	Renish Elroy Martis, Sampath Kumar, Dr K Prabhakar Nayak
Second	Adsorptive Decolouration of Methyl orange Using CuO/ZnO - Nanocomposites	Samvit G Menon, K S Choudhari, Suresh D Kulkarni, Santhosh Chidangil
Third	Preparation and Characterization of Mixed Self-assembled Monolayer (SAM) for Biomolecule Immobilization	Jijo Lukose, Vinaya Kulal, Assefali Bankapur, Santhosh C, Rajeev K Sinha

Pharmaceutical Sciences

Prize	Title	Authors
First	NDM-1 Gene: An Emerging Threat	Ayush Kumar, Sneha B Mahida
Second	Effect of Vitex negundo Aqueous Extract on Induced Endometriosis in Sprague Dawley Rats	Nupur Agarwal, Shabari Anandh J V, Syed Musharraf, Arul Amuthan, Revathi P Shenoy
Third	Drug Recycling	Mayura Das, Oendrila Das

Humanities and Management

Prize	Title	Authors
First	A Study on Mental Health Awareness among Urban and Rural Population	Shobana Sivaraman



Editorial Team

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