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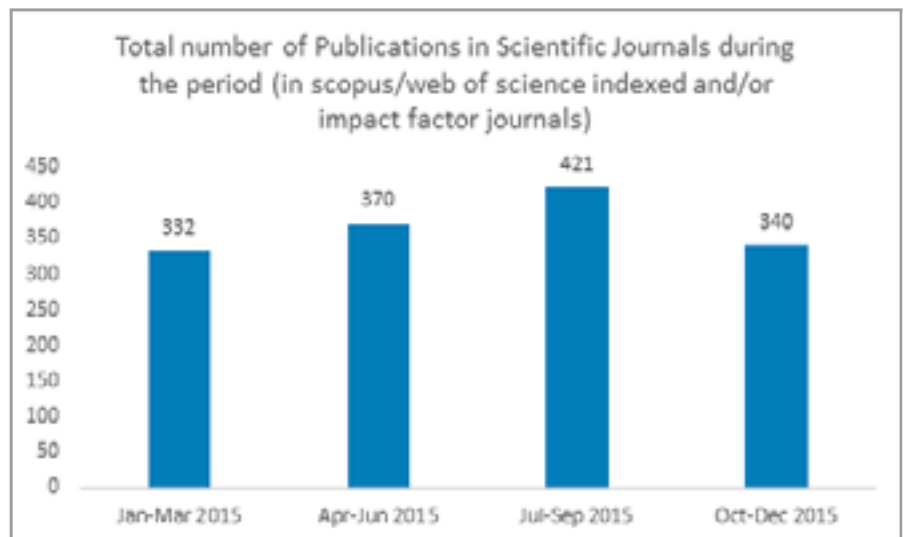
Activities of Manipal University Students' Research Forum (MUSRF)

Part I

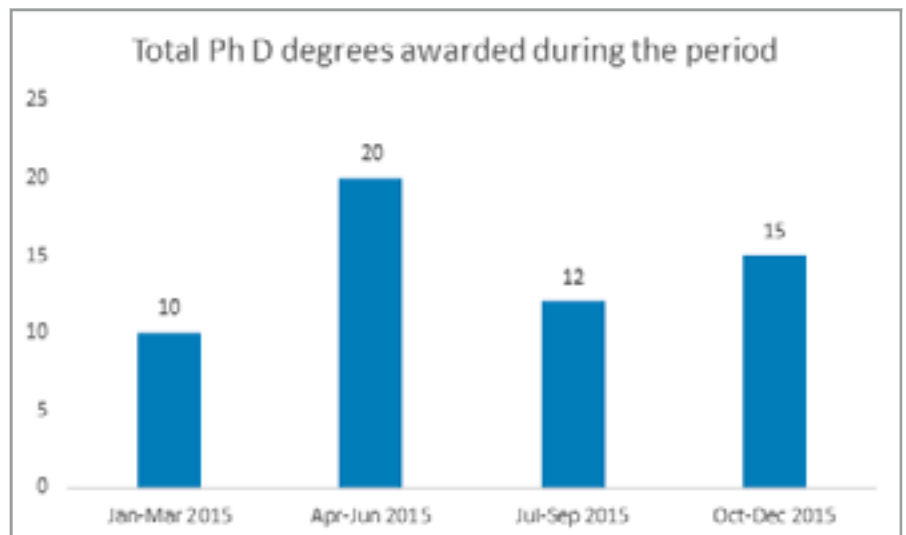
Manipal University (MU) is one of the premier universities in India. MU considers both academics and research equally important for the betterment of an institution. The faculty members and the research scholars at MU have embraced the research culture and publicize their research works in scientific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

A. Details of Research Activities of Manipal University during Oct-Dec 2015

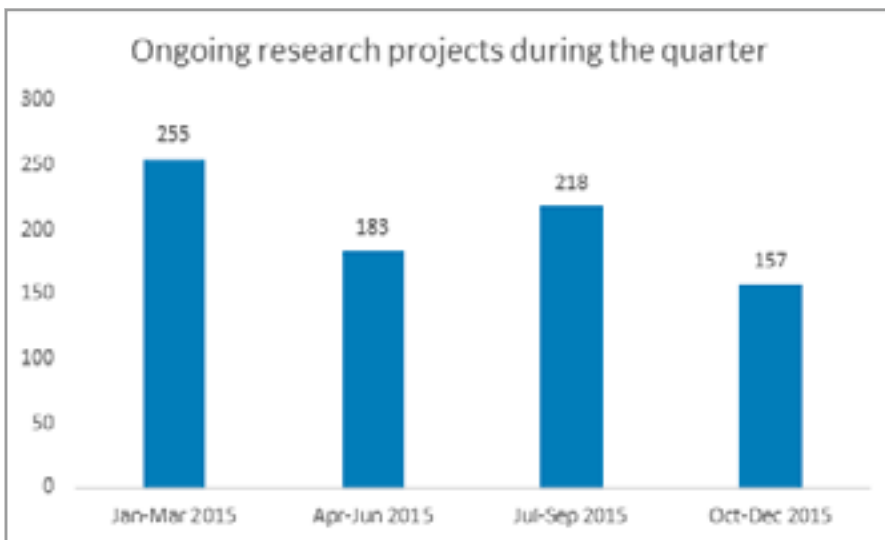
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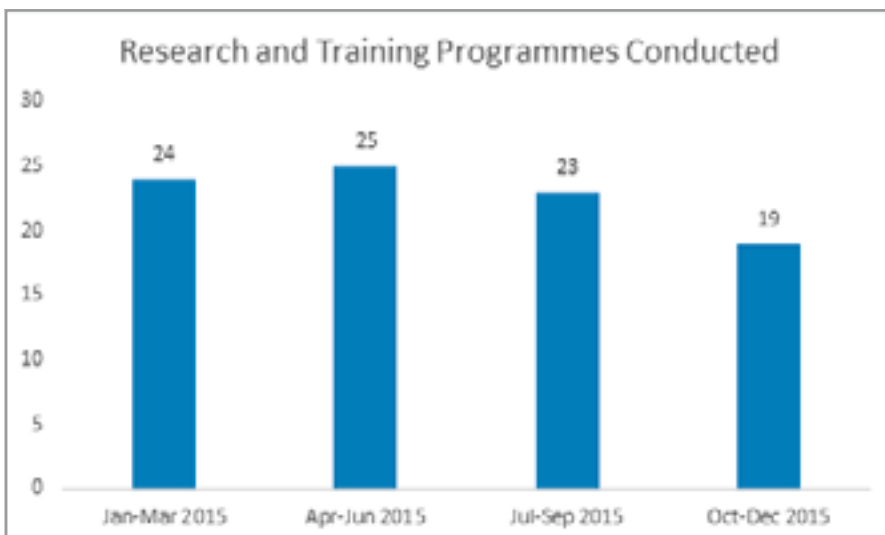
b. Total number of PhD degrees awarded



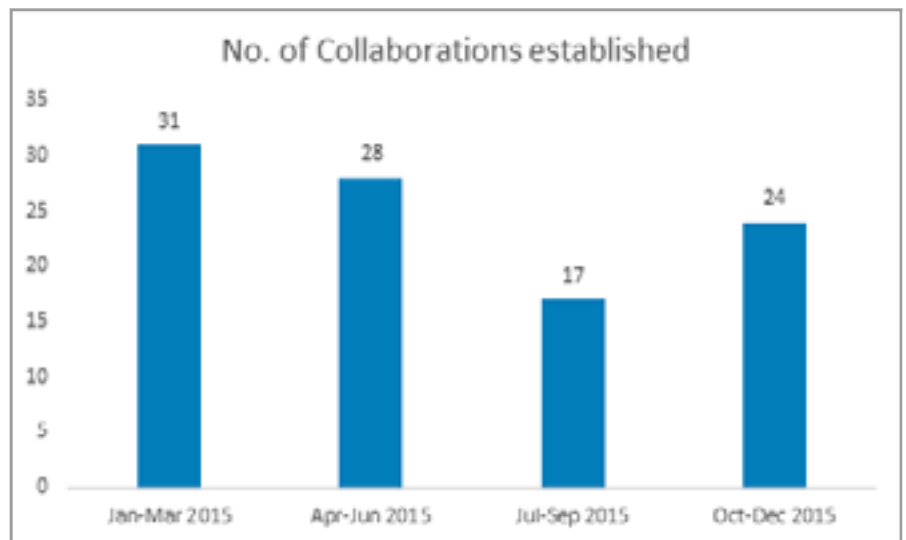
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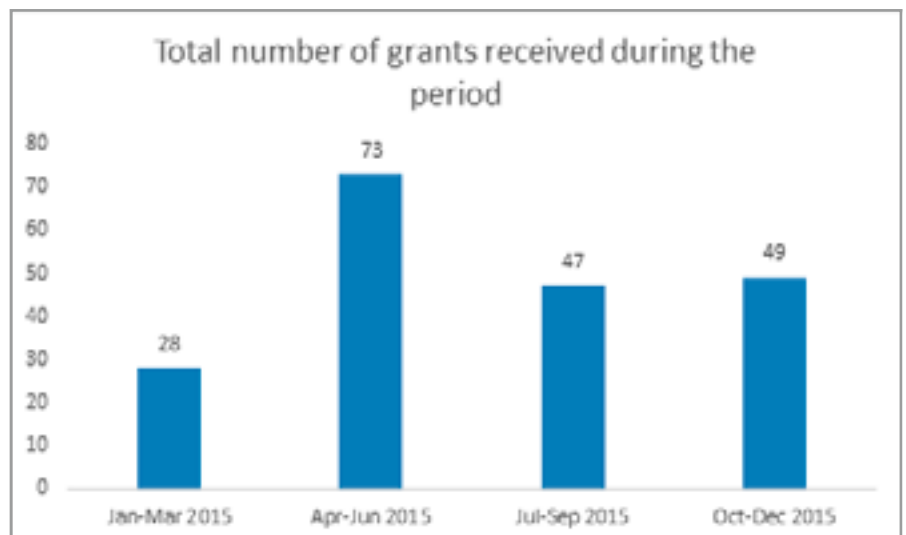
d. Research and Training Programmes Conducted



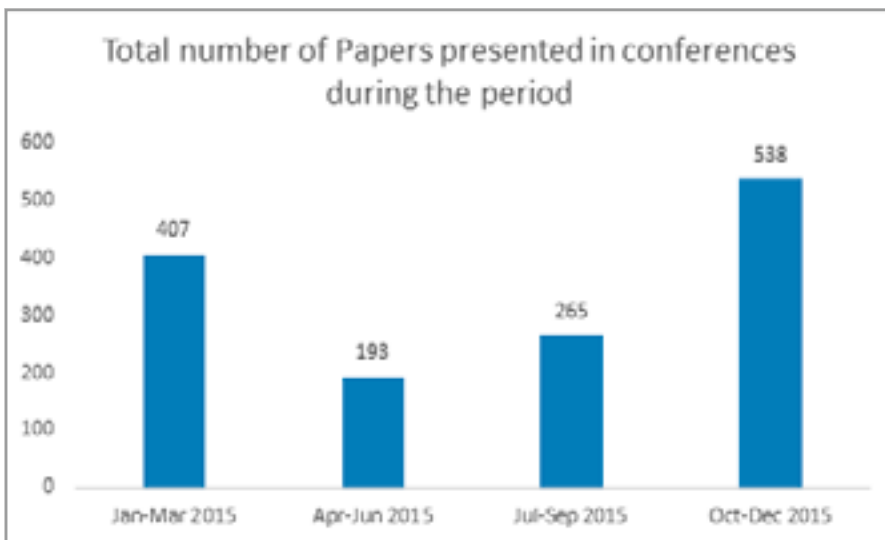
e. Number of Collaborations established



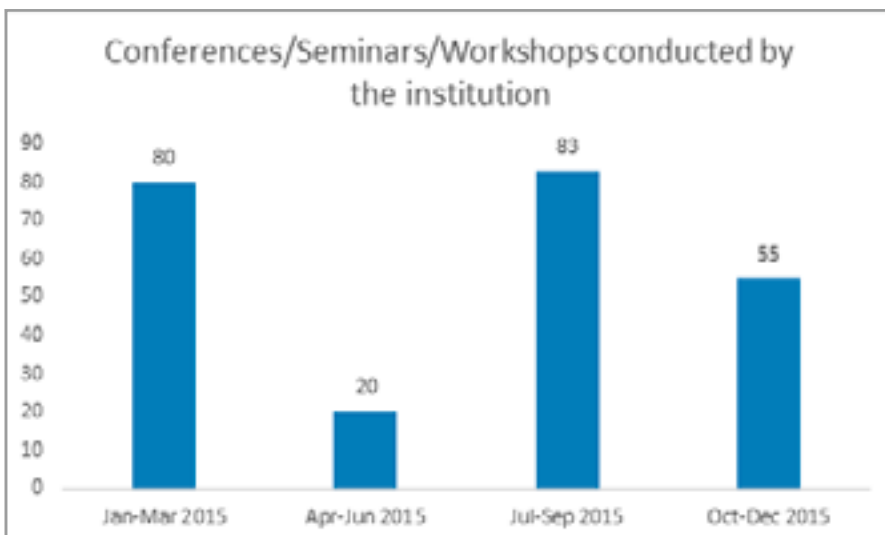
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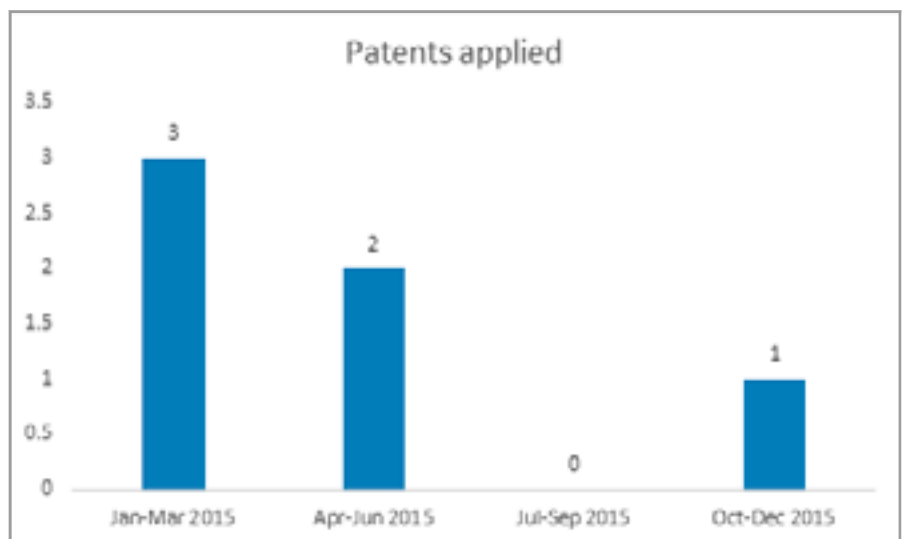
g. Total Number of Papers Presented in Conferences



h. Conferences/Seminars/Workshops Conducted




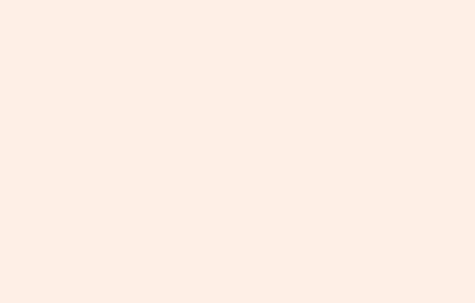
i. Patents Applied



B. Faculty Achievements

- Dr Anju Shukla, Assistant Professor, Department of Medical Genetics, Kasturba Medical College, Manipal, received “Start Up Research Grant (Young Scientist)” from Science and Engineering Research Board (SERB) for the research project titled “Comprehensive Analysis of Genetic Diversity in Waardenburg syndrome”.
- Dr Shalini S Menon, Assistant Professor, Department of ENT-Head and Neck Surgery, received Dr S K Mondal award for the best surgical video presentation on “Endoscopic Excision of Intranasal Meningocele and Repair of Anterior Skull Base Defect” during 33rd AOIKCON 2015 held during Sep 18–20, 2015 at NIMHANS Convention Center, Bangalore.

- Dr Manohar Pai M, Associate Director (Innovation Centre) and Professor, Department of I&CT, Manipal Institute of Technology, Manipal, was sanctioned a grant under BIRAC BIG Scheme from Department of Biotechnology, Government of India in the month of Nov 2015.
- Dr Abhay T Kamath, Professor and Head, Department Oral and Maxillofacial Surgery, Manipal College of Dental Sciences (MCOADS), Manipal, received A O Fellowship to Morrilton Hospital United Kingdom for a period of eight weeks for Training in Cranio Maxillofacial Osteosynthesis Techniques.
- Dr K M Cariappa, Professor, Department of Oral and Maxillofacial Surgery, MCOADS, Manipal, received T C White Scholarship to Guildford Hospital for training in Sentinel Node Biopsy in Oral Malignancy in the United Kingdom.
- Dr N Udupa, Director Research (Health Sciences), Manipal University received IPGA Fellowship Award for the year 2015 during the inaugural session of 30th Annual Conference of IPGA on Oct 31, 2015 at Air Force Auditorium, Subroto Park, Dhaultan Kuan, New Delhi.
- Dr Srinivas Mutalik, Professor, Department of Pharmaceutics, Manipal College of Pharmaceutical Sciences (MCOAPS) received 12th STARS Award 2015 on Dec 12, 2015 in Bengaluru for "Excellence in Academic Research" by AAGCPA (American Association of Government College of Pharmacy Alumni), New York, USA.

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- Mr Ramesh Unnikrishnan, Faculty, School of Allied Health Sciences, Manipal was awarded Fellowship by American Association for Respiratory Care.
 - Dr Shama Prasada K, Assistant Professor, Department of Biotechnology, School of Life Sciences, Manipal University, Manipal, was conferred “VIFRA 2015, Young Scientist Award” on Dec 19, 2015 at GRT Grand, Chennai, India by Centre for Advanced Research and Design, Venus International Foundation, Chennai, for his contribution and achievement in the field of Biotechnology during the Annual Research Meet - VIFARM 2015.
 - Dr Vasudev Ballal, Additional Professor, MCOADS received the Certificate of Outstanding Contribution in Reviewing by Elsevier Publisher and American Association of Endodontists, USA. He is one of the top 10 reviewers in the world, and the only endodontist from India, who received this award for reviewing 100 manuscripts for “Journal of Endodontics”, the eighth top journal in Dentistry with the impact factor of 3.2.
 - Dr Satheesha Nayak, Professor of Anatomy, Melaka Manipal Medical College, Manipal received “Dr Prakash HS gold medal” for publishing maximum number of research articles in a year in reputed indexed journals. The award was given to him at the 17th annual conference of Karnataka Chapter of Anatomists (KCA), held at SSMC, Tumkur, during Sep 25-27, 2015.

C. Achievement by Research Scholars

- Mr Abdul Mueed Bidchol (Senior Research Fellow), Department of Medical Genetics, Kasturba Medical College, Manipal, received Dr S S Agarwal Young Scientist Award -2015.
- Mr Bharath HR, Research Scholar, School of Life Sciences, Manipal, recently attended India International Science Festival, IISF-2015, an event by Ministry of Science and Technology and Earth Sciences, Govt. of India. The event was organized by TIFAC in collaboration with Vijnana Bharati at IIT-Delhi during Dec 5-7, 2015. The India International Science meet had received a total of 1600 abstracts, out of which his paper entitled, "Assessing the Enhancement in Tissue Regeneration upon Low Power Laser Irradiation in Burn Injured Mice" was selected for oral presentation. The presentation was highly appreciated and awarded the First prize under the category, Integrated Healthcare including Innovative Diagnostic Aids. He is pursuing for his PhD under the guidance of Prof K K Mahato, Department of Biophysics, School of Life Sciences, Manipal University, Manipal, Karnataka.

Part II



Featured Scientist of Manipal University

*Dr Santhosh Chidangil, Professor and Head,
Department of Atomic and Molecular Physics,
Manipal Institute of Technology, Manipal
University, Manipal*



Dr Santhosh Chidangil, recipient of Dr T M A Pai Endowment Chair in Biophotonics, has rich expertise in the field of photonics and biophotonics. Since his doctoral days, he has been involved in the study of several processes in biology and medicine using a variety of laser spectroscopic techniques. In Manipal, he has been instrumental in establishing excellent research laboratories in the field of photonics as well as biophotonics and developed optical diagnostic tools for the early detection of many diseases including cancer in collaboration with the faculty members from Kasturba Medical College, Manipal, and Manipal College of Dental Sciences, Manipal, and Mangalore. He believes in taking up the challenges in the less explored areas based on one's strength and it is the key to becoming a global player in the competitive world of Research and Development. Besides having prolific research output in terms of publications in reputed international journals, he with Dr V B Kartha, former head of the department, compiled two decades of their team's contribution as a book "Biomedical Spectroscopy" published by Manipal University Press. He enjoys teaching and believes that teaching and research should go 'hand-in-hand'.

According to Dr Santhosh, infusing research interest among young minds and motivating them to take challenging projects via curiosity driven teaching is the key for the success of our nation's future. He says, "There is no profession without risk, whether it is research or technology or business" He quotes the words of Mark Zuckerberg: "The



biggest risk is not taking any risk... In a world that is changing really quickly, the only strategy that is guaranteed to fail is not taking risks."

He believes that the potential of young minds is far fetching and our country can do wonders in the coming decades if they harness young brains in the right direction. "Explore the unexplored and be open for the changes while believing in yourself," he recommends to the budding scientists.

In Manipal, Dr Santhosh is building a group of young researchers who are focusing on diverse applications of photonics. He has established a strong research collaboration with the Photonics group of Tata Institute of Fundamental Research (TIFR, Mumbai) which has culminated into the setting up of two unique facilities for photonics (femtosecond laser laboratory) and biophotonics (Raman Tweezers laboratory) research. He strongly believes that Manipal University is the only institution which can offer a fertile environment for those who wish to pursue multi-disciplinary research in the country. Dr Santhosh appreciated all the initiatives by the University Research Directorate to improve the quality of research in all institutions of Manipal University.

Understanding the significance of nanoscience and technology in all realms of life and the requirement of cost-effective approaches of diagnosis as well as photonics applications, of late, Dr Santhosh initiated research in the area of nanoscience and his team at Department of Atomic and Molecular Physics is putting effort to integrate these technologies with photonics. A team of young scientists is actively associated with nanobiophotonics research with the generous support of the Department of Science and Technology (DST)–FIST programme and Manipal University. Furthermore, he is regularly organizing many conferences/workshops/symposia to generate enthusiasm amongst the young minds about the potential of these exciting disciplines.

Part III



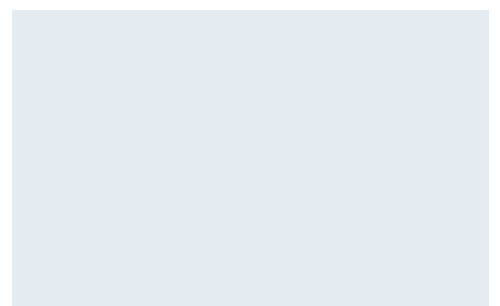
Manipal University Students' Research Forum (MUSRF)

The First International Conference on Healthcare and Technical Research, ICHTR 2015, was held successfully in Manipal during Dec 22-24, 2015. The conference was organized by Manipal University Students' Research Forum (MUSRF) under the aegis of Directorate of Research, Manipal University. It turned out to be a huge success with 550 participants from various disciplines like medicine, dental sciences, technical and management sciences, pharmaceutical sciences, basic and allied health sciences, etc., from different parts of the country. There were 30 invited speakers from several parts of the world to speak on various scientific breakthroughs and more than 250 research papers were presented by the students and the professionals. The chief guest of the conference and keynote speaker, Padmashree awardee Dr Y S Rajan charmed the gathering with his blissful presence. The ceremony witnessed encouraging and motivational speeches by Dr Poornima Baliga, Dean, Kasturba Medical College, Manipal, and Dr G K Prabhu, Director, Manipal Institute of Technology, Manipal, who were the Guests of Honour. Honourable Vice Chancellor of Manipal University, Dr H Vinod Bhat, Directors of Research Dr N Udupa and Dr Safish Shenoy were also present. Dr Vinod Bhat congratulated the two-year efforts of the students in accomplishing the targets that he had set for them. It was very well conducted by the organizing committee.



The scientific programme of ICHTR 2015 started on Dec 23 and comprised the talks related to various aspects on inter professional education, cellular and molecular mechanisms, big data, biomechanics. Oral presentation session was held at the end of the day with an open discussion on many interesting research topics. Besides the parallel scientific talks, there were high quality poster presentations by a number of undergraduate and postgraduate students, and research scholars on various topics of healthcare and technical aspects.

The highlights of the third day were the sessions on entrepreneurs and leadership, biophotonics, innovations in Allied Health Sciences and Epidemiology. The day was graced by legendary surgeon Padma Vibhushan awardee Dr M S Valiathan. Dr Valiathan motivated the students to follow their dream as he did in his journey of saving more than hundred thousand lives. This was followed by a leadership session. The conference came to an end with the valedictory and poster/oral presentation prize distribution ceremony.





Editorial Team

1. Dr N Udupa, Director Research (Health Sciences),
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3. Dr Manthan Janodia, Associate Professor,
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4. Dr Rekha Shenoy, Associate Professor,
Manipal College of Pharmaceutical Sciences, Manipal