Report of
Two days National seminar on “Recent trends in Phytochemistry”
Organised by Dept. of Pharmacognosy, JSS College of Pharmacy, Mysuru from 20-09-19 till 21-09-19

Day 1: (20-09-19)

Inauguration of the seminar

The inauguration of the national seminar was held on 20th Sep 2019 at 10 am in the Rajendra Auditorium of JSS College of Pharmacy, Mysuru. The seminar was inaugurated by Dr. S.L. Hoti, Director, ICMR-National Institute of Traditional Medicine Belagavi. In his inaugural address he emphasized the research in the field of phytochemistry and urged young scientist to actively involve research in phytochemistry. He was talking about tribal and traditional medicine and explained the importance of traditional system of medicine. The importance of antibiotics resistance, where in the remedies from natural products will play an important role. He also spoke about the importance of herbal practitioners and their required scientific knowledge which may be provided by such seminars. He also congratulated the organizers for organizing a very focused and vibrant seminar, and told that such seminars are the need of current research. Guest of honour, Dr. Basavana Gowdappa H, Vice Chancellor JSS Academy of Higher Education & Research, Mysuru, explained that the research currently taking place in the field of phytopharmacology and phytochemistry. He thanked the chief guest of the function and greeted all participants who came from different parts of the country. Dr. T.M. Pramod Kumar, Chairman of seminar and Principal JSS College of Pharmacy, was presided over the function.

Dr. K Mruthunjaya, Organizing Secretary, welcomed the guests and briefed the objectives of the seminar. Dr. N. Paramakrishnan, Lecturer, Department of Pharmacognosy proposed the vote of thanks.

Session 1:

Dr. Babu UV, Head, Phytochemistry R&D, at The Himalaya Dug Company, Bengaluru was the first speaker. He has over 25 years’ experience in research and he 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 also mentioned about composition and formulation aspects and statistical data of herbal medicines. He then spoke about the company and its products along with several patents and its plans for the future. He followed this up by explaining about the latest technology used in
the company and the importance of nanotechnology in herbaceuticals. He then concluded his speech by mentioning about the innovative technology in identifying plants using DNA bar coding.

**Session 2:**
Speaker was **Dr. Akash Navilebasappa** Aquity 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 explained in detail about the various components of MS and the procedures involved in carrying out standard MS. He also mentioned about the various problems associated with the analysis of compounds. He also explained about the working of various ionization sources and types of fragmentation patterns. He provided special emphasis on the analysis of biological samples using LC/MS.

Session 1 & 2 were chaired by Dr. S.L.Hoti, Director, and ICMR-NITM who was the Chief Guest of Inaugural function of the seminar.

**Session 3:**
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. Namely herbal, pharmaceutical and Ayurvedic. He mentions about how the regulatory agencies are concerned with the drug development process. He then explained about the importance of phytochemistry and the difficulties associated with the identification of specific herbal compounds as well as quality assessment management issues. His personal opinion was that currently quality phytochemists are an endangered species and opportunities need to be created to encourage students and researchers to pursue a similar career line.
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. He gave a brief explanation about the use of herbal drugs for various diseases and identified the four main roles of drug substances - It’s usefulness as Natural drugs, less toxic and increased efficacy as drug molecules, They act as biologically active
prototypes into newer and better synthetic drugs, modification of inactive products into potent drugs. He elucidated the following with suitable examples and concluded his talk by saying that modern science needs to incorporate a traditional approach along with latest allopathic drugs in drug discovery as its integration may prove as optimum therapy for various diseases.

Session 3 & 4 were chaired by Dr. Farhath Khanum, Associate Director, DFRL, and Mysuru.

At the day 1 (20-09-2019) session on seminars ended at 4:00 pm followed by Tea break. Simultaneously e-poster evaluation started in 3 venues. In each venue there 10-13 e-poster presentations which were evaluated by 2 evaluators. Seminar presentations went up to 6.30 pm and the first day was called off with a big success.

Day 2 of scientific session: (21-09-19)

The day 2 began with e-poster evaluation at 2 venues at 9.00 am. Poster presentations and evaluations went up to 10.15 am. Soon after the poster evaluation session 5 started.

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. He narrated about the collection and publications using 3, 76,000 plant species. He explained about the nociceptive pathway in detail, enlisted all the targets and mechanisms involved in novel analgesics and elucidated the novel discovery methods using herbal drugs and the molecular docking approach. He concluded by mentioning about the products of the companies as well as his facilities including formulation development and current projects ongoing in his department.

Session 6:

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. He then emphasized on various anti oxidant herbal products which may assist in combating this process. He mentioned about the importance of exercise and meditation in combating stress
which is also one of the major causes of it. He says that instead of focussing more on cosmetics, attention must be given towards the use of herbal products and improvement of diet options.

Session 5 & 6 were chaired by Dr. P.V. Salimath Deputy Director, Research, JSS Academy of Higher Education and Research, Mysuru.

On both days total 57 e-posters were presented from different disciplines such as Pharmaceutical sciences, Ayurvedic science, Dental Science, Horticultural science, Biochemistry. 314 delegates participated in the conference from different states of South India. 6 best posters were awarded. The seminar was concluded with Valedictory function with Dr. P.V. Salimath Deputy Director, Research, JSS Academy of Higher Education and Research as Chief Guest. Dr. T.M Pramod Kumar, Principal, JSS College of Pharmacy, Mysuru, Dean Faculty of Pharmacy presided over the function and Dr. K. Mruthunjaya, Professor and Head, JSS College of Pharmacy, Organizing secretary of the conference was present and rendered the vote of thanks.