LECTURE WORKSHOP REPORT
ON
EMERGING TRENDS IN BIOLOGICAL SCIENCES
7TH – 9TH OCTOBER 2014

SPONSORED & SUPPORTED
BY

Indian Academy of Sciences, Bangalore

Indian National Science Academy, New Delhi
Indian National Academy of Sciences, Allahabad

Organized by

DEPARTMENT OF BIOCHEMISTRY
DR. N.G.P. ARTS AND SCIENCE COLLEGE,
COIMBATORE
The Indian Academy of Sciences, Bangalore, established in 1934, aims at promoting the progress and upholding the cause of science in pure and applied branches. The major activities include publication of scientific journals and special volumes, recognition of scientific talent and improvement of science education. The roles of the academy is to organize - Symposia, Public lectures, Discussion meetings, Refresher courses and lecture workshops jointly with Indian National Science Academy, New Delhi, Indian National Academy of Sciences, Allahabad in Institutions/Universities/Colleges throughout our country.

**Aim of the Workshop**

To promote the cause of science in pure and applied branches by promoting the original research and dissemination of scientific knowledge to the local students, teachers and the community.

**Participants**

About 150 students from various colleges and universities like Bharathidasan university, Trichy, Tamilnadu Agricultural University, SNR Sons College of Arts and Science, P.S.G. College of Arts and Science, Hindustan College of Arts and Science, R.V.S. College of Arts and Science, Kongunadu Arts and Science College have registered and participated in the Lecture Workshop.

**Registration**
Inaugural Session

The programme was initiated by on 7th October 2014 by Dr.K.Veluthambi, Professor (Retired) & UGC – BSR Faculty Fellow, School of Biotechnology, Madurai Kamaraj University, Madurai. The day started with a warm welcome by the coordinator DR.N.Kannikaparameswari, Associate Professor, Department of Biochemistry, Dr.N.G.P Arts and Science College, Coimbatore followed by Presidential address by Dr.Nalla G Palaniswami, Chairman, Kovai Medical Centre and Educational Trust, Coimbatore, where he mentioned the improvement of science and technology in everyday aspects by pointing out the Nobel Prize winners in medicine. Dr.Thavamani.D.Palaniswami, Secretary, Dr.N.G.P Arts and Science College, Coimbatore felicitated the programme and insisted to review the fundamental science and reasoning power which will trigger an individual to become a scientist. Dr.P.R.Muthuswamy, Principal, Dr.N.G.P Arts and Science College, Coimbatore felicitated the audience by stating that, following 4 points like exploring the mind, reading Biographies, having awareness on networking capacity with scientists in different scientific institutions throughout the world and designing career should be followed to attain success in scientific field. Followed by the felicitations, the souvenir was released.

Inauguration by Dr.K.Veluthambi, Professor (Retired) & UGC – BSR Faculty Fellow, School of Biotechnology, Madurai Kamaraj University, Madurai.
Dr. K. Veluthambi, in his inaugural address, mentioned the various programmes conducted by the science academies to nurture science. He gave a brief history about Indian Institute of Sciences, Bangalore and its association with other academies. He clearly explained the role of science academies in promoting strong science platform in colleges by conducting various programmes like Summer Research Fellowships for students and faculties to learn the advanced research, Refresher Courses for faculties on contemporary topics, Lecture Workshops to listen and interact with the scientific fellows to improve their career. He also pointed out the 4 journals that are published by the science academies.

Souvenir release

Inaugural address by Dr. K. Veluthambi,

UGC – BSR Faculty Fellow

The first session for the day was chaired by, Dr. K. Veluthambi. He talked about Rice Functional Genomics by Gene Targeting & Tagging, by explaining the role of Reverse Genetics in functional genomics with the example of Gene targeting of OsMADS1 gene in rice. In Session II, he described the use of T-DNA tagging in functional genomics with an example of transgenic rice cell line TC – 19.

Rice Functional Genomics by Gene Targeting & Tagging by Dr. K. Veluthambi, UGC – BSR Faculty Fellow
Dr. S. Sudhakar, Associate Professor & Head, Department of Biotechnology, Manonmanium Sundaranar University, Tirunelveli, chaired the III and IV Sessions. He explained the function of riboflavin in regeneration of earthworm by describing the isolation of a new species of bacterium responsible for the auto fluorescence of stem cells. He described his research on development and functional studies of earthworm nervous system and the prospects of using it as a model system for studying autism.

Dr. S. Sudhakar, Associate Professor & Head, Department of Biotechnology, Manonmanium Sundaranar University, Tirunelveli

Day 2 started with the Sessions V and VI by Dr. P. R. Padma, Professor, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam University for Women, Coimbatore.
Coimbatore, in which she explained the basics of Cancer Biology and the strategies to be used in the development of anticancer drugs and also mentioned the challenges faced in the production of these drugs.

VII and VIII Sessions were chaired by the eminent outstanding Professor, Dr. T. J. Pandian, Visiting Professor, CAS in Marine Biology, Annamalai University, where he stressed the need of science teaching at the present hour to explain the science and knowledge of science from ancient to modern periods. He also explained the magnitude of scientific colonization of our country by considering cell phones and its manufacturing at Chennai. In the another session, he explained the importance of Honey Bee in Pollination, the need for research in understanding the biochemical basis for the mechanism and the threats to their survival.

**Dr. T. J. Pandian, Visiting Professor, CAS in Marine Biology, Annamalai University**

Day 3 (Session IX) started with an interesting topic of Biology and Behaviour of Bats by the INSA Senior Scientist, Professor G. Marimuthu, Dept. of Animal Behaviour & Physiology, School of Biological Sciences, Madurai Kamaraj University, Madurai. He described the use of echolocation by bats to Zero in on its prey and the different strategies that was used by them to capture mobile and stationary preys through wonderful videos. In Session X, he explained about the biological clocks in different organisms.
Prof. G. Marimuthu, INSA Senior Scientist, Dept. of Animal Behaviour & Physiology, School of Biological Sciences, Madurai Kamaraj University

This is then followed by the Feedback Session, where the students expressed their views about the Lecture Workshop followed by Photo session.

Feedback Session
Group Photo Session

The last Session XI was delivered by Dr. R. Sathish Kumar, Assistant Professor and Group Leader, Plant Genetic Engineering Laboratory, Bharathiar University, Coimbatore who clearly gave a vision about DNA barcoding and its applications.

Dr. R. Sathish Kumar, Assistant Professor and Group Leader, Plant Genetic Engineering Laboratory, Bharathiar University, Coimbatore
The programme was ended by Valedictory Session with report presentation, Felicitated by Dr. K. Durairaj, Vice Principal, Dr. N. G. P. Arts and Science College, Coimbatore, valedictory adress by Dr. R. Sathish Kumar, Assistant Professor and Group Leader, Plant Genetic Engineering Laboratory, Bharathiar University, Coimbatore and the vote of thanks was delivered by Dr. N. Kannikaparmeswari, Associate Professor, Department of Biochemistry, Dr. N. G. P. Arts and Science College, Coimbatore.

Dr. N. G. P. ARTS AND SCIENCE COLLEGE, COIMBATORE-48
DEPARTMENT OF BIOCHEMISTRY

SCIENCE ACADEMIES LECTURE WORKSHOP ON
“EMERGING TRENDS IN BIOLOGICAL SCIENCES”

October 7th to 9th, 2014

Sponsored & Supported by
Indian Academy of Sciences, Bangalore
Indian National Science Academy, New Delhi
National Academy of Sciences India, Allahabad

PROGRAM SCHEDULE FOR THE LECTURE WORKSHOP

<table>
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<th>Date and Time</th>
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<th>Program</th>
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<tr>
<td>Day 1</td>
<td>07.10.2014</td>
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<tr>
<td>9.00 am</td>
<td>Registration</td>
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<tr>
<td>9.15 am - 10.15 am</td>
<td>Inauguration by Dr. Nalla G. Palaniswami Chairman, Kovai Medical Center and Educational Trust, Coimbatore-48.</td>
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<td>Dr. Thavamani D. Palaniswami Secretary, Dr. N. G. P Arts and Science College Coimbatore-48</td>
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<td></td>
<td>Dr. P. R. Muthuswamy Principal Dr. N. G. P Arts and Science College (Affiliated to Bharathiar University) Kalapatti road, Coimbatore 641048</td>
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<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>10.15 am - 11.30 am</td>
<td>Inaugural Lecture</td>
<td>Dr. K. Veluthambi</td>
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<td>11.30 am - 11.45 am</td>
<td>Tea Break</td>
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<td>11.45 am - 1.00 pm</td>
<td>Technical Session – I</td>
<td>Dr. K. Veluthambi</td>
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<td>1.00 pm - 1.45 pm</td>
<td>Lunch Break</td>
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<td>1.45 - 3.15 pm</td>
<td>Technical Session – II</td>
<td>Dr. S. Sudhakar</td>
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<td>3.15 pm - 3.30 pm</td>
<td>Tea Break</td>
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<td>3.30 pm - 5.00 pm</td>
<td>Technical Session – III</td>
<td>Dr. S. Sudhakar</td>
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<td>Day 2 08.10.2014</td>
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<td>9.30 am - 11.00 am</td>
<td>Technical Session – V</td>
<td>Dr. P. R. Padma</td>
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<td>11.00 am - 11.15 am</td>
<td>Tea Break</td>
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<td>Time</td>
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| 11.15 am - 12.45 pm  | Technical Session-VI         | DR.P.R.Padma  
Professor  
Department of Biochemistry, Biotechnology and Bioinformatics  
Avinashilingam University for Women |
| 12.45 pm-1.45 pm     | Lunch Break                  |                                                                                |
| 1.45 pm.- 3.00 pm    | Technical Session- VII       | Dr. T.J.Pandian  
Visiting Professor,  
CAS in Marine Biology  
Annamalai University India |
| 3.00 pm - 3.15pm     | Tea Break                    |                                                                                |
| 3.15 pm - 4.45pm     | Technical Session- VIII      | Dr. T.J.Pandian  
Visiting Professor,  
CAS in Marine Biology  
Annamalai University India |
| Day 3                | 09.10.2014                   |                                                                                |
| 9.30. am - 11.00     | Technical Session- IX        | Prof. G. Marimuthu  
INSA Senior Scientist  
Dept. of Animal Behaviour & Physiology  
School of Biological Sciences  
Madurai Kamaraj University  
Madurai 625 021, India |
| 11.00 am - 11.15 am  | Tea Break                    |                                                                                |
| 11.15 am - 12.45 pm  | Technical Session- X         | Prof. G. Marimuthu  
INSA Senior Scientist  
Dept. of Animal Behaviour & Physiology  
School of Biological Sciences  
Madurai Kamaraj University  
Madurai 625 021, India |
| 12.45 pm - 1.15 pm   | Feedback from the participants & Group Photograph |                                                                                |
| 1.15 pm - 1.45 pm    | Lunch Break                  |                                                                                |
| 1.45 pm - 3.15 pm    | Technical Session - XI       | Dr. R. Sathish Kumar  
Assistant Professor and Group Leader  
Plant Genetic Engineering Laboratory  
Bharathiar University Coimbatore |
| 3.15 pm - 3.30 pm    | Tea Break                    |                                                                                |
| 3.30 pm - 4.30 pm    | Valedictory function         | Dr. R. Sathish Kumar  
Assistant Professor and Group Leader  
Plant Genetic Engineering Laboratory  
Bharathiar University Coimbatore |
|                      | Valedictory address          |                                                                                |