



## 9<sup>th</sup> NABS-National Conference

### *Theme*

New Biological Researches: Opportunities and Challenges  
for sustainable development  
(*Agriculture, Biology, Energy, Environment, Health and  
Climate Change*)

### **Series No. 9**

#### **General Particulars**

Date : 11 & 12 August, 2016  
Venue : Preview Theatre, Madurai Kamaraj  
University, Madurai, Tamil Nadu

The ninth NABS-National Conference on "*New Biological Researches: Opportunities and Challenges for Sustainable Development*" was organized at Madurai Kamaraj University, Madurai for two days from 11 to 12 August 2016 in collaboration with School of Energy, Environment and Natural Resources, MK University, Madurai, Tamil Nadu.

The program was sponsored by Science and Engineering Research Board, New Delhi; Indian Council of Agricultural Research, New Delhi, Madurai Kamaraj University, Madurai and National Academy of Biological Sciences (NABS).

Chief Patron : Prof. M.S. Swaminathan  
Founder Chairman  
M.S. Swaminathan Research Foundation  
3<sup>rd</sup> Cross Street, Institutional Area,  
Taramani, Chennai

Patrons : The Convener & The members of  
Syndicate Committee, Madurai Kamaraj  
University, Madurai

Organizing Secretary : Prof. K. Muthuchelian  
Professor and Chair, School of Energy,  
Environment and Natural Resources,  
Madurai Kamaraj University, Madurai &  
Former Vice-Chancellor, Periyar University

## Inaugural function

- Presided over by : Prof. K. Muthuchelian  
Former Vice Chancellor  
Periyar University, Salem & Organizing  
Secretary
- Declaring conferment of “Dr.APJ Abdul Kalam Memorial NABS-Life Time Achievement Award” on Prof. K. Ramasamy, VC, TNAU; release of a book on “*Bioinformatics, Barcoding and Benefit sharing in Biodiversity*” authored by Dr. K. Muthuchelian & Inaugural address : Dr. R. Appavuraj  
Director  
Defence Research and Development Organization, Ministry of Defence, Government of India, Chandipur, Balasore, Odisha
- Released the Abstract Book of NABS-National conference; declared conferment of 'Prof. S. Kannaiyan Memorial Award' on Prof. R. R. Hanchinal, Chairperson, PPV & FRA, New Delhi by Guest of Honor : Dr. Kirti Singh  
Chairperson, World Noni Research Foundation & President, International Society for Noni Science, Chennai
- Felicitations by Guests : Prof. S. Natarajan  
Vice-Chancellor, The Gandhigram Rural Institute - Deemed University, Gandhigram, Tamil Nadu
- Prof. S. Sudalaimuthu  
Vice-Chancellor, Karpagam Academy of Higher Education - Deemed University, Coimbatore
- Dr. (Tmt.) G. Valli  
Vice-Chancellor, Mother Teresa Women's University, Kodaikanal
- Prof. S. Kannaiyan Memorial Oration : Prof. R. R. Hanchinal  
Chairperson, Protection of Plant Varieties and Farmers' Rights Authority, GoI, New Delhi
- Topic : International Treaties, National IPR-Policy and Impact on Innovations in Plants

## Valedictory function

Presided over by	:	Dr. R.R. Hanchinal Chairperson, PPV & FRA, New Delhi
Chief Guest	:	Dr. P. Vijayan Registrar i/c, Madurai Kamaraj University, Madurai
Guest of Honor	:	Dr. K. Ravichandran Director, Research & Project Officer & Special Officer, Madurai Kamaraj University, Madurai
Presentation of recommendations of Conference by Organizing Secretary	:	Prof. K. Muthuchelian Former Vice-Chancellor, PU, Salem & Organizing Secretary & Panel Chairman

## Technical Sessions

The deliberations of National Conference on “**New Biological Researches: Opportunities and Challenges for sustainable development (Agriculture, Biology, Energy, Environment, Health and Climate Change)**“ were made in six technical sessions *viz.*, (i). New Biological Research- Agriculture, (ii) New Biological Research- Biology (iii) New Biological Research- Energy (iv) New Biological Research-Environment (v) New Biological Research- Health (vi) New Biological Research- Climate change. Two concurrent sessions one for Agriculture and the rest of the themes in another concurrent session.

### Technical Session- I : New Biological Research- Agriculture

**Day-1: 11-08-2016**

#### **New Biological Research-Agriculture- 1**

Chairman	:	Prof. Dr. K. Shiva Shankar
Rapporteur	:	Dr. S. Nakkeeran
Lead Paper	:	Plant microbiomes and molecules- A. <i>Kumar</i>
No. of oral Presentations	:	3

#### **New Biological Research-Agriculture-2**

Chairman	:	Prof. Dr. D. J. Bagyaraj
Rapporteur	:	Dr. M. Prakash
No. of oral Presentations	:	6

#### **New Biological Research Agriculture-3**

Chairman	:	Prof. Dr. M. Subramanian
Co-Chairman	:	Dr. R. Selvarajan
No. of oral Presentations	:	6

#### **New Biological Research Agriculture-4**

Chairman : Prof. K. Natarajan  
Co-Chairman : Dr. B. Meena

No. of oral Presentations : 6

#### **Technical Session-II: New Biological Research- Biology-1**

Chairman : Prof. Dr. N. Mathivanan  
Co-Chairman : Dr. A. Maruthupandian

Lead Paper : eDOPS-An electronic data base of plants-  
*A.K.Nagpal*

No. of oral Presentations : 3

#### **New Biological Research- Biology-2**

Chairman : Prof. Jyotsana Rai  
Co-Chairman : Dr. U. Ramesh

No. of oral Presentations : 6

#### **New Biological Research- Biology-3**

Chairman : Prof. K. Manoharan  
Co-Chairman : Dr. R. Ganesan

No. of oral Presentations : 6

#### **New Biological Research- Biology-4**

Chairman : Prof. R. Balagurunathan  
Co-Chairman : Dr. V. T. Hiremath

No. of oral Presentations : 6

#### **Day-2: 12-08-2016**

#### **New Biological Research Agriculture-5**

Chairman : Prof. K. Samiayyan  
Co-Chairman : Dr. N. Arunkumar

No. of oral Presentations : 6

#### **New Biological Research-Agriculture-6**

Chairman : Prof. A. K. Nagpal  
Co-Chairman : Dr. V. Shanmugaiah

Lead Lecture-2 : Gentotypic and phenotypic dynamics of  
*Urginea* and its medicinal value  
(Hyacinthaceae) -*M. N.*  
*Shivakameshawari*

No. of oral Presentations : 5

### **New Biological Research-Agriculture-7**

Chairman : Prof. S. Murugesh

Co-Chairman : Dr. M. N. Shivakameshawari

No. of oral Presentations : 8

### **Technical Session-III: New Biological Research- Energy**

Chairman : Prof. C. E. Sooriamoorthy

Co-Chairman : Dr. C. Gopinathan

Lead Presentation : Exploring potential of Sugar beet as an alternate source of bio-ethanol production in India- *A. K. Mall*

No. of oral Presentations : 8

### **Technical Session-IV: New Biological Research- Climate Change**

Chairman : Dr. M. G. Ragunathan

Co-Chairman : Dr. S. Selvakumar

Lead Presentation : Phytotechnologies for global environmental management- *P. Thangavel*

No. of oral Presentations : 6

### **Technical Session-V:New Biological Research- Health**

Chairman : Dr. N. Balanayagam

Co-Chairman : Dr. S. B. Anand

Lead Presentation : Molecular genetic markers in man: continental Perspectives- *K. Balakrishnan*

No. of oral Presentations : 8

### **Technical Session-VI: New Biological Research- Environment**

Chairman : Dr. R. Ramanibai

Co-Chairman : Dr. M. Anand

Lead Presentation : Heavy metal and Pesticide analysis of water and soil samples of Punjab - *Jatinder Kaur Katnoria*

No. of oral Presentations : 9

### **Poster Presentations**

#### **Poster presentations were held on both the days**

Poster sessions on Agriculture, Biology, Energy, Climate Change, Health and Environment were conducted session-wise. In all 384 posters were listed, 87 in Agriculture, 182 in Biology, 14 in Energy, 59 in Environment, 36 in Health and 6 in Climate Change. Best presentations were awarded.

## **Best Oral Presentation Award**

### *Under New Biological Researches: Agriculture*

- Plant microbiomes and molecules- *A. Kumar*

### *(Under New Biological Researches: Biology)*

- Quality assessment of herbal laxatives containing Senna (*Cassia angustifolia*)- *Satyanshu Kumar, Raghuraj Singh, Tushar Dhanani, Ritesh Chauhan and Rajiv Sharma*

### *Under New Biological Researches: Energy*

- Synthesis and characterization of TiO<sub>2</sub>-NiO and TiO<sub>2</sub>-WO nanocomposites for DSSCs- *C. Gopinathan and P. Pandi*

### *Under New Biological Researches: Environment*

- Role of village council in protecting Indian genetic resources- *K. Sowmia, R. Kannan and K. Muthuchelian*

### *(Under New Biological Researches: Health)*

- Fish epidermal mucus and muscle extractions as antibacterial drugs- *Jinsu Varghese, P. Liju Varghese and Rosemary Titto*

### *Under New Biological Researches:: Climate Change*

- Patterns of ecosystem level carbon pools along an elevational gradient in temperate forests of Western Himalaya, India- *Javid Ahmad Dar, S. M. Sundrapandian and M. L. Khan*

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## **Best Poster Presentation Award**

### *Under New Biological Researches: Agriculture*

- Assessment of factors influencing the agrobacterium – mediated plant genetic transformation of peanut (*Arachis hypogaea* L.) cultivars-*Kartihik Sivabalan*

*Under New Biological Researches: Biology*

- Purification, characterization and kinetic study of cellulose from *Aspergillus niger* KP164968- *Priyanka Pachauri*

*Under New Biological Researches: Energy*

- Comparative study of pretreatment methods for agro-waste of pearl millet (*Pennisetum glaucum*) stalk for bioethanol production- *Smitha Banu*

*Under New Biological Researches: Environment*

- Genotoxicity study using micronuclei assay in *Channa punctata* of Vaigai River, Madurai Tamil Nadu- *K. Ragavan*

*Under New Biological Researches: Health*

- Anticancer property of an yellow pigment produced by *Exiguobacterium alkaliphilum*: An *in vitro* study- *P. G. Bharath*

*Under New Biological Researches: Climate Change*

- Estimation of land surface temperature using remote sensing: A case study in Southern Districts of Tamil Nadu- *Shabira Begum*