



**University of Agricultural Sciences, Bangalore**  
**Department of Plant Biotechnology**  
**Silver Jubilee Year 2022**

**International Conference**

On

**BIOTECHNOLOGY**

**TRENDS AND FUTURE PROSPECTS**

Date: September, 13-15, 2022 | Venue: UAS, GKVK, Bengaluru-560 065



### Chief Patron:

#### **Dr. S. Rajendra Prasad**

Vice-Chancellor, University of Agricultural Sciences Bangalore

### Patrons:

**Dr. K. C. Narayanaswamy**, Director of Education, UAS Bangalore

**Dr. Basave Gowda**, Registrar, UAS Bangalore

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**Dr. C. Doreswamy**, Special Officer, CoA, Chamarajanagar

**Dr. V. Palanimuthu**, Special Officer, Co Agri. Engg., UAS Bangalore

### About the University

The University of Agricultural Sciences Bangalore (UASB) was established in 1964 as the first State Agricultural University (SAU) in Karnataka. This University has a legacy of more than 100 years as an Experimental Agricultural Station at Hebbal with 30 acres of land donated by Her Excellency Maharani Kempa Nanjammanni Vani Vilasa Sannidhi, the Regent of the then princely state of Mysore in 1899. Many visionaries, to be highlighted, Dr. Lehmann, German Scientist who initiated research on soil crop response with laboratory in the Directorate of Agriculture, later in 1906, Dr. Leslie Coleman, a Canadian Entomologist and Mycologist who succeeded Dr. Lehmann, strengthened the foundation for modern agricultural academics and research in Karnataka under the wings of this institution. Academic expansion happened by way of establishing the Mysore Agriculture Residential School at Hebbal in 1913, Agriculture College at Hebbal in 1946 with four year professional degree program in Agriculture affiliated to the University of Mysore. In 1964, with 1300 acres of land at Gandhi Krishi Vigjana Kendra Campus the University of Agricultural Sciences Bill (Act No. 22) which received assent of the President of India to become the Law. In 1964, Government appointed Dr. K.C. Naik, MSc, Ph.D (Bristol) working with USAID as the first Vice Chancellor on 12<sup>th</sup> June 1964. The UAS, GKVK campus was inaugurated by Dr Zakir Hussain, the Vice President of India on the 21<sup>st</sup> Aug 1964.

### Department of Plant Biotechnology

The Department of Plant Biotechnology was established in 1996 with an aim of building human resource and conducting advanced research in biotechnological aspects for crop improvement. The department is presently functioning in a 3380 sq.mtrs building 'Advanced Center for Plant Biotechnology' with state-of-the-art infrastructure for research labs, teaching labs, modern class rooms, Bioinformatics lab, seminar hall, auditorium & library. The central instrumentation facility of the department has advanced analytical instruments viz. GC-MS, Fluorescence microscope, DNA Fragment Analyser, RT-PCR, HPLC, Ultra Centrifuge, Deep Freezer & Phase Contrast microscope, Lyophilizer, UV-VIS Spectrophotometer with Kinetics, Speed Vac, etc. for conducting research in genomics, metabolomics, molecular biology, plant transformation, nanotechnology, molecular diagnosis, biofuel, molecular markers, etc. Presently, the department is funded under DST-FIST (Fund for Improvement of S&T Infrastructure) Level II DST, GOI. Since its inception, the department is continuously supported by ICAR, RKVY, KBITS, DBT-HRD programme, BIRAC, DST FIST, KIRK HOUSE Trust, UK, and DBT-UAS HUB projects.

The department has Master's degree programme in three disciplines, Plant Biotechnology, Plant Biochemistry and Bioinformatics and also Ph.D. programmes in Biotechnology and Biochemistry.

## The major research achievements and research areas

1, Isolation of Phosphate Solubilizing Bacteria (PSB); 2, Vit A enriched rice; 3, Plant Vaccines; 4, Enhancement of shelf life of tomato; 5, Drought tolerant bio fortified aerobic rice genotypes with high Zn and Fe content; 6, Anther culture in rice; 7, PR proteins; 8, Micorrhiza (VAM); 9, Biofuel; 10, Detection of cardamom Mosaic Virus (CdMV) for diagnosis of the virus; 11, Biosensor for detection of Papaya Ring Spot Virus (PRSV) infecting papaya, 12, Compost Tea (CT) application for enhanced biomass, yield and disease control in crops; 13, Early bearing and high yielding Jack fruit genotypes released and propagated for sales; 14, Ragi genome has been Sequenced, Association mapping panel and mapping populations developed; 15, Development of mapping populations and fine mapping of wilt resistance in Chickpea, QTLs in Ragi; 16, Heat tolerant inbred lines developed in Maize and promising hybrids produced; 17, Efficient strains of Microalgae for biofuel production identified; 18, Multigene approach for the development of transgenic maize against Turicum leaf blight; 19, Development of transgenic mulberry for the expression of antiviral proteins against BmNPV infection in mulberry silkworm; 20, Phytosynthesis of nanoparticles and application in Agriculture; 21, Host-parasite interaction of the root parasite Sandalwood.

## Scope of the Conference

Biotechnology is one of the disciplines of life sciences with a great potential to contribute in the advancements of Agriculture, Medicine, Food, Feed and many Industrial processes. To extend the reach and multiply the utility of current understanding, fundamental and applied research findings in the core areas of biotechnology need to bridge with other non-biotechnological disciplines in order to enhance the cohesion between different expertise as well as for the evolution of transdisciplinary outcomes. Therefore, scientists from universities and research institutions who made a good foundation in their respective research area and willing to explore into transdisciplinary research, partnering with core and allied biotechnological areas, are invited for new opportunities in the frontier areas of advanced biotechnology. This conference aims at bridging disciplines such as advanced biotechnology, biochemistry, genomics, metabolomics, big-data analytics, etc.

## Thematic Areas of Conference

### 1. Crop Improvement by Molecular and Biotechnological Approaches

Genetic Engineering and Genome Editing, Cell and Tissue Culture, Marker Assisted Breeding, RNA Biology.

### 2. Frontiers in Biochemistry and Bioinformatics

Protein Engineering, Signal Transduction and Plant Communication, Omics, Post-Harvest Technology, Nanotechnology, Phyto-chemistry

### 3. Environmental and Bio-fuel Biotechnology

Endophytes, Bio-control agents, Biofertilizers and PGPRs, Biofuels

### 4. Animal Biotechnology

Veterinary and Fisheries

### 5. Industrial Biotechnology

Cell culture based production, Secondary metabolites, Immobilized cell technology, Pharma farming

### 6. Entrepreneurship in Biotechnology

Crop improvement, Bio energy, Medical and Veterinary, Fisheries, Cell culture based production, post harvest technology

Awards will be conferred to best oral and poster presentations.

## Who can attend this conference?

Scientist from research institutions, University faculty members, alumni of the Department of Biotechnology, postgraduate students, research scholars, industry professional, etc.

## Call for Research Abstract

Research abstracts, broadly within the scope of the conference thematic areas, written in English language (250 words), are solicited with declaration of originality. Abstracts may be submitted electronically during the registration. Abstracts will be published in the conference compendium. A poster depicting the major research finding presented in the abstract need to be placed in the poster session during the conference. Abstract submission deadline: 20<sup>th</sup> July 2022.

## Registration Fee (INR)

	Offline	Online
Students and Research Scholars	1,000	500
Scientist/University Faculty members	2,500	1,500
Industry Professionals	5,000	
Late registration	+250	
On-spot registration	+500	

Registration fee include conference kit, soft copy of souvenir, abstract compendium, lunch and snacks.

**Registration dead line: 30<sup>th</sup> August 2022**

### Accommodation and Food

Participants need to make their own accommodation. No transportation will be provided by the organizers for the candidates to travel from conference venue to hotels.

Only lunch will be provided for the registered participants. Tea and light snacks will be provided between the sessions.

## Schedule of Event

	FN-Session-1		FN-Session-2		AN-Session-1		AN-Session-2
Day 1	Inaugural Function	Tea Break	Crop Improvement by molecular and Biotech. Approaches (Part-1)	Lunch Break	Crop Improvement by molecular and Biotech. Approaches (Part-2)	Tea Break	Crop Improvement by molecular and Biotech (Online)
Day 2	Frontiers in Biochemistry and Bioinformatics (Part-1)		Frontiers in Biochemistry and Bioinformatics (Part-2)		Environmental and Bio-fuel Biotechnology		Frontiers in Biochemistry and Bioinformatics (Online)
Day 3	Animal Biotechnology		Industrial Biotechnology		Entrepreneurship in Biotechnology		Valedictory Function

**Venue:** Rajendraprasad Convention Centre / North Block Auditorium, University of Agricultural Sciences, GKVK, Bengaluru-560 065

**Language of conference:** English

### Note

The organizing committee is not responsible for any financial transaction the participants make with local hotels and travel agents. The payment towards your accommodation and travel should be borne by the participants. All expenditure pertaining to the accompanying person should also be borne by the participant.

### COVID Advisory

All participants are required to get two dose vaccination and adhere to the COVID appropriate behavior guidelines issued by the local competent authority from time to time.

# Lead Speakers

## Crop Improvement by Molecular and Biotechnological Approaches



**Dr. A K Singh**  
Director  
IARI, New Delhi

**Crop Improvement**



**Dr. K. G. Raghothama**  
Professor, Purdue University  
USA

**Plant Nutrient Absorption**



**Dr. Ramanjini Gowda**  
Prof. (Rtd.), Member  
Board of Regents  
UAS Bangalore

**Genetic Engineering**



**Dr. C. S. Prakash**  
Professor, Tuskegee  
University, Alabama  
USA

**Crop Genomics**



**Dr. Ravikumar R. L.**  
Prof. (Rtd.), Department of  
Plant Biotechnology,  
UAS Bangalore

**Marker Assisted Breeding**



**Dr. Jochen Kumlehn**  
IPK Gatersleben  
Germany

**Transgenesis & Genome  
Editing**



**Dr. C. Viswanathan**  
Division of Plant  
Physiology, IARI  
New Delhi

**Abiotic stress and Epigenetics**



**Dr. Vibha Ahuja**  
Chief General  
Manager, Biotech  
Consortium India  
Limited, New Delhi

**Biosafety**



**Dr. Kishor D.S**  
Department of Biological Sciences  
College of Natural Science  
Seoul National University  
South Korea

**Fast-Track Breeding**



**Dr. Hee -Jong Koh**  
Professor in Plant Breeding  
Dept. of Plant Science  
Seoul National University  
Seoul, South Korea

**Plant Architecture for Higher Yield**

## Frontiers in Biochemistry and Bioinformatics



**Prof. R. Sowdhamini**  
NCBS, Bangalore  
Karnataka, India

**Computational Biology**



**Dr. P. V. Shivaprasad**  
NCBS, TIFR, Bangalore  
Karnataka, India

**Plant Epigenetics**



**Dr. Utpal Nath**  
Professor, Indian  
Institute of Science, Bangalore

**Molecular Plant Development**



**Dr. Satendra Kumar**  
Mangrauthia  
Scientist, IIRR, Hyderabad

**Stress Tolerance**



**Dr. Murukarthik Jayakodi**  
Head of Grain Legume  
Genomics group, IPK  
Gatersleben, Germany

**Genomics**



**Dr. Ramesh S V**  
Scientist, CPRI, Shimla

**Plant Biochemistry**

## Environmental and Bio-fuel Biotechnology



**Prof. Dr. Oelmüller, Ralf**  
Professor, Friedrich  
Schiller University, Jena, Germany

**Molecular Interactions of Endophytes**



**Dr. T. K. Siddarama Gowda**  
Prof. (Rtd.), Department of  
Biotechnology  
UAS Bangalore

**Agricultural Biotechnology**



**Dr. Vandana Vinayak**  
Dr. Harisingh Gour  
Vishwavidyalaya, Sagar, INDIA

**Diatom Nano Engineering  
and Metabolism**

## Animal Biotechnology



**Dr. Shankar, K. M**  
Prof (Retd.)  
Fisheries college, University of  
Veterinary Sciences, Bidar

**Biotechnology in Fisheries**



**Dr. Ravi Manjithaya**  
Professor  
JNCASR, Bangalore

**Molecular Neuroscience,**



**Dr. Sweety Samal**  
Scientist, THSTI, New Delhi  
Translational health Science and  
Technology Institute, Faridabad

**Virology & Animal Models**

## Industrial Biotechnology



**Dr. Narasimha Prasad**  
Samartha Life Science  
Tumkur, Karnataka

**Vaccines**



**Dr. Girenavar**  
Cryagen, Bangalore

**Biotech. Entrepreneurship**

## Entrepreneurship in Biotechnology



**Dr. Shrinivas Rao**  
ADG, Intellectual  
Property, ICAR

**Unleashing Innovation &  
Entrepreneurship  
in Agriculture, Biotechnology  
and Allied Sectors**



**Dr. K K Narayanan**  
CEO, Agrigenome,  
Bangalore, India

**Biotechnology  
Entrepreneurship**



**Dr. Ramjee Pallela**  
Atal Incubation  
Centre of CCMB  
Hyderabad

**Biotechnology Entrepreneurship**

## Registration

Scan the QR code or click the hyperlink for online registration



<https://forms.gle/KFe6fTLjqGn685M59>

## Account Detail:

Account Name: Organising Secretary BTFP  
AC/No.: 110053242583  
Name of the Bank: Canara Bank  
IFSC: CNRB0002737  
Branch: GKVK, Bengaluru-560 065, Karnataka, INDIA

Registration Fee payment:



UPI ID: 310609076242583@cnrb



## Organizing Committee

### Organizing Secretary:

**Dr. Shyamamma S.**  
Professor & Head

### Co-organizing secretaries:

**Dr. K. M. Harinikumar**  
Professor and AO, UAS Bangalore  
**Dr. Anitha Peter**  
Professor  
**Dr. Veena S. Anil**  
Professor

### Organizing Committee Members:

**Dr. Krishnaprasad, B. T; Dr. Benherlal, P. S.**  
**Dr. Mohan Chavan; Dr. Nagesha, N.**  
**Mrs. Poornima, R.; Dr. Ningaraju, T. M.**  
**Dr. Nagesha, S. N.; Dr. Ramesh, B. N.**  
**Dr. Bhavani. P.; Dr. Geetha Govind**  
**Dr. Manoj Kumar, H. B.**

### Contact address:

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Mobile: 9482309941

### Bengaluru Urban

Bengaluru is a fast-paced amalgam of the old and new. It is an exciting destination with tantalising sights to take in, mixed with the sensations of a happening cosmopolitan city. Bengaluru Urban is more than just a city; it is a vibrant melange of the past, present and future, a potpourri of experiences unlike any other! With its cosmopolitan nature, Bengaluru welcomes you into its fold.



#### Major Attractions



Lalbagh Botanical Garden



Bannerghatta National Park



ISKCON Sri Radha Krishna Temple



Visvesvaraya Industrial and Technological Museum

### Mysuru

Mysuru, the 'City of Palaces', is royalty and magnificence embodied; overflowing with history, sprawling gardens and tree-lined boulevards. One of South India's most fascinating cities, Mysuru has a plethora of places to visit and explore. Ruled over by the Wadiyars from 1399 till Independence, Mysuru is renowned for its royal heritage and splendid monuments and buildings.



#### Major Attractions



Mysuru Palace



Chamundeshwari Temple



Jayalakshmi Vilas Palace



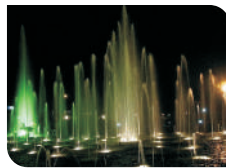
Nagarahole National Park

### Mandya

Mandya is also known as the land of five rivers due to the presence of the rivers Cauvery, Hemavathi, Shimsha, Veeravaishnavi and Lokapavani. These rivers give Mandya both religious importance and scenic beauty. Mandya has been ruled by many dynasties like Gangas, Cholas, Hoysalas, Vijayanagara, Prabhus of Nagamangala and Wadiyars but the major influence has by Hyder Ali-Tipu Sultan regime as they had their capital in Srirangapatna.



#### Major Attractions



Brindavan Gardens



Ranganathittu Bird Sanctuary



Kokkarebellur



Shivanasamudra

### Hassan

Hassan is blessed with a pleasant climate and a great picturesque location. It is here where the plains (maidaans) begin to gently slope into the Western Ghats (malnad). Although not a proper hill station, Hassan is often referred to as "Poor Man's Ooty". It is also associated with the Hoysala Empire who had their capital at Belur and Dwarasamudra (present-day Halebeedu). The district is a veritable treasure-house of Hoysala architecture and sculpture, the best specimens of which are at Belur and Halebeedu.



#### Major Attractions



Halebeedu



Belur



Shravanabelagola