



जैव प्रौद्योगिकी विभाग
Department of Biotechnology
Ministry of Science & Technology
Government of India



Harnessing a decade of education and research
Department of Biotechnology & Bioinformatics
Hosts
International Conference
on
**One Health: Biotechnology as a Catalyst
for Sustainable Development
(HEAL-BioTec 2023)**

Date: 7th to 9th December 2023
Venue: School of Life Sciences, Mysuru

CONFERENCE REPORT

Submitted By

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Organizing Secretaries

Department of Biotechnology &
Bioinformatics

JSS Academy of Higher Education & Research
Mysuru-570015

Introduction:

International Conference on One Health: Biotechnology as a Catalyst for Sustainable Development was organized by Department of Biotechnology & Bioinformatics, JSS Academy of Higher Education & Research, Mysuru, India. The conference was supported by Department of Biotechnology (DBT), Department of Science and Technology (DST) and Council of Scientific & Industrial Research (CSIR), Government of India.

The objective of the conference was to bring together well-distinguished professionals from Government, Academia, Industry, and Start-ups and to nurture and prepare young minds for future readiness.

The eminent and well-distinguished scientists from both national and international presented the keynote address (01), plenary talks (05), and invited talks (22) covering the topics related to the conference theme "One Health". The concept of 'One Health' covered the topics/sessions related to Healthcare, Agri-Foods and Environmental sectors.

Further, the organising committee put forwarded three themes, under which call for abstracts were advertised, which includes 1. Biologics in Healthcare, 2. Computational Biology, Bioinformatics, Artificial Intelligence & Data Science, followed by 3. Plant, Microbes and Environment. Registrations were received from 519 participants, among which 179 registered participants were from outside the host institute. The abstracts received were 175 in total and screened by the scientific committee of the conference. The committee accepted 171 abstracts among which 50 abstracts for oral presentations and 121 abstracts for poster presentation were provided the opportunity.

Total 18 awards were given to the winners among which 9 awards were given to oral and poster presentations each. Three awards were given to each thematic area including 1. Biologics in Healthcare, 2. Computational Biology, Bioinformatics, Artificial Intelligence & Data Science, followed by 3. Plant, Microbes and Environment for oral and poster presentations each.

Inaugural Session - Day 1 (7-12-2023)



Inaugural session of the international Conference on One Health: Biotechnology as a Catalyst for Sustainable Development, held during 07th to 09th December 2023.

Scientific Sessions

First day of the conference started with a Plenary talk by **Prof. Hans Jørgen Lyngs Jørgensen, Department of Plant and Environmental Sciences, University of Copenhagen, Denmark** on the topic 'Biocontrol of plant diseases'. Later, the international conference was inaugurated by the chief guest of the function, **Shri. SK Varshney**, Advisor and Head, DST, Govt. of India. The function was presided by the President **Dr. CG Betsurmath**, Executive Secretary, JSS Mahavidyapeetha Mysuru and the Guest of Honors, **Dr. Surinder Singh**, Vice Chancellor, JSS AHER; **Shri Himanshu Goyal**, Vice President, IBM, Bengaluru, **Prof. Hans Jørgen Lyngs Jørgensen**, University of Copenhagen, Denmark; **Prof. Vijay Chandru**, IISc, Bengaluru; **Prof. Raveesha KA**, Dean, Faculty of Life Sciences, JSS AHER.

During the Inaugural session, **Shri Sanjay Kumar Varshney**, Advisor and Head, International Collaborations, Department of Science and Technology (DST), Government of India, said that Artificial Intelligence (AI) is the new buzzword in Science and Technology these days, which will act as a catalyst for providing faster clinical treatment to the people. Observing that a significant time is being wasted in clinical processes of treatment, Varshney said that AI will put an end to wastage of time and in this backdrop, a lot of research is going on cutting down time using AI. Pointing out that the medical fraternity, scientists and all other stake holders are keenly watching the output of research studies, he said 'One Health' serves as a catalyst for achieving the Sustainable Developmental Goals (SDG) by the year 2030. Continuing, Varshney said that the 'One Health' approach aims to improve disease management by bringing together Health, Food and Environmental Scientists and Policy Specialists from different parts of the globe. Stressing on the need for the people to work with a mission mode to achieve SDGs, he said that the human concept on SDGs should change with advancements in Science and Technology. He cited the example of COVID times, when the Government, apart from ensuring the health of the population, was also concerned about the welfare of animals. He assured that the conference will provide an opportunity for faculty members, students and researchers to interact with the experts and gain knowledge, focusing on advancements in Biotechnology.

Later, the President of the function **Dr. CG Betsurmath**, Executive Secretary, JSS Mahavidyapeetha Mysuru delivered the Presidential address. He said about a huge demand in Industry-Academia partnership which is the need of the hour to address several health issues being faced by the world population today. He assured that the conference will prove to be one of such kind which gathers Scientists of International and National reputation to discuss and find solution towards achieving the Sustainable Development Goals through One Health concept.

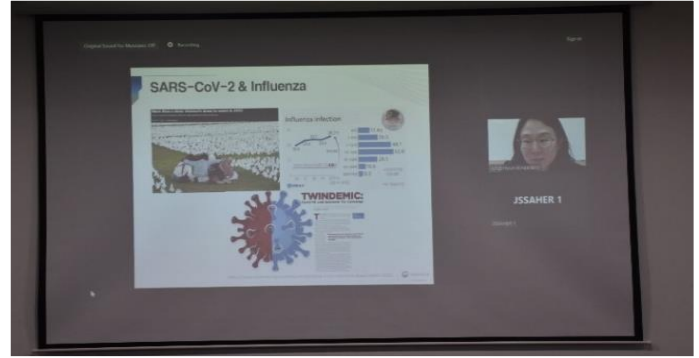
Next, the Guest of Honor of the function **Dr. Surinder Singh**, Vice Chnacellor, JSS AHER Mysuru spoke about the One Health theme which is certainly benefitting researchers from diverse health and life science background. He further stressed on the need of artificial intelligence in health, agrifood and environmental sectors. He assured the

conference will enlighten the young minds and paves way for meaningful collaborations with the academic institutions, research organisations and industries.

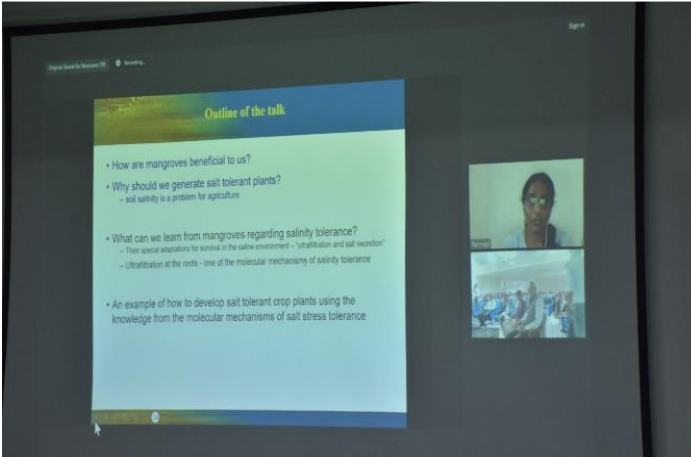


The inaugural session was concluded with Plenary Lecture 2 by **Shri Himanshu Goyal** on the topic 'GenAI as a differentiator for Healthcare'. Later **Prof. Vijay Chandru** delivered the Plenary Lecture 3 on the topic 'TechBio in the Anthropocene'

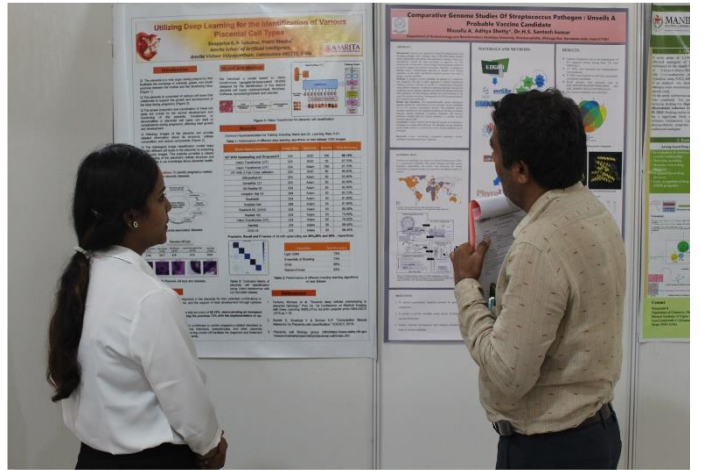
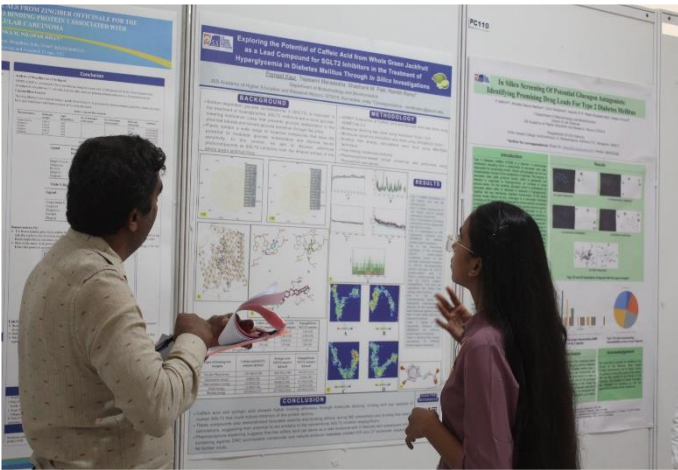
Technical sessions of Day 1, 2 &3:

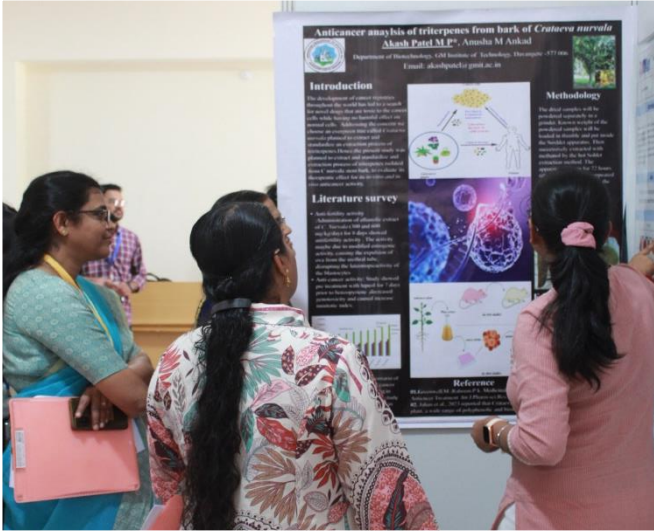






Oral and Poster presentations:





Valedictory Program:

The three-day Conference ended with a valedictory session. The valedictory program was held afternoon. The chief guest of the session was Dr. Anil Kaul, Oklahoma State University, USA. President of the session was Dr. B. Suresh, Pro Chancellor, JSS AHER. The Guests of Honor were Dr. Prashanth V, Dean (Research), JSSAHER; Shri. DP Prakash, Executive Director, KSIIDC, GoK; Dr. Vishal Kumar Gupta, Dean (Academics), JSS AHER; Prof. Raveesha KA, Dean, Faculty of Life Sciences. The valedictory program was concluded with the distribution of awards for the winners of the oral and poster presentations. Total 18 awards were given to winners of poster and oral presentations in three thematic areas.



Summary of Day 1

- Time: 9AM to 5PM
- Theme: Health Care
- Presentations: **50**
 1. Keynote address: **01**
 2. Plenary talks: **03**
 3. Invited Talks: **02**
 4. Lunch session: **01**
 5. Oral presentations: **11**
 6. Poster presentations: **32**

Summary of Day 2

- Time: 9.50AM to 5.40PM
- Themes: 1. Health Care and 2. Plant, Microbes and Environment
- Presentations: **103**
 1. Plenary talks: **01**
 2. Invited Talks: **12**
 3. Oral presentations: **27**
 4. Poster presentations: **63**

Summary of Day 3

- Time: 9.50AM to 5.30PM
- Theme: Computational Biology, Bioinformatics, Artificial Intelligence & Data Science
- Presentations: **45**
 1. Plenary talks: **01**
 2. Invited Talks: **08**
 3. Oral presentations: **09**
 4. Poster presentations: **27**

Executive Summary

Themes: 1. Health Care, 2. Plant, Microbes and Environment and 3. Computational Biology, Bioinformatics, Artificial Intelligence & Data Science

- Presentations: **197**
 1. Keynote address: **01**
 2. Plenary talks: **05**
 3. Invited Talks: **22**
 4. Oral presentations: **47**
 5. Poster presentations: **122**
- Delegates participated: **517**
- Awards: **18**

- **Oral Category:**

Name & Affiliation	Theme	Award
Mrs. Yashaswini GV. Research Scholar. Yenepoya Research Centre	Health	I Prize
Ms Monika B Raj Research Scholar JSS AHER	Health	II Prize
Dr. Saroj Babar Faculty National Forensic Sciences University, Dharwad	Health	III Prize
Dr. Akshath US Faculty Nitte University center of Science Education & Research.	Plant, Microbes & Environment	I Prize
Mrs Mrudula MM Research Scholar JSS AHER	Plant, Microbes & Environment	II Prize
Dr. Jibu Thomas Faculty Karunya institute of Technology and Sciences	Plant, Microbes & Environment	III Prize
Ms Bhavana HH Research Scholar JSS AHER, Mysuru	Computational Biology, Bioinformatics, Artificial Intelligence & Data Science	I Prize
Mrs. Nagashree Faculty	Computational Biology, Bioinformatics, Artificial Intelligence & Data Science	II Prize

JSS Academy of Technical Education, Bangalore		
Dr. Shyla Raj Faculty Sri Jayachamarajendra College of Engineering	Computational Biology, Bioinformatics, Artificial Intelligence & Data Science	III Prize

- Poster Category:**

Name & Affiliation	Theme	Award
Mr. Vinay CS Research Scholar Nitte University Centre for Science Education & Research	Health	I Prize
Mr. Nadeem Khan G Research Scholar Manipal School of Life Sciences	Health	II Prize
Mr. Sayad Hafeez Research Scholar Kuvempu University	Health	III Prize
Mr. Rahul N Deshpande Student JSS AHER, Mysuru	Plant, Microbes & Environment	I Prize
Dr. Anitha Subbappa Research Scholar JSS Dental College & Hospital	Plant, Microbes & Environment	II Prize
Mr. Surjit Bhattacharjee Student Jain University	Plant, Microbes & Environment	III Prize
Nesara MR Student JSS AHER	Computational Biology, Bioinformatics, Artificial Intelligence & Data Science	I Prize
Abhijit Bhatkal Research Scholar KLE Academy of Higher Education and Resaech	Computational Biology, Bioinformatics, Artificial Intelligence & Data Science	II Prize
Smitha Bhat Research Scholar JSS AHER	Computational Biology, Bioinformatics, Artificial Intelligence & Data Science	III Prize

Outcome of the Conference:

The main focus of the conference was to emphasize on 'One Health' through collaborative effort of multi-disciplinary areas working locally, nationally, and globally. It was important to connect scientists from universities, research centers, industries, entrepreneurs, research scholars and graduate students from across the country to share knowledge in the field.

The conference gave an opportunity to understand & assess the global consideration and strategies in the food, health, and environmental biotechnology.

The conference gathered growing research scholars with different cultures and knowledge and to provide them with a major opportunity to explore and exchange their ideas and expertise to effectively develop the field of Biotechnology. This conference will provide many opportunities to explore joint initiatives to build new scientific relations and collaborations. The conference environment has inspired and motivated our young research workers to extend their interest to obtain excellent outcomes from their own research activities.