

**2nd International Conference
on
Biotechnology and Bioinformatics
(ICBAB-2023)**

11-13 July 2023

Organized by

**Department of Biotechnology and Bioinformatics,
Jaypee University of Information Technology, Solan, Himachal Pradesh, India**

Sponsored by

**Science and Engineering Research Board
Department of Science and Technology, Government of India**

**Council of Scientific and Industrial Research
Human Resource Development Group
New Delhi**



**2nd International Conference on Biotechnology and Bioinformatics (ICBAB-2023) in
Jaypee University of Information Technology**

Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology Solan Himachal Pradesh organized a three day international conference '2nd International Conference on Biotechnology and Bioinformatics' (ICBAB-2023) on 11-13 July 2023. This conference was financially supported by CSIR-HRDG and SERB DEST, Government of India.

Hon'ble Vice-Chancellor Prof. Dr. Rajendra Kumar Sharma, Dean, Prof. Dr. Ashok Kumar Gupta, Head, Biotechnology and Bioinformatics Prof. Dr. Sudhir Kumar and Registrar, Maj. Gen. Rakesh Bassi and Convenors Prof. Dr. Jata Shankar and Dr. Udaybanu has lighted the lamp and released the conference abstract book. More than 180 participants have participated in this hybrid conference. Various experts/keynote speakers from national and international institutes delivered their invited lectures



Joint Convener, Dr. Abhishekh Chauwdhary coordinated the oral presentation, in which Mr. Pradeep Kumar N -IARI (3rd Prize), Ms. Chandrika Mittal-CURAJ (2nd Prize) and Chinmaya Mahapatra-NITR (1st Prize) received the award. In poster category, Himanshu-JUIT and Babita Thakur-Chandigarh University (3rd prize), Sanchita Singh-Lucknow University (2nd prize) and Ananya Singh-Allahabad University, received 1st prize.



Prof. Jata Shankar, Convener, thanked the Honorable Vice-Chancellor, Respected Dean of Academics and Research, Respected Registrar and Dean of Student Welfare, all distinguished speakers, Head, Biotechnology and Bioinformatics, Heads of other Departments, Faculties, Participants, Technical Support Staff and Volunteers for their support.

Theme of the conference:

Topics and Scopes ICBAB-2023 aims to provide an innovative and comprehensive overview of Biotechnology and Bioinformatics. A focus on recent research advances including:

- ❖ Biotechnology: Biomedicine, biopharmaceuticals, enzymology, and toxicology.
- ❖ Bioinformatics: Biosimilar, NGS, drug discovery, systems biology
- ❖ Agricultural & food science and industrial biotechnology
- ❖ Microbiology, virology, cytology and immunology
- ❖ Biological macromolecules, proteins and nucleic acids
- ❖ Biomaterials, biopolymers and bioenergy
- ❖ Applications in bioengineering, biomedical engineering & technology; and other related fields

Technical Schedule

Tuesday July 11, 2023	
8:30 - 9:30 AM	REGISTRATION
Venue	LT - 3
9:30 – 10:30 AM	Opening Ceremony
10:30 – 11:00 AM	High Tea
Venue	Orange Shade- Mughal Garden
11:15 - 12:00 PM	<p>Session Chair Prof. Dinesh Goyal and Dr. Priyanka Priyadarsiny Prof. Sudhir Kumar Syal Department of Biotechnology and Bioinformatics Jaypee University of Information Technology Solan INDIA Title-Biofules for sustainable rural development</p>
12:00 - 12:45 PM	<p>Dr. Taruna Madan Gupta Scientist-G NIRRH-ICMR Mumbai-INDIA Title- Collectins: The Sentinels of Mucosal Health</p>
12:45 - 2:00 PM	Lunch Anpurna
02:00- 02:45 PM	<p>Session chair Dr. Taruna Madan Gupta and Prof. Sudhir Kumar Syal Dr. Priyanka Priyadarsiny Head of R& D Biologicals, Panacea Biotech-INDIA Title- Technology Trends in Drug Discovery and Development</p>
02:45 – 03:30 PM	<p>Prof. Dinesh Goyal Thapar Institute of Engineering and Technology, Patiala, India Title-Biorefining of lignocellulosic waste biomass into bioethanol and value added products</p>
03:30- 04:00 PM	<p>Dr. Rupesh K. Srivastava, Associate Professor AIIMS New Delhi Title- Discovering the Osteoclastogenic role of Th9 cells in Osteoporosis</p>
04:00 - 04:15 PM	Tea Break
04:15 - 05:00 PM	<p>Session chair: Dr. Sujan Sigdel, Pokhara University, Nepal and Dr. Jata Shankar</p> <p>Prof. Vladimír Havlicek Institute of Microbiology- Academy of Sciences of the Czech Republic Videnska 1083, CZ-142 20 Prague Title- Metallomics and metabolomics with a special focus on next-</p>

	generation infection diagnostics
07:00-10:00 PM	Conference Dinner

Wednesday July 12th, 2023	
Venue	LT - 3
9:30 - 10:15 AM	<p>Session Chair: Dr. Anil Kumar and Dr. Udayabanu Dr. Pradeep Kumar Shukla Associate Professor College of Medicine - Memphis Department of Physiology University of Tennessee Health Science Center Memphis, Tennessee-USA</p> <p>Title- Effects of dietary probiotics on alcohol-induced intestinal inflammation, dysbiosis, barrier dysfunctions and tumorigenesis</p>
10:15 – 10:25 AM	Tea Break
10:25 - 11:10 AM	<p>Session chair: Prof. Sudhir Syal and Dr. Rupesh K. Srivastava Prof. Ruplal Department of Zoology University of Delhi-INDIA</p> <p>Title- Combinatorial Biosynthesis Approaches to Manipulate <i>rif</i> PKS Gene Cluster of <i>Amycolatopsis mediterranei</i> for the Production of Rifamycin B Analogues Effective Against <i>Mycobacterium tuberculosis</i></p>
11:10-11:40	<p>Dr. Sandeep K. Sharma, Senior Scientist CSIR-Indian Institute of Toxicology Research (IITR)-Lucknow</p> <p>Title- Point-of-care methods and sensors for ensuring food quality and human health</p>
11:40-1:00	<p>Dr. Anand Mohan, Associate Professor Lovely Professional University/School of Bioengineering and Biosciences</p> <p>Title- Agro-technological strategies with nano-fertilizer application to enhance secondary metabolites formation in Cannabis sp</p>
1:00 - 01:10 PM	Poster Session- offline
01:15 - 02:30 PM	Lunch - Annapurna
02:45 PM Onwards	Poster Session- online

Thursday July 13th, 2023	
Venue	LT- 3
	Session chair: Prof. Sudhir Syal and Dr. Tiratha Raj Singh

9:15 - 10:00 AM	Dr. Jessie Uehling Oregon State University USA Title- Decoding fungal symbioses using computational evolutionary genomics
10:00 - 10:45 AM	Prof. Rajesh K. Sani Departments of Chemical and Biological Engineering & Applied Biological Sciences-South Dakota School of Mines and Technology (SDSMT)-Rapid City, SD-USA Title- Single-Step Biomass-to-Bioplastic in Mini-cell Factories
10:45 - 11:00 AM	Tea Break Session chair: Dr. Rahul Shrivastava, Dr. Hemant Sood, Dr Abhshekh
Oral Presentation	
11:00- 11:10 AM	Dr. Satrupa, Assistant Professor VIT Title- A computational study to understand role of sesame polyphenols against the high penetrance and metastasis-associated genes in triple-negative breast cancer therapeutics
11:10 -11:20 AM	Dr. Debanjan Sen, Associate Professor BCDA College of Pharmacy and Technology Kolkata Title- Targeting Epidermal Growth Factor Tyrosine Kinase for Therapeutic Intervention in Triple Negative Breast Cancer: Structure-Based Drug Design and Lead Optimization
11:20-11:30 AM	Mr. Pradeepkumara N Title- Optimization of haploid induction in cucumber through parthenogenetic embryo development using irradiated pollen (Gamma) IARI Pusa Delhi
11:40-11:50 AM	Dr. Sonia K Shisodia, Assistant Professor Chandigarh University Title- Role of heat shock proteins in Shikonin mediated Inhibition of <i>Aspergillus terreus</i>
11:50:-12:00 PM	Dr. Pooja Bhardwaj, Young Scientist ICMR-Regional Medical Research Centre Gorakhpur UP Title- Repurposing CRISPR/Cas12a for ultrasensitive, one-pot detection of Chikungunya virus
12:00-12:10 PM	Dr. Shahzadi Gulafshan Project Associate-I ICMR-Regional Medical Research Centre Gorakhpur UP Title- Prevalence of Coxiella burnetii infection in Acute Encephalitis Syndrome (AES) cases of Gorakhpur, Uttar Pradesh
12:10-12:20 PM	Rishika Raj, SHUAT, Allahabad Title- A computational approaches identifying stress induced transcription factors such as myb, wrky & nac are essential for abiotic stress responsive plant (solanaceae family)
12:20-12:20 PM	Chandrika Mittal, CURAJ Ajmer Title- Impact of low pH and high temperature on the soluble crystallin protein of Human cataract eye lenses

12:20-12:30 PM	Rasna Zinta LPU Title- Aeroponics evaluation for tuberisation and physio-biochemical traits in indian potato varieties under different nitrogen regimes
12:30-12:40 PM	Malvika Mehta , Shri Mata Vaishno Devi University, Katra Jammu Title- Biosynthesis of Silver and Zinc Oxide Nanoparticles from <i>Carissa opaca</i> Extracts for Antimicrobial Activity and Wastewater Treatment
12:40-12:50 PM	Mr Vikas lamba , Mansarovar Global University, Sehore MP Title- Public Perception of GM Crops: a Pilot Survey from Indian Consumers
12:50-1:10 PM	Manpreet Kaur* and Reena Gupta HPU, Shimla Title- Purification and structure prediction of lipase from <i>Bacillus subtilis</i> TTP-06
1:10-1:20 PM	Divya Sharma and Reena Gupta HPU, Shimla Title- Optimization of production conditions of laccase from entomopathogenic fungus <i>Beauveria pseudobassiana</i> PHF4
1:20-1:30	Dr. Chinmaya Mahapatra Assistant Professor NIITR Title- Impact of Redox-active Nanomaterials from Cellular to Therapeutic Regulations
1:30 - 2:30 PM	Lunch in Annapurna
3:30 -4:00 PM	Valedictory Function and certificate distribution, Best Poster/oral award

Few glimpse of the ICBAB-2023









Rajesh Sani is presenting

Single-Step Biomass-to-Bioplastic in Mini-cell Factories

Rajesh Sani, Distinguished Professor
Department of Chemical and Biological Engineering &
Chemistry, Biology, and Health Sciences
South Dakota Mines - An engineering, Science and technology university
Lead Co-PI
Rajesh.Sani@sdstate.edu
<https://webpage.sdmstate.edu/~rsani/> and <http://www.sdmstate.edu/>

JAYPPE
July 13, 2023

google meet

Rajesh Sani

google meet

SUHANI BHAGTA 196552

Aditi Thakur

pooja bhardwaj

Pradeep Kumar N

BABITA THAKUR

DIKSHA 196551

11 others

google meet

10:04 AM | ICBB

22

Link - google.meet@juitsolan.co x Meet - ICBB

meet.google.com/bih-zqcf-uo

Gmail YouTube Maps

9:55 AM | ICBB

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21°C 09:55 11-07-2023

10:37 AM | ICBB

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20

Link - google.meet@juitsolan.co x Meet - ICBB

meet.google.com/bih-zqcf-uo

Gmail YouTube Maps

Ashita Sood

Rohit Kumar

17 others

10:33 AM | ICBB

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22°C

ENG 10:33 11-07-2023

Inbox (432) x Jaypee Uni x Meet - x Fwd: Fw: In x ICBAB 202 x My Drive - x

meet.google.com/bih-zqcf-uo?authuser=0

Gmail YouTube Maps

Anup Kumar Sinha can now join this meeting

Meena choudhary

google meet

25 others

12:14 PM | ICBB

Type here to search

22°C

ENG 12:14 11-07-2023

PRIYANKA PRIYADARSINY is presenting

The Concept of Gene Therapy

Gene therapy is a technique for potential Insertion of normal gene into an individual's cells and tissue to treat a hereditary disease in which a deleterious mutant allele is replaced with a functional one.



- Monogenic Disorders**
 - Monogenic disorders (monogenic traits) are disorders caused by variation in a single gene and are typically recognized by their striking familial inheritance patterns.
- Example :**
Leber Congenital Amaurosis (LCA), Cystic fibrosis, Hemophilia & other rare diseases
- Deliver genetic material to a cell.**
 - Direct Plasmid, Virus Like Particles (VLP), Liposomal etc.,
 - Viral Vector based Gene Delivery
 - Adeno-Associated Virus based Gene Delivery

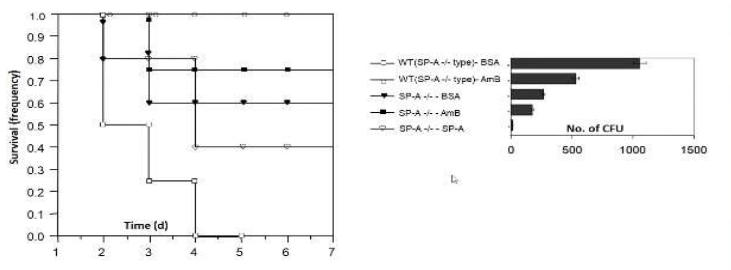
3:16 PM | ICBB

Participants in the meeting:

- PRIYANKA PRIYA...
- google meet
- Rupashree Salvi
- google meet
- Sunil Datt Sharma
- Ruchi Sharma
- 21 others
- You

Dr. Taruna Madan is presenting

AKO-IPA mice showed enhanced survival than WT-IPA
Administration of SP-A decreased their survival



Survival (frequency) vs **Time (d)**

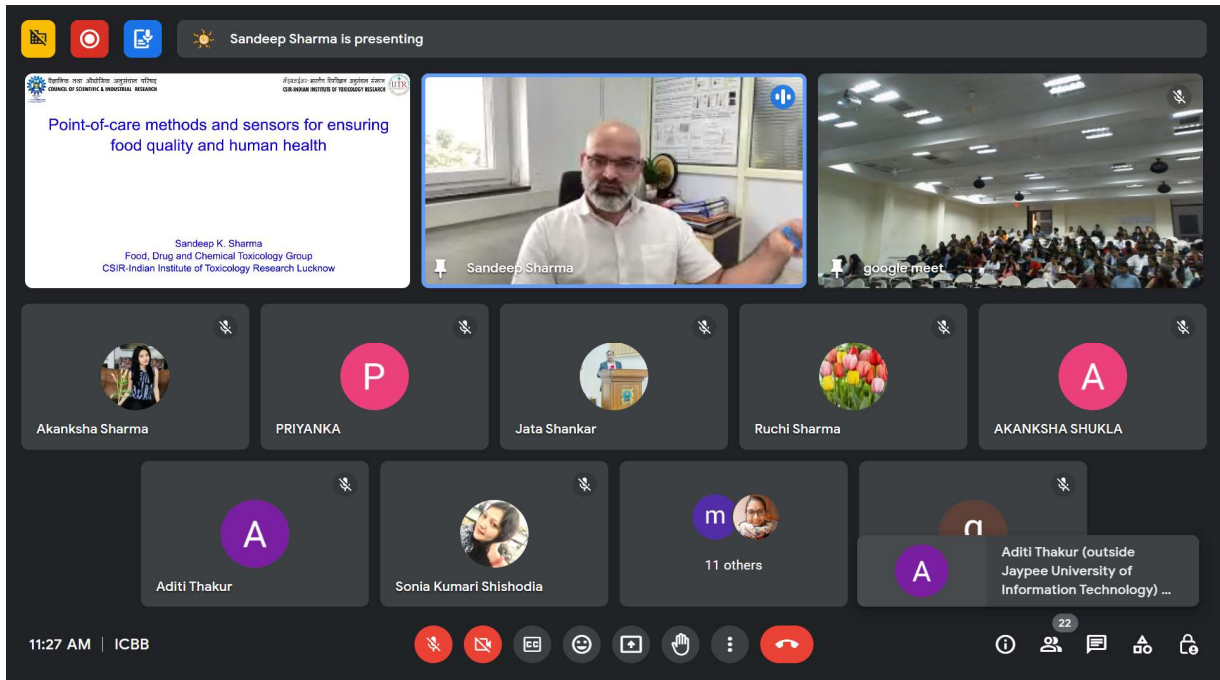
No. of CFU

(Madan et al., Mol Immunol 2010)

12:43 PM | ICBB

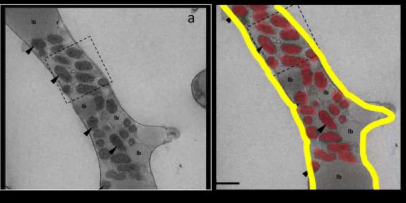
Participants in the meeting:

- Dr. Taruna Madan
- PRIYANKA PRIYA...
- DINESH GOYAL
- Meena choudha
- PRIYANKA PRIYADARSINY (outside Jaypee University of Information Technology...)




9:18 AM | ICBB

Jessie Uehling is presenting



Fungal endosymbionts Fungi Bacteria



google meet

Jessie Uehling

Bhupender Yadav

pooja bhardwaj

Pradeep Kumar N

madhavi singh

Aditi Thakur


PRIYANKA

google meet

10


11:27 AM | ICBB

Sandeep Sharma is presenting



Point-of-care methods and sensors for ensuring food quality and human health

Sandeep K. Sharma
Food, Drug and Chemical Toxicology Group
CSIR-Indian Institute of Toxicology Research Lucknow



google meet

Sandeep Sharma

Akanksha Sharma

PRIYANKA

Jata Shankar

Ruchi Sharma

AKANKSHA SHUKLA

Aditi Thakur

Sonia Kumari Shishodia

11 others

Aditi Thakur (outside Jaypee University of Information Technology) ...

22

10:37 AM | ICBB

Pradeep Shukla is presenting

Chronic Ethanol Feeding Promotes AOM+DSS-Induced Colon Tumorigenesis Markers

AOM+DSS (Tumor)

AOM+DSS+EtOH (Tumor)

A

	Control		AOM/DSS	
	PF	EF	EF	PF
pSmad	[band]	[band]	[band]	[band]
VEGF	[band]	[band]	[band]	[band]
β-Actin	[band]	[band]	[band]	[band]

B

Marker	Group	Treatment	Band Density Ratio to β-actin
pSmad	Control	PF	~0.15
		EF	~0.18
	AOM/DSS	PF	~0.30*
		EF	~0.50*#
VEGF	Control	PF	~0.20
		EF	~0.30
	AOM/DSS	PF	~0.35
		EF	~0.65*#

Pradeep Shukla

google meet

Akanksha Sharma

madhavi singh

pooja bhardwaj

SHRISTY MAURYA

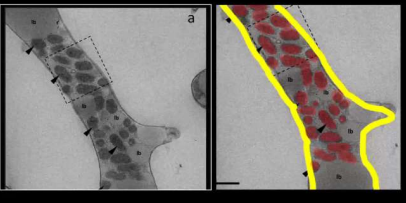
2 others

google meet


9:42 AM | ICBB

9:18 AM | ICBB

Jessie Uehling is presenting



Fungal endosymbionts Fungi Bacteria



google meet

Jessie Uehling

Bhupender Yadav

pooja bhardwaj

Pradeep Kumar N

madhavi singh

Aditi Thakur

PRIYANKA

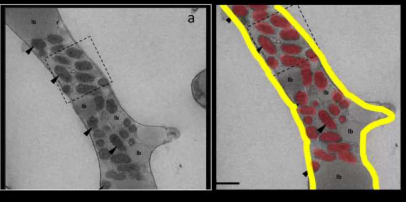
google meet

9:18 AM | ICBB


10

9:18 AM | ICBB

Jessie Uehling is presenting



Fungal endosymbionts Fungi Bacteria



google meet

Jessie Uehling

Bhupender Yadav

pooja bhardwaj

Pradeep Kumar N

madhavi singh

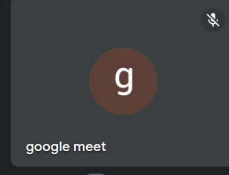
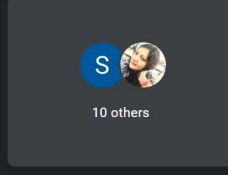
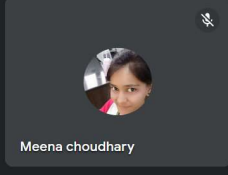
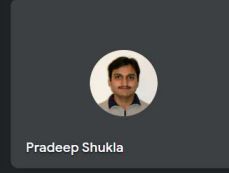
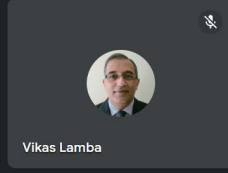
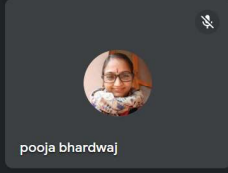
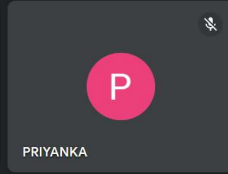
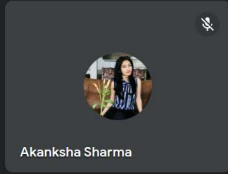
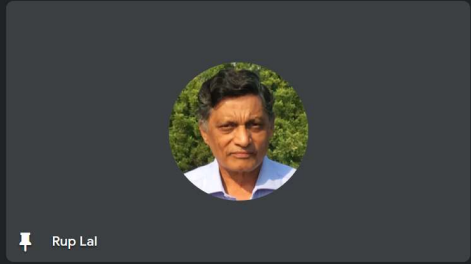
Aditi Thakur

PRIYANKA

google meet

9:18 AM | ICBB

10



10:34 AM | ICBB

