<u>**REPORT**</u>

ISME Workshop 2018
on
"Computational Biology for (Meta) Genomics Analysis"
Date: 3rd May, 2018 at 11:00 AM
Venue: Auditorium, School of Biotechnology, Kalinga Institute of Industrial Technology-KIIT

Date and Venue:

The one-day training-workshop took place on 3rd May, 2018 at 11:00 AM at **School of Biotechnology, Kalinga Institute of Industrial Technology-KIIT, Bhubaneswar, Odisha-751024, INDIA**. The training team arrived at the venue one day before, on 2nd May, 2018, in order to meet for fine-tuning of the agenda and coordination of facilitation. ISME Young Ambassador from IISER, Kolkata arrived on morning of 3rd May, 2018.

Organizing and Training Team

The members of the organizing team and training team for this programme were Prof. Rup Lal (University of Delhi); Dr. Punyasloke Bhadury (IISER, Kolkata); Dr. Vishakha Raina (School of Biotechnology, KIIT) and Prof. Mrutyunjay Suar (School of Biotechnology, KIIT); Mr. Vipin Kumar Gupta (University of Delhi); Mr. Utkarsh Sood, (University of Delhi).

Agenda

10:30-11:00	Registration
11:00-11:10	Welcome Address: Dr. Mrutyunjay Suar, Director School of Biotechnology and CEO of KIIT-TB (Organizing Secretary, AMI-2017)
11:10-11:20	"Introduction of ISME & ISME Ambassador Network" by Prof Rup Lal
11:20-11:40	Tea Break
11:40-12:00	Remarks by (ISME Young Ambassador, ISME)
	Dr. Vishakha Raina, KIIT
	Dr. Punyasloke Bhadury, IISER, Kolkata
12:00-12:20	"Insights into Genomics & Metagenomics: Our Experiences" by Prof. Rup Lal
12:20-12:45	Lunch
12:45-01:15	"Role of Computational Biology in Microbiology" by Prof Rup Lal
01:15-02:45	Module I – Introduction

Introduction to Linux/Ubuntu and Cloud Platform by Mr. Vipin Kumar Gupta (University of Delhi) and Mr. Utkarsh Sood, (University of Delhi).

Module II- Genomics
Genomic Assembly using Paired End Data and Basic of Assembly Validation using Quast by Mr. Vipin Kumar Gupta   (University of Delhi) and Mr. Utkarsh Sood, (University of Delhi)

02:45-03:15   Refreshments
03:15-04:45   Module III – Annotations
               Genomic Annotations using KEGG-KAAS-MinPath and System Biology
               Approach for Genomic Annotations by Mr. Vipin Kumar Gupta   (University of
        Delhi) and Mr. Utkarsh Sood, (University of Delhi)
04:45-05:15   Lecture on "Metabarcoding approach for exploring bacterial communities in
               coastal ecosystems" by Dr. Punyasloke Bhadury
05:15-05:30   Benefits of ISME Memberships and ISME-17th Conference
05:30-05:45   Concluding Session and Certificate Distribution
05:45-06:30   ISME Ambassador Discussion

Participants

The training-workshop was attended by more than 40 students/scholars at KIIT. Scholars from Wetland Research and Training Centre (WRTC), Govt. of Odisha and from Institute of Life Sciences (ILS), Bhubaneswar, India were also a part of this workshop.

The Training-Workshop

The training-workshop was started with an introduction by Dr. Vishakha Raina, KIIT followed by "Lighting-a-Lamp" by the training team. Prof. Suar then opened the session by welcoming the participants and training team.

Prof. Rup Lal then disseminated information about the International Society for Microbial Ecology (ISME) followed by Dr. Raina and Dr. Bhadury have given their remarks and role for being the ISME Young Ambassadors. Prof. Lal gave an introduction to the workshop, what to expect and benefits. He also gave an insight into metagenomics work in his lab and shared his experiences. He highlighted the major role of computational biology in understanding the microbial world and emphasized how it can open the path for deeper understanding of biomes.

The other two members of the Training team Mr. V. Gupta and Mr. U. Sood first started the Introductory module on Linux/Ubuntu and Cloud Platforms like Google Genomics and their uses. Then they have highlighted the computational methods for "Knowing the Quality of Raw Data" and genome assembly by various software like ABySS and Quast. Post refreshments and lunch, next module was conducted which had highlighted the concepts of genome annotation and elucidation of the metabolic pathways using KEGG-KAAS annotation servers and protein-protein interactions study using databases like STRING and software Cytoscape.

Dr. Bhadury then highlighted his experience on "Metabarcoding approach for exploring bacterial communities in coastal ecosystems" and shown the comparison of Sundarban Coastal ecosystem with few relevant ecosystems across the globe.

Prof. Lal then provided valuable information about ISME Society, membership and a short introduction on the upcoming ISME conference scheduled in August in Leipzig, Germany.

Certificates of participation were then awarded to each of the participants by Prof. Lal, Dr. Bhadurey, Dr. Raina and Dr. B. N. Banerjee (Faculty, School of Biotechnology). The organizing team was felicitated with a memento and certificate of organizing were awarded. The final concluding remarks were given by Prof. Lal and Dr. Raina.

A short discussion later took place between the Senior Ambassador and Young Ambassadors for future workshops. It was planned that the next workshop would be conducted at IISER, Kolkata (dates to be finalized). A short visit was conducted in the evening to KIIT Technology Business Incubator (KIIT-TBI). The training-workshop was closed at 6:30PM.

Dr. Vishakha Raina welcomed all the dignitaries and participants

Lighting-a-Lamp by Training and organizing Team and Prof. M. Suar
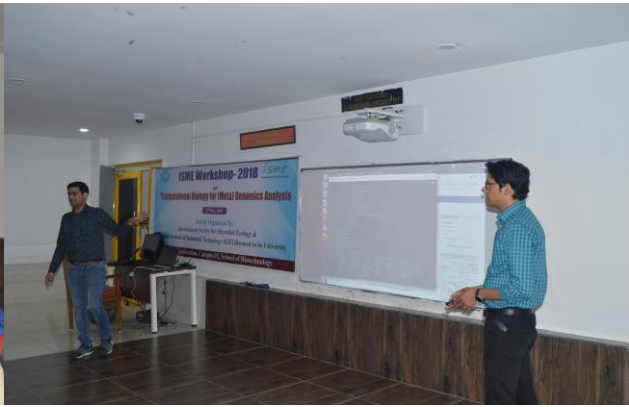
Welcome address by Prof. Mrutyunjay Suar, Head School of Biotechnology, KIIT

Prof. Rup Lal sharing information about the ISME and gave an highlights of his experience on metagneomics in microbial ecology

Remarks by ISME Young Ambassadors Dr. Vishakha Raina (Left) and Dr. Punyasloke Bhadurey (Right)

Mr. Vipin K Gupta and Mr. Utkarsh Sood explaining the various Modules of this workshop

Dr. Bhadurey explaining Metabarcoding approach for exploring bacterial communities in coastal ecosystems

Felicitation of the Training Team

Certificate Distribution

ISME Workshop at KIIT