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Scheme for Promotion of Academic and Research Collaboration

## Indo-Finnish Research Symposium and Workshop

On

“Microbiome Research & Data Analysis”

In

Department of Zoology, SPPU, Pune-411007

From

February 21<sup>st</sup> to 24<sup>th</sup>, 2023 sponsored by SPARC, MHRD, India

Registration Link: <https://form.123formbuilder.com/6359987/student-registration-form>

### Preamble:

The importance and volume of microbiome research has increased rapidly during the last decade. This symposium will bring together researchers from various fields to share their experiences on the relevant methodology and applications, and provides hands on bioinformatics training in for the next generation of researchers.

Savitribai Phule Pune University (formerly university of Pune) is organizing four days' Indo-Finnish Research Symposium and workshop on “**Microbiome Research & Data Analysis**” sponsored by SPARC, MHRD, Govt. of India. The Research Symposium is scheduled on 21<sup>st</sup> to 24<sup>th</sup> February, 2023. During days 2-4 there will be additional hands-on workshop in microbiome data analysis for post-graduate & Ph.D students. The faculty outside Pune and India will be presenting and participating in online mode.

**Contents:** The presentations of the research symposium can be viewed online and cover broad areas ranging from human to marine microbiome its computational analysis and application in health, disease-states, environment and industry. The hands-on training workshop will cover the use of R/Bioconductor in microbiome data analysis.

### Patron:

Prof. (Dr.) S.V Pandit  
*Head, Department of Zoology*  
Prof. (Emeritus) Saroj Ghaskadbi  
*Institutional Co-ordinator, SPARC*

### Advisory Committee:

Prof. (Retd.) Kalpana Pai  
*Former Head, Department of Zoology*

### Organizers & Conveners:

Dr. Richa Ashma  
*Indian PI-SPARC*

Prof. Ameeta Ravikumar  
*Indian Co-PI-SPARC*

Dr. Leo Lahti  
*Foreign PI-SPARC*

Dr. Eveliina Munukka  
*Foreign Co-PI-SPARC*

**Inauguration Ceremony:** 9:45 A.M. – 10:00 A.M.

9.45 A.M.- 9.50 A.M.: Participants Login for Research Seminar on Day-1

Welcome address by HOD, Zoology

9:50 A.M.- 9.55 A.M.: Address by Institutional SPARC Co-ordinator (Prof. Saroj Ghaskadbi)

9:55 A.M.- 10:00 A.M.: Inauguration of Research Symposium & Workshop (Prof. Ameeta Ravikumar)



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<b>Microbiome Research Symposium &amp; Data Analysis Workshop</b>		
<b>Day 1</b>	<b>21<sup>th</sup> February, 2023 (Tuesday)</b>	<b>Speaker</b>
10.00 – 11.00 am	Title: To be announced (Online Mode)	Dr. Yogesh Souche, NCCS, Pune
11.00 – 11.30 am	<b>Hi-Tea break</b>	
11.30 – 12.30 pm	Title: To be announced (Online Mode)	Dr. Eveliina Munukka Microbiome biobank Faculty of Medicine University of Turku, Finland (Co-PI SPARC)
12.30– 1.30 pm	Computational approaches for obtaining microbiome-based biomarkers for health and wellness (Offline Mode)	Dr. Sharmila Mande Distinguished Chief Scientist, TCS Research, India.
01.30 – 02.30 pm	<b>Discussion and Lunch Break</b>	
02.30 – 3.30 pm	From Genomes To Systems-Level Models: Leveraging Constraints-based Flux Balance Analysis for Clinical Applications. (Offline Mode)	Dr. Anu Ragunathan National Chemical Laboratory, Pune, India
3.30 – 3.45 pm	<b>Discussion and Tea break</b>	
3.45 – 4.45 pm	The Human Microbiome in India: A Cultural and Biological Perspective (Offline Mode)	Dr. Dhiraj Dhotre, NCCS, Pune

<b>Day - 2</b>	<b>22<sup>nd</sup> February, 2023 (Wednesday)</b>	<b>Speaker</b>
10.00 – 11.00 am	Title: To be announced (Offline Mode)	Prof. Ameeta Ravikumar Emeritus Prof. IBB, SPPU
11.00 – 11.15 am	<b>Discussion and Tea Break</b>	
11.15 – 12.15 pm	Statistical and machine learning techniques in microbiome research (Offline Mode)	Dr. Leo Lahti Department of Computing, University of Turku, Finland (PI- SPARC)
12.20 – 01.20 pm	Determinants of antimicrobial resistance genes in the FINRISK cohort (Online Mode)	Dr. Katariina Pärnänen Postdoctoral Researcher University of Turku, Finland
01.20 – 2.15 pm	<b>Discussion and Lunch Break</b>	
2.15 - 3.15 pm	Data Analysis (Hands-on)- (Offline Mode)	
3.15- 3.30 pm	<b>Discussion and Tea Break</b>	
3.30 – 5.30 pm	Data Analysis (Hands-on)- (Offline Mode)	



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Day -3	23 <sup>rd</sup> February, 2023 (Thursday)	Speaker
10.00 – 11.00 am	Exploring the Ocean Microbiome (Online Mode)	Prof. Deepti Deobagkar Former ISRO Chair, ISRO-SPPU cell Former Professor & Head Department of Zoology, Savitribai Phule Pune University
11.00 – 11.15am	<b>Discussion and Tea Break</b>	
11.15 – 12.15 am	Ecosystem services provided by the environmental microbiome. (Online Mode)	Dr. Atya Kapley Chief Scientist & Head CSIR-NEERI, Nagpur, India
12.20 – 1.20 pm	A community challenge to predict incident heart failure risk based on gut microbiome composition: FINRISK DREAM Challenge. (Online Mode)	Dr. Pande Putu Erawijantari Postdoctoral researcher University of Turku, Finland
01.20 – 2.15 pm	<b>Discussion and Lunch Break</b>	
2.15 - 3.15 pm	Data Analysis (Hands-on)- (Offline Mode)	
3.15- 3.30 pm	<b>Discussion and Tea Break</b>	
3.30 – 5.30 pm	Data Analysis (Hands-on)- (Offline Mode)	

Day 4	24 <sup>th</sup> February, 2023 (Friday)	Speaker
11.00 – 12.00 pm	Early life gut microbiota, neuropsychological outcomes, and prenatal stress (Online Mode)	Dr. Anna Aatsinki Postdoctoral Researcher, Centre for Pop. Health Res. University of Turku, Finland
12.00 – 12.15 pm	<b>Discussion and Tea Break</b>	
12.15 - 01.15 pm	Machine learning aspects and new methods in Microbiome data analysis (Online Mode)	Dr. Matti Ruuskanen Postdoctoral researcher University of Turku, Finland
01.15 – 2.15 pm	<b>Discussion and Lunch Break</b>	
2.15 -3.15 pm	Data Analysis (Hands-on)- (Offline Mode)	
3.15 – 3.30 pm	<b>Discussion and Tea Break</b>	
3.30 – 5.30 pm	Data Analysis (Hands-on)- (Offline Mode)	
5.30 – 5.35 pm	Valedictory: Concluding Remarks by HOD Biotechnology Department feed-back by participants vote of thanks.	Dr. Richa Ashma (PI- SPARC)

**Target audience for Research Symposium:** M.Sc Microbiology/ Life Sciences & Ph.D students  
(Registration not required)



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(N=100 apart from our M.Sc and Ph.D students)

**Target audience for workshop:** M.Sc. & Ph.D students having basic knowledge of R or regularly using R/Bioconductor packages in microbiome research (Registration compulsory for certificate)

**Number of participants for workshop:** Participants will be shortlisted based on their application and will be informed through email. They are requested to bring their own laptops for hands-on workshop. Prior instructions will be given through mail regarding software and tools downloading.

**Registration Fee:** Nil

**Important dates of Research Seminar & Workshop:**

Release of the circular: **7<sup>th</sup> February, 2023**

Last date of Registration: **15<sup>th</sup> February, 2023**

Research Seminar and Workshop: **21<sup>st</sup> February to 24<sup>th</sup> February, 2023.**

**Contact details:**

<b>Workshop Venue:</b> Digital Classroom, (eCDLIC) Research Foundation Park, Savitribai Phule Pune University, Pune 411007, India	Email: <a href="mailto:richaashma@unipune.ac.in">richaashma@unipune.ac.in</a> , <a href="mailto:ameeta@unipune.ac.in">ameeta@unipune.ac.in</a> Phone: +91 20 25690195 / 25692039
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