The Journey...

MARCH 2020

ASM-IUSSTF
INDO-US PROFESSORSHIP IN
MICROBIOLOGY
<table>
<thead>
<tr>
<th>Country/Region</th>
<th>28-Day Cases</th>
<th>28-Day Deaths</th>
<th>28-Day Vaccine Doses Administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>2,284,442</td>
<td>33,068</td>
<td>772,570</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1,091,755</td>
<td>4,424</td>
<td>144,414</td>
</tr>
<tr>
<td>Russia</td>
<td>1,055,485</td>
<td>32,813</td>
<td>261,526</td>
</tr>
<tr>
<td>Germany</td>
<td>963,137</td>
<td>4,289</td>
<td>99,514</td>
</tr>
<tr>
<td>Turkey</td>
<td>718,942</td>
<td>5,891</td>
<td>75,235</td>
</tr>
<tr>
<td>Ukraine</td>
<td>588,149</td>
<td>18,250</td>
<td>87,371</td>
</tr>
<tr>
<td>France</td>
<td>383,035</td>
<td>2,401</td>
<td>140,880</td>
</tr>
</tbody>
</table>
The Journey...
GTN Smörgåsbord

Over 1100 Participants and counting!

https://galaxyproject.org/events/2021-02-smorgasbord/
• Reached out to students and researchers in India via twitter, emails, etc.

• Selected researchers based on their CV and statement on why they were interested in the workshop.

• 24 registered students from all across India along with 13 students from IMTech attended the workshop.
SPEAKERS/INSTRUCTORS

- Robert Hettich (Oak Ridge National Laboratory, Oak Ridge, TN)
- Dave Clements (Galaxy Project, Johns Hopkins University)
- Pratik Jagtap (Galaxy-P Team, University of Minnesota, MN)
- Saskia Hiltemann (Erasmus University Medical Center, Hague)
- Yogesh Shouche (National Centre for Cell Science, Pune)
- Dr. Gareth Price (QCIF Facility for Advanced Bioinformatics, St. Lucia)
- Berenice Batut (University of Freiburg, Freiburg)
- Manoj Kumar (CSIR-IMTECH, India)
- Subina Mehta (Galaxy-P Team, University of Minnesota, MN)
- Brook Nunn (University of Washington, Seattle, WA)
- Anshu Bhardwaj (CSIR-IMTECH, India)
- Paul Wilmes (University of Luxembourg, Luxembourg)
- Timothy Griffin (University of Minnesota, MN)

AGENDA: https://galaxyproject.org/events/2021-11-microbiomes/home/
The Journey...

MARCH 2020

ASM-IUSSTF INDO-US PROFESSORSHIP IN MICROBIOLOGY

DECEMBER 2019

SEPTEMBER 2021

GTN Smörgåsbord

Over 1100 Participants and counting!

FEBRUARY 2021

ANALYSIS OF FUNCTIONS EXPRESSED BY MICROBIOMES

Online Workshop
15-24 November 2021

Funded by American Society of Microbiology (ASM) and Indo-United States Science and Technology Forum (IUSSTF).

Hosted by CSR-IMTech, Chandigarh and Galaxy-P Team, Minneapolis.

NOVEMBER 2021

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https://galaxyproject.org/events/2021-11-microbiomes/home/
The Feedback...

• BACKGROUND
• WHAT DID YOU LEARN?
• HOW WILL YOU USE THIS IN YOUR RESEARCH/CAREER?
  • FEEDBACK ON THE WORKSHOP
  • FOLLOW UP
The Feedback...

❖ Positives:
• Registered attendees learnt about Galaxy platform, metagenomics, metatranscriptomics and metaproteomics.
• GTN as a Resource for learning about tools and workflows.
• Great opportunity to listen to eminent scientists (‘learning from artisans’).
• Quiz sessions were great and educational!

❖ Room for Improvement:
• The workshop levels can be BASIC, INTERMEDIATE AND ADVANCED – with opportunity to analyze your own data.
• Follow up workshops with ‘hackathon’, ‘Meet the Speakers” as themes.
• Running and completing workflows was challenging for some (However, could complete it later).
The Feedback...

My experience of using galaxy

Command line interphase
Learning: Difficult
Execution: Easy

Galaxy
Learning: Easy
Execution: Easy

THE GALAXY

Galaxy of tools
Metabolomics
Metatranscriptomics
Metagenomics
Microbiome
AMRs
Many more...

Dig more....know more

IF YOU ASK, YOU WILL NEVER KNOW.
BUT,
IF YOU KNOW, YOU NEED ONLY ASK...
The Feedback...

Describe Galaxy in One Word...
- Reproducible
- accessibility
- helpful!
- Wet and dry research
- Easy to use
- starting-point
- User-friendly
- Awesome
- Marvellous
- Reproducibility
- Saviour
- metagenomics
- easy data analyzer
- Smooth

Describe Metagenomics in One Word...
- unknown_world
- Communities
- Interesting
- comprehensive
- Microbiome
- Delineate
- SISPA and NGS Techni
- diversity
- Virome
- Unravel
- genes collection
- eDNA
- all-in-one
- Pool of information
- Abundance

Describe Metatranscriptomics in One Word...
- Functional expression
- Master of Dry Lab
- RNA pool
- RNAiome
- Collective analysis
- Global RNA
- half way
- metaRNA
- community expressions
- Microbes action plan
- Expression

Describe Metaproteomics in One Word...
- Functional
- annotation
- Functions
- Function
- Intriguing!
- action of microbes
- large scale
- many proteins
- Processes
- mass-spec
- expression
- complex data
- Application of metagenomic
The Feedback...

interactive

10 days cowabunga journey!
Box in a box information
Exploration
Galaxomics
Illuminating
functional micro-omics
Microbiome
Happy to be a part
functional meta-omics
statified
Eminently Excellent
Helpful
Exciting

Enriching
Outstanding
Interdisciplinary
Educational
FUTURE PLANS

• Continued access to the training material and Slack channel.
• Follow up with research groups for some data-intensive projects.
• Follow-up workshop after 3 to 6 months or a year.
• Project-driven hackathon?
• Basic workshop for college students?
• Workshop in other parts of the world?
QUIZ WINNERS!

Day One of the Online Microbiome Workshop

1. Tanisha
   - Score: 10636
   - Accuracy: 13 out of 15

Day Two of the Online Microbiome Workshop

1. Hema
   - Score: 11639
   - Accuracy: 14 out of 17

2. Pratheusa
   - Score: 11286
   - Accuracy: 13 out of 17

3. Adhip
   - Score: 11146
   - Accuracy: 13 out of 17

Runners-up:

4. Samir D...
5. Saurabh

Day 3 Analysis of Functions Expressed by Microbiomes

1. Sakshi kamboj
   - Score: 9496
   - Accuracy: 13 out of 15

2. Adhip
   - Score: 11641
   - Accuracy: 13 out of 15

3. Samir
   - Score: 8866
   - Accuracy: 10 out of 15

Day 4 Analysis of Functions Expressed by Microbiomes

1. Sakshi kamboj
   - Score: 17291
   - Accuracy: 17 out of 19

2. Adhip
   - Score: 16025
   - Accuracy: 17 out of 19

3. Saurabh
   - Score: 11487
   - Accuracy: 11 out of 19
THANK YOU!

RESEARCHERS WHO ATTENDED TALKS & WORKSHOP

INSTRUCTORS & SPEAKERS