

Science Setu Webinars by NIPGR
VIRTUAL VISIT TO NIPGR, NEW DELHI

Press- Note

Date: 26-03-2021, Friday

Resource person: Dr. Gitanjali Yadav, Scientist V, NIPGR

The Department of Biotechnology, Government of India, has planned “Science Setu” as a virtual platform to connect research Institutes with undergraduate students. Under this, our college has been assigned to National Institute of Plant Genome Research (NIPGR), New Delhi. NIPGR is an autonomous institution aided by the Department of Biotechnology. Research at NIPGR focuses on functional, structural, evolutionary and applied genomics of plants, including crop plants. Through the Science Setu program, our students and faculty virtually connect with NIPGR, New Delhi and got to know about the multifarious kinds of plant based research. It is a unique opportunity for science students at undergraduate level to get an exposure to high-level research.

Dr. Amarjeet Singh, Scientist III, NIPGR gave welcome note on this event. **Resource person: Dr. Gitanjali Yadav, Scientist V, NIPGR** started her lecture by encouraging the researchers to learn and manage data science. She discussed about the ability of plants to communicate with their environment and translate this information into active movement of their organs. She told that plants send chemical signals to communicate with their environment. She stressed on the isoprenoids which are the most diverse amongst plant chemicals. She focused on the collection of emission profiles, measuring the terpenomes, emission data analysis and building the dictionaries of these chemical compounds. She concluded her lecture discussing about not to cultivate invasive species as it is destroying livelihood in India. She explained the genomics of the various plants and discussed about the herbarium. She also told the students about the summer research fellowship and encouraged the undergraduate and postgraduate students to participate in such kind of program. Faculty of Science and total 50 science students attended the event. Dr. Pinky Agarwal, Scientist, NIPGR attended the questions of the participant’s and gave vote of thanks. It was an intellectual and exciting experience for all the participants.

Event is in progress... x +

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Viewing Gitanjali Yadav's screen

The Critical Need for Data Science & Data Scientists

@gilienv

If the next 50 years of Biology can be summed into one word, it would be "integration."

Already! You may be spending more time on the computer and the Internet to generate and describe your data and experiments, to analyze it and find other people's data relevant for comparison, to find existing knowledge in the field and to relate it to your results into the current body of knowledge, and to publish this to the world.

HERE'S WHAT "YOU" NEED TO DO

Learn Data Science!

...like YESTERDAY!

Chat

from Gitanjali Yadav to Everyone:
Great to see students from so many locations!! THANKS for joining! 15:06

from palak chandel to Everyone:
palak chandel BSC medical sem 3 207004 15:07

from Naveget Gill to Everyone:
Good afternoon everyone, Ms. Naveget, Kanya Maha Vidyalaya, Jalandhar 15:07

from kritika thakur to Everyone:
kritika thakur Bsc medical sem3 Kanya Mahavidyalaya Jalandhar 15:08

Send to: Host

Type your message here

15:10 26-03-2021

Event is in progress... x +

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Viewing Gitanjali Yadav's screen

CAN PLANTS THINK?!

Ancient scriptures carry information about plant life

Aristotle said that plants have complex Inner Life including Thoughts, Memories, Dreams and Future Plans!

Charles Darwin was the first who noted the ability of plants to communicate with their environment and translate this information into active movements of their organs. (1880)

JC Bose (1903) showed experimentally that plants have cognitive abilities!

Barbara McClintock called plant cells "thoughtful" (1940)

Chat

Kanya Maha Vidyalaya, Jalandhar 15:07

from kritika thakur to Everyone:
kritika thakur Bsc medical sem3 Kanya Mahavidyalaya Jalandhar 15:08

from Pinky Agarwal to All Attendees:
Requesting all participants again to type in the names of your college. Thanks. 15:14

from Damanjeet to Everyone:
Damanjeet kaur 15:14
Damanjeet kaur Bsc.Biotechnology sem 3 206654 Kanya Maha Vidyalaya, Jalandhar 15:15

Send to: Host

Type your message here

15:19 26-03-2021

Event is in progress... x +

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Viewing Gitanjali Yadav's screen

A Most fascinating Area in Modern Science!

Plants carefully consider their environment, speculate on the future, conquer territory and enemies, and are often capable of

15:26 26-03-2021

Chat

from Damanjeet to Everyone:

Damanjeet kaur 15:14
Damanjeet kaur Bsc.Biotechnology sem 3
206654 Kanya Maha Vidyalaya, Jalandhar 15:15

from shweeta N Hegde to Everyone:

Transposons! 15:21

from Pooja to Everyone:

it was for transposons in maize 15:21

from anushka Dutta to Everyone:

for transposons 15:21
1983 15:22

Send to: Host

Type your message here

Event is in progress... x +

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Viewing Gitanjali Yadav's screen

Our Research : Plant volatiles

The Invisible Bouquet

INTRODUCTION

OF THE THOUSANDS OF DIFFERENT METABOLITES THAT PLANTS CAN PRODUCE, many from a cloud around the plant. These volatile compounds reflect the metabolic complexity of plants and also serve a diversity of functions. Volatile compounds signal opportunity to insects, pathogens, and pollinators alike. In a classic case of "the enemy of my enemy is my friend," plants being nibbled on by insect herbivores can produce volatile signals that call in other insects to prey on the herbivores. For plants that flower

page 806

Plant Volatiles

15:29 26-03-2021

Chat

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Viewing Gitanjali Yadav's screen



- ♦ Alteration in Emission
- ♦ Within and Between
- ♦ Species, Stages, Tissues, Conditions

ISOPRENOIDS | TERPENOIDS : MOST DIVERSE AMONGST PLANT CHEMICALS

The Variable Terpenome

Collecting Emission Profiles
Analyzing Emissions (Invasive Species)
Genomics @Herbarium

6), Kumar et al., Zenodo (2020)

Gitanjali Yadav

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1983 15:22

from shweata N Hegde to Everyone: lavender? 15:30

from Akrit Kaur Gill to Everyone: lavender 15:30

Send to: Host

Type your message here


15:32 26-03-2021

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Expanding online Mentorship!



Join us!!
OPENVIRUS

DEPARTMENT OF SCIENCE & TECHNOLOGY
Government of India

Indian Academy of Sciences
Summer Research Fellowship

UNIVERSITY OF CAMBRIDGE

Focus Area Science Technology Summer Fellowship (FAST) 2019

gillenv

Gitanjali Yadav

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Type your message here

15:38 26-03-2021

< Chat with everyone

Hi Everyone

I'm Jannat from KMV COLLEGE
JALANDHAR

U

Urvashi 14:59

Urvashi
student at kanya maha vidyalaya
Jalandhar

R

Radhika 15:00

Radhika student of KMV college
jalandhar

A

Akanksha 15:01

Akanksha Student of Kanya Maha
vidyalaya Jalandhar

GK

gagandip kaur 15:03

Gagandip student of doaba college .
jalandhar

MA

Michelle Arland 15:04

Michelle Arland from Ben-Gurion
University, Israel

GY

Gitanjali Yadav 15:06

Great to see students from so many
locations!! THANKS for joining!



< Chat with everyone

DM Dr. Reema Mishra 14:58

Dr. Reema Mishra, Gargi College,
University of Delhi

Dr. Neetu, Kanya Maha Vidyalaya
Jalandhar

AG Akrit Kaur Gill 14:58

Akrit kaur gill
From Kanya maha vidyalaya
Jalandhar

AD anushka Dutta 14:58

Hello everyone. I am Anushka
from Botany department, Calcutta
University.

PK poonam k 14:58

Dr poonam Khullar
Bbk dav college for women
Amritsar

MN Mushtaq Ahmad Najar 14:59

Hii I am Mushtaq Ahmad Najar
from division of plant biology Bose
institute Kolkata

< Chat with everyone

DM Dr. Reema Mishra 14:58

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S

shagun 14:59

shagun student of kanya maha
vidyalaya jalandhar

JK

Jannat Kainth 14:59

Hello Everyone
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JALANDHAR

U

Urvashi 14:59

Urvashi
student at kanya maha vidyalaya
Jalandhar

R

Radhika 15:00

Radhika student of KMV college
jalandhar

A

Akanksha 15:01

Akanksha Student of Kanya Maha
vidyalaya Jalandhar

GK

gagandip kaur 15:03

15:10   •



Chat with everyone

Michelle Ariand from Ben-Gurion University, Israel



Gitanjali Yadav 15:06

Great to see students from so many locations!! THANKS



palak chandel 15:07

palak chandel

BSC medical sem 3

[207004](#)



Navgeet Gill 15:07

Good afternoon everyone,

Enter message here.

Need for Data Science & Data Scientist



Years of Biology can be summed into one word: "Integration."



more time on the computer, our data and experim

Gitanjali Yadav is sharing.



ESsoiLDB (> 150,000 RECORDS EXTRACTED FROM LITERATURE)

Collating Emission Data

Terpenome Repository

100 years of Publications
 >2000 species
 >8000 compounds
 Contextual Information

Freely Available at www.niper.ac.in/EssoiLDB

Kumari et al, Database (2013) Kumari et al, Phytochem Rev (2013)



Gitanjali Yadav



15:57



< Chat with everyone

True ma'am...

TS

Tanu sharma 15:55

Tanu sharma ,bsc biotechnology;
Kanya Maha vidyalaya Jalandhar

MN

Mushtaq Ahmad Najar 15:56

Thank you Mam, for your kind word.

PK

poonam k 15:56

please share link for further details

NP

Neha Parveen 15:56

Great learning experience!!!
Thank you ma'am.

MA

Michelle Arland 15:56

Thank you for your inspiring talk (got
to know from your twitter account).
I would like to know more about
the ways to proceed with data from
metabolomics and connect it with
transcriptome data etc

15:56

Good to know about your summer
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