

Dr. Ambedkar College, Deekshabhoomi, Nagpur

"National Webinar"

Organised by

Post Graduate Department of Chemistry

Under the Aegis of

ACS International Student Chapter, DACN

Resource Person: 1. Prof. Sheshanath V. Bhosale

2. Dr. Vinod Kumar Tiwari

11th September 2021

Dr. Ambedkar College, Deekshabhoomi, Nagpur

Department of Chemistry

Notice

Date: 09.09.2021

Department of Chemistry under the aegis of ACS International Student Chapter, Dr. Ambedkar College, Deekshabhoomi, Nagpur has organized a National Webinar via Zoom meeting on 11th September 2021 from 12 pm onwards.

All the B.Sc., M.Sc. Students, research scholars and faculty members are requested to attend the program.



(Prof. Dr. D. Y. Panhekar)

HOD, Chemistry

Head, ACS Chapter DACN



(Dr. Mrs. B. A. Mehere)

Principal

Image 1: Notice of the Webinar

REPORT

Under the aegis of American Chemical Society (ACS) International Student Chapter, DACN; Department of Chemistry organized a Virtual National Webinar for UG and PG Students with Chemistry as one of core Subject, on **11th September 2021** via Zoom meeting app. For this program, two Resource persons who added a spark in the young minds were **Prof. Sheshanath V. Bhosale**, from Goa University and **Dr. Vinod Kumar Tiwari** from Banaras Hindu University. A responsibility to motivate & guide Students was ably taken by a resource person. The purpose of this webinar was to create awareness about the importance of current research trends in chemical sciences and its usefulness in day-to-day life. As, Research in any area plays the crucial role in developing and broadening the knowledge in that particular area. Around 95+ participants, including faculty members, teaching staff, UG and PG students actively participated in this webinar.

The entire webinar program was conducted in two sessions. Webinar was hosted by ACS (International Student Chapter) Executive Secretary Ms. Swarnima Burande. The webinar had been started by the program welcome remarks delivered by the respected Principal of the college Dr. Mrs. B. A. Mehere mam. She mentioned the importance and benefits of chemistry to the human kind.

The Introductory remark as well as overview about this National Webinar was proposed by Prof. Dr. Mrs. D. Y. Panhekar Mam, Head & PG Coordinator, Faculty advisor-American Chemical Society (ACS) International Student Chapter. Continuing this, Ms. Anisha Rokade, vice-president of ACS (International Student Chapter) gave an introduction of the first resources person of the webinar Professor Sheshanath V. Bhosale, UGC-Professor (FRSC, FMASc, ARC-FF, ARC-APD, MRACI), Goa University. Sir has worked in several scientific and research organizations in various countries that includes Germany, Switzerland, Australia and currently he is working as a UGC-Professor in School of Chemical Sciences, Goa University, India. To mention, Sir has published 240 peer reviewed publications with 90% of publications in **A*/A journals** including 25 cover page articles and more than 6800 overall citations with 1 book and 9 book chapters on his credit along with invited talk/key/plenary lectures in ~100 conferences. Prof. Bhosale Sir supervised 9 PhD students and guided 01 Master's as well as 04 honors students during their research project. He delivered his talk in this webinar on the topic '**Concepts Transfer from Nature**'.

The key findings in Prof. Sheshanath Bhosale Sir's talk were:

- Mimicking natural concepts using supramolecular self-assembly of small organic molecules
- Supramolecular chemistry: Utilizing concepts from Nature, how supramolecular chemistry helps to carry out most operations essential to life, photosynthesis, respiration, etc.
- PRC (Photosynthetic Reaction Centre): Nanoscale cavities capable of molecular recognition. i.e., few artificial systems have been used in last 03 decades for the entrapment and ordering of molecules

- Functional yacto-wells for biological application, Naphthalene diimides, Photoluminescent material, Porphyrin Nanostructures, Dyes for solar cell application.

He also mentioned the upcoming research trends and the biological/pharmacological significance of Vanadium pentoxide in the treatment of breast cancer, which may open a new door in medical sciences, too.

Session was a great source of learning. After the completion of this first lecture session, Question Answer session was conducted by Ms. Indrakshi Surpatne, Joint Secretary, ACS (International Student Chapter), for clearing the ideas of students upon this subject. At the end of the first session Dr. Ratnadeep Sawant Sir proposed a formal vote of thanks.

The second session of the webinar was delivered by the second resource person Dr. Vinod Kumar Tiwari on the topic '**Synthetic Chemists and Our Society**'. Ms. Janki Paravadia, Joint Secretary, ACS Intl. Student Chapter, DACN introduced the speaker. Sir is working as a Professor in Department of Chemistry, Banaras Hindu University, Varanasi. Dr. Tiwari Sir has more than 140 publications, 8 patents, 19 book chapter & winner of many national and International Award under his credit. His research area is mainly focused on Carbohydrates. The focus of the webinar was on human health, organic compounds and its relationship with human behaviour.

The key points of the second session chaired by Dr. Vinod Kumar Tiwari were:

- Synthetic Chemistry has a great role for making our life easy, healthy and pleasant.
- Chemistry has enormous potential to construct diverse simple to Complex glycol-conjugates including glycol-dendrimers of wide applications.
- Molecular structure of organic compounds as medicine like Paracetamol, Aspirin, Diclofenac, Brufen, Quinine, Vanillin etc.
- Discussion on what will be the safest antibiotic useful for the treatment of number of bacterial infections like Chloramphenicol.
- Discussion on highly expeditious synthesis of bicyclic Imino-sugar.
- He added about the great discoveries by Thomas Kealy & Peter Pauson and the Development of sugar-based antitubercular agents.
- Carbohydrates containing molecule have been recognised as an attractive scaffold in a drug discovery and development.
- He gave an insight on how chemistry plays an important role in synthesizing life-saving drugs, which has opened many ways in understanding drug delivery systems.

The session was very informative for every participant. The session was followed by the Question answer round by Ms. Indrakshi Surpatane. The formal vote of thanks was given by Mr. Parag Panse sir by his heart-warming words. Mr. Anuj Jain, Ms. Anisha Rokade, Mr. Himanshu Bathav, Mr. Himanshu Dhawade, Ms. Vrushali Khadatkhar, Ms. Srushti Wandhare, Ms. Anushka Chinchmalatpure, Ms. Ankita Patel, Ms. Ritu Patle, Ms. Swarnima Burande, Ms. Sneha Burse, Ms. Ankita Khonde, Ms. Shriya Thakre, Ms. Janhvi Gawande and others worked hard for the success of this webinar. The faculty members of the Department of Chemistry Prof. Dr. V. M. Shivankar Sir, Dr. Mrs. D. M. Borikar, Dr. N. G. Telkapalliwar, Dr. Ratnadeep Sawant & Mr. Parag Panse graced the occasion with their valuable inputs.





ACS Intl. Student Chapter
Dr. Ambedkar College



Dr. Ambedkar College, Deekshabhoomi, Nagpur
Department of Chemistry
ACS International Student Chapter
Organizes

National Webinar



Dr. Vinod Kumar Tiwari
Professor, Organic Chemistry
Department of Chemistry, Institute of Science
Banaras Hindu University, Varanasi
Topic : Synthetic Chemists and Our Society



Prof. Sheshanath Bhosale
UGC-Professor, FRSC, ARC-FF, ARC-APD, MRACI
School of Chemical Sciences, Goa University, Goa
Topic : Concept Transfer From Nature

Patrons:
Hon'ble Bhante Arya Nagarjun Surei Sasal
Chairman P. P. Dr. Babasaheb Ambedkar Smarak Samiti, Nagpur
Dr. Sudhir Fulzele
Secretary P. P. Dr. Babasaheb Ambedkar Smarak Samiti, Nagpur

Chairman:
Dr. Mrs. B. A. Mehere
Principal, Dr. Ambedkar College, Deekshabhoomi, Nagpur

Convener:
Prof. Dr. Deepa Panhekar
Head-Department of Chemistry,
Faculty Advisor-ACS International Student Chapter, DACN

Organising Secretary:
Dr. Ratnadeep Sawant
Asst. Prof., Department of Chemistry
Mr. Parag Panse
Asst. Prof., Department of Chemistry

Joint Organizing Secretary:
Anuj Jain, President, ACS Chapter, DACN
Himanshu Bathav, Secretary, ACS Chapter, DACN

11th Sept. 2021, Saturday
Time: 12.00 pm onwards

[Register Now](#)

<https://forms.gle/3kaEQ1C15CGfB3Jp6>

 **FEEDBACK**
<https://forms.gle/ubkNBYN9oMeVAXrj9>

 **zoom**
<https://us06web.zoom.us/j/88341734428?pwd=ekVTekV3OThiTmE0NDBSdjcwQ0Vldz09>
Meeting ID: 883 4173 4428
Passcode: 757000

Image 2: Brochure of the National Webinar

Registration link: <https://forms.gle/3kaEQ1C15CGfB3Jp6>

Feedback form link: <https://forms.gle/ubkNBYN9oMeVAXrj9>

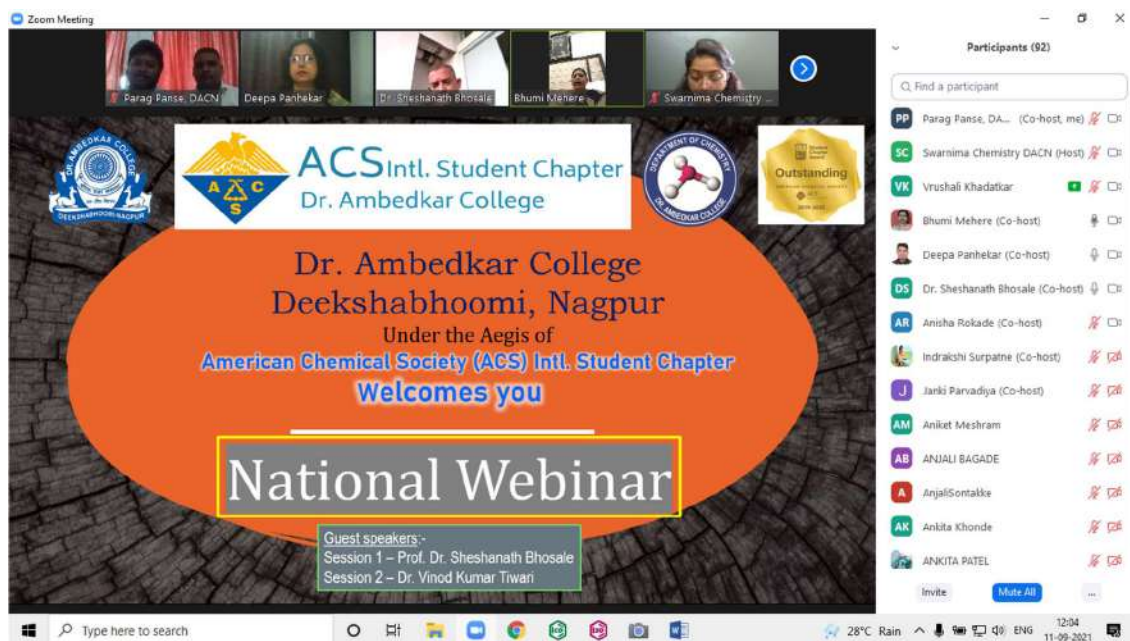
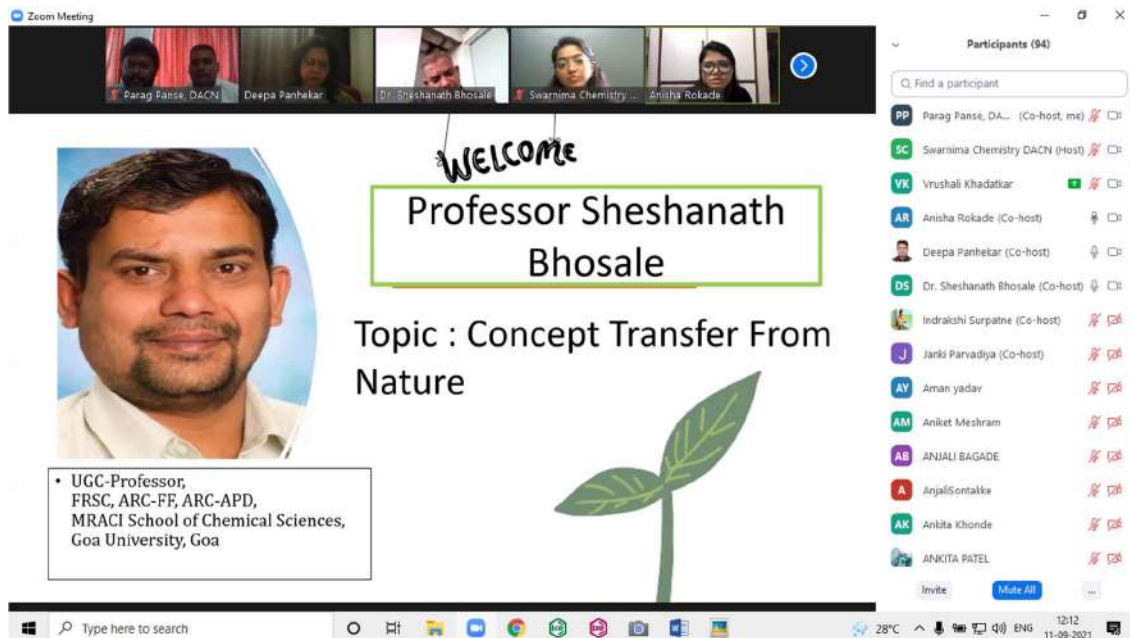


Image 3: Resource Persons, ACS Team Members, faculty members along with the Students Participated in this webinar.

Session 1: 'Concepts Transfer from Nature' delivered by Prof. Sheshanath V. Bhosale



Zoom Meeting

Participants (94)

Find a participant

PP Parag Fpanse, DA... (Co-host, me) [M] [V] [A]

SC Swarnima Chemistry DACN (Host) [M] [V] [A]

DS Dr. Sheshanath B... (Co-host) [M] [V] [A]

Deepa Panhekar (Co-host) [M] [V] [A]

AR Anisha Rokade (Co-host) [M] [V] [A]

Indrakshi Surpatne (Co-host) [M] [V] [A]

J Janki Parvadiya (Co-host) [M] [V] [A]

AY Aman yadav [M] [V] [A]

AM Aniket Meshram [M] [V] [A]

AB ANJALI BAGADE [M] [V] [A]

A AnjaliSontalke [M] [V] [A]

AK Ankita Khonde [M] [V] [A]

ANKITA PATEL [M] [V] [A]

AJ Anuj Jain [M] [V] [A]

Invite Mute All

PowerPoint Slide Show - [Prof. Sheshanath] - PowerPoint

"Concepts Transfers from Nature"

Mimicking Natural Concepts using Supramolecular Self-Assembly of Small Organic Molecules

Dr. Sheshanath V. Bhosale
 UGC-FRP Professor
 FRSC, MRACI, ARC-Future Fellow, ARC-APD fellow
 School of Chemical Sciences
 Goa University, Goa, India
 svbhosale@unigoa.ac.in; bsheshanath@gmail.com

Slide 1 of 64

Type here to search

28°C 12:16 11-09-2021

Zoom Meeting

Participants (94)

Find a participant

PP Parag Fpanse, DA... (Co-host, me) [M] [V] [A]

SC Swarnima Chemistry DACN (Host) [M] [V] [A]

DS Dr. Sheshanath B... (Co-host) [M] [V] [A]

Deepa Panhekar (Co-host) [M] [V] [A]

AR Anisha Rokade (Co-host) [M] [V] [A]

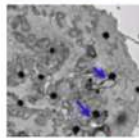
Swarnima Chemistry... [M] [V] [A]

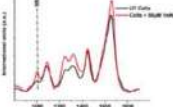
Yrushi Khadakar [M] [V] [A]

Invite Mute All

PowerPoint Slide Show - [Prof. Sheshanath] - PowerPoint

Paradigm of Vanadium pentoxide nanoparticles in inducing autophagy and apoptosis mediated breast cancer cell death





Vanadium is a trace element in the human body and playing important roles in the normal functioning of the thyroid gland. Keeping in mind an in-depth understanding of the effect of vanadium nanoparticles on breast cancer cells could help to engineer newer generations of nanofomulations enabling nanoparticle-mediated cancer management. ~50.6% cancer cells kills within 48 hrs is the breakthrough

	6h	12h	18h	24h
Untreated control				
HEBS				
20µM VPO				
50µM VPO				

Slide 22 of 64

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28°C 12:40 11-09-2021

Image 4,5,6: Professor Dr. Sheshanath V. Bhosale sir explaining supramolecular chemistry

Session 2: "Synthetic Chemists and Our Society" delivered by Dr. Vinod Kumar Tiwari

Zoom Meeting

The slide displays the following information:

- Title:** Synthetic Chemists & Our Society
- Logo:** Banaras Hindu University
- Author:** Vinod Kumar Tiwari, Professor, Organic Chemistry, Department of Chemistry, Institute of Science, BANARAS HINDU UNIVERSITY, INDIA. E-mail: Vinod.Tiwari@bhu.ac.in
- Logo:** ACS International Student Chapter, II Superblock, 2021
- Thanks...** Prof. Deepa Panhekar & Ratnaveer Sawant, Dr. Ambedkar College, Deekshabhoomi, Nagpur

Windows taskbar: Type here to search, 28°C, 11-09-2021

Zoom Meeting

The slide illustrates various organic compounds in everyday life:

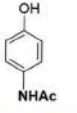
- Text:** YOU All are surrounded by various ORGANIC COMPOUNDS
- Chemical Structures:**
 - $R-C(=O)O^-Na^+$ (Sodium Carboxylate)
 - $R-SO_3^-Na^+$ (Sulfonate)
 - C_6H_5OH (Phenol)
 - $OCOR$, $OCOR^1$, $OCOR^2$ (Esters)
- Images:** LUX soap, a ballerina, a bottle of perfume, a molecular model, a loaf of bread, various medicine bottles, a plate of food, tomatoes, a movie poster for 'ROTI KAPDA aur MAAKAN', and a woman holding a glass of orange juice.

Windows taskbar: Type here to search, 28°C, 11-09-2021

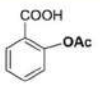
Zoom Meeting

Parag Panse, DA...
Parag Panse, DACN
Swarinima Chemistry...
Deepta Panhekar
Janki Panvadya
DR VINOD KUMAR...
DR VINOD KUMAR TIWA...
Vrushali Khadatar

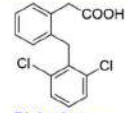
Organic Compounds as Medicine (representative examples)



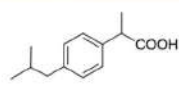
Paracetamol



Aspirin




Diclofenac

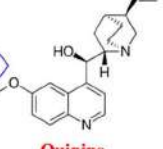


Brufen


NSAIDs



Cinchona



Quinine
(Anti-malarial Drug)

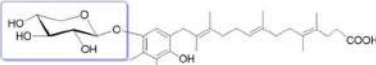


Artemisinin
(You You Tu, Nobel, 2015)

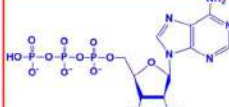
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Zoom Meeting

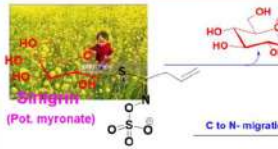
Parag Panse, DACN
Swarinima Chemistry...
Deepta Panhekar
DR VINOD KUMAR...
DR VINOD KUMAR TIWA...
Vrushali Khadatar
Anisha Rokade



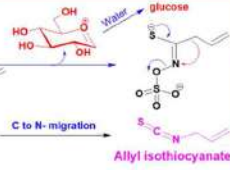
Lurline, a sex pheromone produced by the female gametes of *Chlamydomonas allensworthii* (isolated in 1995) which attracts the male gametes at a concentration as low as 10^{-12} M (Responsible for **FALLING IN LOVE**).



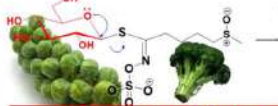
Cell Currency: ATP
John Walker solved the structure of ATP synthetase (Nobel in 1997)



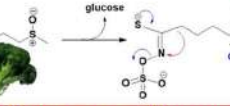
Pot. myronate



Allyl isothiocyanate



S-glycosides



Sulforaphane

Protect yourself from cancer with green vegetables: S-glycosides

Windows taskbar: Type here to search, 28°C, 13:18, 11-09-2021

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Recording


CHEMICAL REVIEWS
public.acs.org/CR

Cu-Catalyzed Click Reaction in Carbohydrate Chemistry

Vinod K. Tiwari,^{1,2} Bhuwan B. Mishra,^{1,2} Kunj B. Mishra,¹ Nidhi Mishra,¹ Anoop S. Singh,¹ and Xi Chen^{1,2}

¹Department of Chemistry, Centre of Advanced Study, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh-221005, India
²Department of Chemistry, One Shields Avenue, University of California—Davis, Davis, California 95616, United States

ABSTRACT: Cu(I)-catalyzed azide-alkyne 1,3-dipolar cycloaddition (CuAAC), popularly known as the “click reaction”, serves as the most potent and highly dependable tool for facile construction of simple to complex architectures at the molecular level. Click-knitted threads of two exclusively different molecular entities have created some really interesting structures for more than 15 years with a broad spectrum of applicability, including in the fascinating fields of synthetic chemistry, medicinal science, biochemistry, pharmacology, material science, and catalysis. The unique properties of the carbohydrate moiety and the advantages of highly chemo- and regioselective click chemistry, such as mild reaction conditions, efficient performance with a wide range of solvents, and compatibility with different functionalities, together produce miraculous neoglycoconjugates and neoglycopolymers with various synthetic, biological, and pharmaceutical applications. In this review we highlight the successful advancement of Cu(I)-catalyzed click chemistry in glycoscience and its applications as well as future scope in different streams of applied sciences.



Tiwari et al. *Chemical Review*, 2016, 116, 3086-3240 (Most Read Article)

Participants (61)

DB Dhanashri Sorikar
DG Dhanshree Game
DN Dinesh Nadimetta
DI divyani ingle
DN Dr. N G Tellapalliar
F Flavia
GM Gouri Muley
GG Gurjeet Gill
HB Himanshu Bathav
HD Himanshu Dhawade
I iPhone
Janvhi Bhaissare
KW Khushboo Warthe
KG Khushi Galkwad

29°C AQI 86 13:48 11-09-2021

Zoom Meeting

Recording

Thanks to my students (Publication: 155, Patents: 8; CI: 6000, h-index:38)



Dr. Vinod Kumar Tiwari (Asst. Prof., Noida), Vinod Kumar (Asst. Prof., BHU), Bhuwan Mishra (Sr. C. CIAB), Archana Sr. Plasma Hydri. Navneet (PDE, Pretoria), Dhananjay (Asst. Prof., Gaya), Divya Kashwaha (Asst. Prof., BHU), Prabhakar Dwivedi (Mehali), Anurita Mishra (Asst. Prof., Lucknow), Kunj Mishra (III-K), Anoop Singh (Jabalpur), Nidhi Mishra (Present PhD students: Anand Agrawal (CSIR-JRF), Mala Singh (JRF), Sumit Kumar (SPM Fellow), Mangal Yadav (JRF), Priyanka Bose (SERB-JRF), Manoj Jaiswal (CSIR-JRF); Sanil Kumar, etc. MS students: 19... Dr. Kunwar Garima & Sanchayita (Assistant Professor).

Participants (54)

DG Dhanshree Game
DN Dinesh Nadimetta
DI divyani ingle
DN Dr. N G Tellapalliar
F Flavia
GM Gouri Muley
GG Gurjeet Gill
HB Himanshu Bathav
HD Himanshu Dhawade
Janvhi Bhaissare
KG Khushi Galkwad
KHUSHI HADKE
Khushi Khan
MS Mayuri shingarwade

29°C Rain 14:11 11-09-2021

Feedback Form/Responses for National Webinar

NATIONAL WEBINAR

Feedback Responses

1.

Email Address:

flavia17travasso@rediffmail.com

Name of Participant:

Flavia Travasso

- Have you attended an event like this before?
No
- Where did you learn about the event?
Other
- Was this the first time you attended one of our events?
Yes
- On a scale of 1 to 5, how helpful did you find the webinar? 1 being least and 5 being most.
5
- Did you find the quiz and the event knowledgeable?
Yes
- If yes, then on a scale of 1 to 5, how knowledgeable would you rate the event? 1 being least and 5 most.
5
- How was the event managed according to you as an audience?
Very well
- Would you like to participate in more such events?
Yes
- Overall, how would you rate the event?
5
- Additional comments: -
Very informative and enriching sessions. Very good choice of resource persons. Well organized event.

2.

Email Address:

poojashreechippa01@gmail.com

Name of Participant:

Pooja Shreechippa

- Have you attended an event like this before?
Yes
- Where did you learn about the event?
Friends
- Was this the first time you attended one of our events?
Yes
- On a scale of 1 to 5, how helpful did you find the webinar? 1 being least and 5 being most.
4
- Did you find the quiz and the event knowledgeable?
Yes
- If yes, then on a scale of 1 to 5, how knowledgeable would you rate the event? 1 being least and 5 most.
4
- How was the event managed according to you as an audience?
Very well
- Would you like to participate in more such events?
Yes
- Overall, how would you rate the event?
4
- Additional comments: -
Was nice opportunity for getting more knowledge about research

3.

Email Address:

khushigaikwad30@gmail.com

Name of Participant:

Khushi Gaikwad

- Have you attended an event like this before?

No

- Where did you learn about the event?

Teachers

- Was this the first time you attended one of our events?

Yes

- On a scale of 1 to 5, how how helpful did you find the webinar? 1 being least and 5 being most.

5

- Did you find the quiz and the event knowledgeable?

Yes

- If yes, then on a scale of 1 to 5, how knowledgeable would you rate the event? 1 being least and 5 most.

5

- How was the event managed according to you as an audience?

Very well

- Would you like to participate in more such events?

Yes

- Overall, how would you rate the event?

5

- Additional comments: -

Event is very nice, knowledgeable & very helpful. I would like to attend such a meeting again.