



**Dr. Ambedkar College, Deekshabhoomi, Nagpur**

**Department of Biochemistry and Biotechnology**

**Online International Conference**

**On**

**Topic: “Scientific Expedition into the Forces of Immune System to Fight Infections”**

**A Report**

Department of Biochemistry and Biotechnology, Dr. Ambedkar College, Deekshabhoomi, Nagpur organized an online International Conference entitled, “Scientific Expedition into the forces of Immune System to Fight Infections” on 27<sup>th</sup> August, 2021 on Zoom platform and the conference streamed live on YouTube. The guest speakers for three sessions were Dr. Shilpa Rao, Research Associate, Molecular Biosciences, University of Texas, USA, Dr. Pranay Dogra, Senior Scientist, Oncology Biomarker development, Genentech, San Francisco, CA and Dr. Vijay Upadhye, Associate Professor and Deputy Director, Research and Development Cell, Parul University, Vadodra. The conference began with the welcome address by the Principal, Dr. Mrs. B. A. Mehere, Dr. Ambedkar College, Deekshabhoomi, Nagpur followed by introduction to the program by Dr. Deovrat Begde, Organizing secretary, of the conference and Assistant Professor, Department of Biochemistry and Biotechnology, Dr. Ambedkar College, Nagpur.

**Lecture 1:** The first guest lecture was delivered by Dr. Shilpa Rao who was introduced to the participants by Mrs. Shweta Paranjape, Assistant Professor, Department of Biochemistry and Biotechnology, Dr. Ambedkar College, Deeksha Bhoomi, Nagpur. Dr. Rao delivered her lecture on the topic "Genes with 5' terminal oligopyrimidine tracts preferentially escape global suppression of translation by SARS Cov-2 Nsp-1 protein". In her lecture she explained about the nature of genetic material of SARS-Cov-2, how viruses use multiple mechanisms to block host mRNA translation. She explained about the effects of Nsp 1 protein expression on global translation and mRNA abundance. She also introduced various assay techniques to measure protein synthesis, mRNA abundance, ribosomal profiling and different ways to identify gene specific translational changes. She emphasized how Nsp-1 mediates preferential translation of TOP transcripts in perturbed upon mTOR pathway. In the end Dr. Shilpa Rao highlighted future perspectives for the research she conducted.

The lecture was very informative and interactive. She answered all the queries of the participants.

One query from a participant was as below:

Did the overexpression of elongation factors of translation of TOP mRNAs will not lead to the upregulation of translation?

to answer this query Dr. Rao explained the paradox about how Nsp-1 allows preferential translation of translation machinery but these cannot be used by the host mRNA because of binding of Nsp-1 protein, only the virus is evolved to replace these proteins and can use this machinery for their own and also through the degradation of host mRNA also virus suppresses the host translation.

**Lecture 2** - Topic: Learnings from Monitoring Immune response to COVID-19 in Children and Adults by Dr. Pranay Dogra

Dr. Pranay Dogra is an immunologist with a strong background in T- and NK-cell biology, and has significant experience in implementation of bioinformatics techniques for the analysis of high-dimensional datasets. He possesses immense knowledge of virology, immunology, and programming skills and is focused more on the development of new and potent cell-based immunotherapies. The session began with the welcome and introduction of Dr. Dogra to all the participants by Ms. Rita Lakkakul, Assistant Professor, Department of Biochemistry and Biotechnology, Dr. Ambedkar College, Deekshabhoomi, Nagpur. Dr. Dogra spoke about vulnerability of SARS-CoV-2 in present pandemic situation and emphasised that all the researchers need to stand up as united research community to uncover the secrets of the deadly coronavirus so that patients can be treated effectively and we can be prepared better for future variants of coronavirus. He highlighted more on characterizing immune response to SARS-CoV-2 and his studies on children having lower neutralizing antibodies than adults. He also explained the importance of T-Cells which will help us in future treatment strategies for the disease. He also emphasized that all the students should learn Bioinformatics and coding analysis to help them excel in research. The lecture was highly informative and students interacted by asking their queries to Dr. Pranay Dogra.

Query from Participant: What is your suggestion about analysing longevity of protection against SARS-Cov-2, by checking airway immune response or blood immune response?

Answer: Airway immune response because the active immune response is seen in airway.

Query from Participant: As surface markers (spike protein) to which antibody response is more then how could we predict based on nucleocapsid the severity of disease or infection pattern?

Answer: It doesn't tell the severity but it tells the previous history. Severe and non-severe covid both have same amount of nucleocapsid.

**Lecture 3**: Topic: Role of Interferon –gamma release assay in detection of latent TB infection by Dr. Vijay Upadhye.

Dr. Vijay Upadhye was the third guest speaker and he was introduced and welcomed by Pradip Hirapure, Joint secretary of the conference and Assistant Professor, Department of Biochemistry and Biotechnology to deliver the lecture. Dr. Upadhye explained the principle

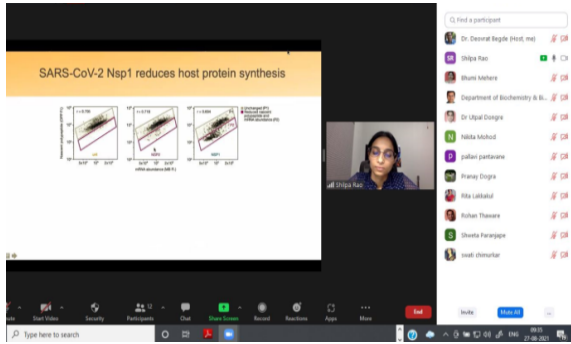
and mechanism of IGRA test and its application in the diagnosis of latent tuberculosis, he very well described the significance and limitation of this Assay. Overall this lecture was very informative and easy to understand for everyone. During this lecture Dr. Vijay Upadhye emphasized things like an *in vitro* blood test based on IGRA with antigens specific for *M tuberculosis* can also be used to screen for latent TB infection and offers certain advantages over tuberculin skin testing. The lecture was informative and interactive as the participants asked queries related to Multidrug resistance nature of *M tuberculosis* and its possible treatment.

Query from participant : Is there any single globally accepted test for diagnosis of Tuberculosis and what kind of lifestyle will be helpful in preventing TB infection. Dr. Vijay Upadhye positively answered each question in detail.

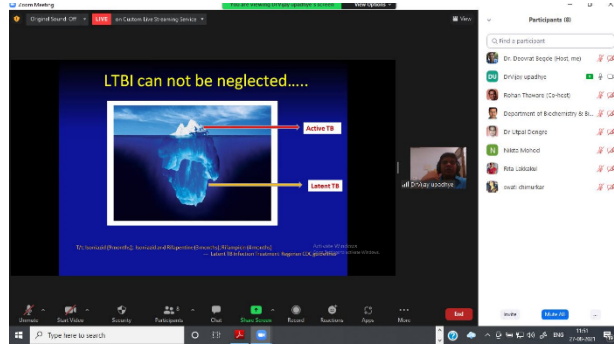
Huge number of students actively participated in the conference and very well interacted with all the guest speakers by asking various questions followed by patient listening and answering the queries by all the three guest speakers. The conference concluded by vote of thanks which was proposed by Dr. Utpal Dongre, Head of the Department, Department of Biochemistry and Biotechnology, Dr. Ambedkar College, Deekshabhoomi, Nagpur. He congratulated all the members of the organising Committee and encouraged participants to attend more virtual platforms, the new normal, to connect and self-aware during the pandemic.

Youtube Link : <https://youtu.be/k16rQKZheV0>

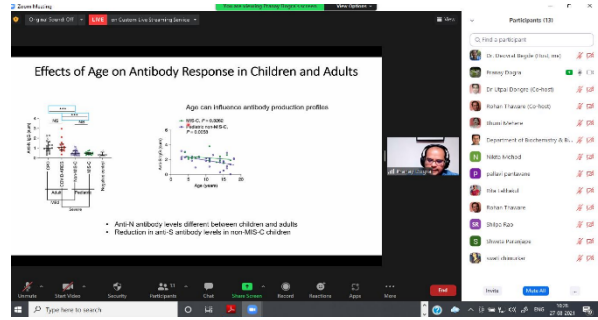
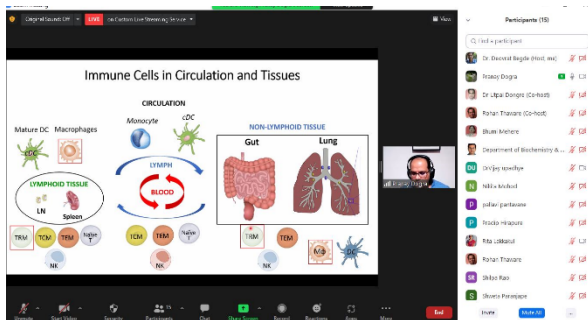
# Glimpses of the Online International Conference



**Dr.Shilpa Rao delivering lecture**



**Dr.Vijay Upadhye Delivering lecture**



**Dr.Pranay Dogra Delivering his lecture**

# Feedback for "Online International Conference on Scientific Expedition into The Forces of the Immune System to Fight Infections 2021" organized by Department of Biochemistry and Biotechnology on 27th August 2021 @ 9 AM

Thank you for attending this Online International Conference . We hope you had as much fun attending as we did organizing it.

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Email \*

arnendu.edu20@gmail.com

Your Name (As to be included in e-certificate) \*

Arnendu Barman

Institute Name (As to be included in e-certificate) \*

All India Institute of Medical Sciences (AIIMS), Bhubaneswar

How satisfied were you with the International Conference? \*

Not very      1      2      3      4      5      Very much

How relevant and helpful do you think it was for your career? \*

Not very      1      2      3      4      5      Very much

What were your key take aways from this International Conference? \*

1. Different diagnostics of covid and TB 2. How to monitor immune response in covid. 3. Immunological advances in medical science. 4. Genes with 5' terminal oligopyrimidinetracts preferentially escape global suppression of translation by the SARS-CoV-2 Nsp1 protein"

Which sessions did you find most relevant? \*

|   | Not relevant          | Relevant                         | Very relevant         | Did not attend        |
|---|-----------------------|----------------------------------|-----------------------|-----------------------|
| Introduction to the International Conference By Dr. Deovrat Begde   | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Speaker 1 Dr. Shilpa Rao Topic: "Genes with 5' terminal oligopyrimidinetracts preferentially escape global suppression of translation by the SARS-CoV-2 Nsp1 protein" | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Speaker 2 Dr. Pranay Dogra Topic: "Learnings from Monitoring Immune Response to COVID-19 in Children and Adults"  | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Speaker 3 Dr. Vijay J. Upadhye Topic: "Role of Interferon-gamma release assay in detection of latent TB infection"  | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How satisfied were you with the session content? \*

Poor      1      2      3      4      5      Excellent

Any additional comments regarding the sessions or overall agenda?

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Topics you would like to be dealt in the future events?

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Dr. Shipa Rao was from which University? \*

- University of Texas
- University of Washington
- University of California, L.A.



Dr. Pranay Dogra was from which University/Institute? \*

- Genentech, San Francisco, CA
- University of Texas
- University of California, L.A.

Dr. Pranay Dogra emphasized on which techniques that students and researchers must learn? \*

- HPLC
- Bioinformatics
- Protein Engineering

Dr. Vijay J. Upadhye was from which University/Institute? \*

- Parul Institute of Applied Sciences, Gujrat
- RTM Nagpur University
- Amravati University

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Email \*

ektakatre2017@gmail.com

Your Name (As to be included in e-certificate) \*

Ekta Jagdish Katre

Institute Name (As to be included in e-certificate) \*

Dr. Ambedkar College Deekshabhoomi Nagpur

How satisfied were you with the International Conference? \*

Not very      1      2      3      4      5      Very much

How relevant and helpful do you think it was for your career? \*

Not very      1      2      3      4      5      Very much

What were your key take aways from this International Conference? \*

It was very beneficial. In this session the future direction about bioinformatics was very informative

Which sessions did you find most relevant? \*

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How satisfied were you with the session content? \*

Poor      1      2      3      4      5      Excellent

Any additional comments regarding the sessions or overall agenda?

Session was very informative

Topics you would like to be dealt in the future events?

About the future direction guide in the biotech feild.

Dr. Shipa Rao was from which University? \*

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Email \*

anuskabiswas100@gmail.com

Your Name (As to be included in e-certificate) \*

Anuska Biswas

Institute Name (As to be included in e-certificate) \*

Kanchrapara college

How satisfied were you with the International Conference? \*

|          |                       |                       |                       |                       |                                  |           |
|----------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|-----------|
|          | 1                     | 2                     | 3                     | 4                     | 5                                |           |
| Not very | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | Very much |

How relevant and helpful do you think it was for your career? \*

|          |                       |                       |                       |                       |                                  |           |
|----------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|-----------|
|          | 1                     | 2                     | 3                     | 4                     | 5                                |           |
| Not very | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | Very much |

What were your key take aways from this International Conference? \*

I have learned many new things

Which sessions did you find most relevant? \*

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How satisfied were you with the session content? \*

|      |                       |                       |                       |                       |                                  |           |
|------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|-----------|
|      | 1                     | 2                     | 3                     | 4                     | 5                                |           |
| Poor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | Excellent |

Any additional comments regarding the sessions or overall agenda?

Overall agenda

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Topics you would like to be dealt in the future events?

Biological significance of immune receptors

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