

Report on the  
**Biotechnology Webinar Series**

Organized by  
PG Biotechnology (Shift II)  
Dept.of Plant Biology & Biotechnology  
Loyola College



**LOYOLA COLLEGE  
(Autonomous)  
CHENNAI 600034**

**Biotechnology Webinar Series**

**Biotechnological tools in Molecular Diagnostics**



**Dr. Fabian Davamani Amalraj  
International Medical University  
Kuala Lumpur, Malaysia.**

**Topic: Surface plasmon resonance based  
diagnosis for biomarkers  
Date: 28th September 2021,11.00 -12.00pm IST**



**Mr. Berty Ashley  
Senior Research Scientist  
Bangalore, India.**

**Topic: Antisense Oligonucleotide Technology and  
its future as therapy for rare genetic disorders  
Date: 29th September 2021,11.00 -12.00pm IST**

**Registration Link: <https://forms.gle/2W67zWspHBr3zpWC7>**

Organised By  
PG Biotechnology  
Dept.of Pl.Biology & Biotechnology  
School of Life Sciences  
Loyola College

Dr. Sheela.S  
Convener

Dr. J. Joel Gnanadoss  
Head of the Department

## Synopsis

*Name of the event* : Webinar on “Biotechnological tools in Molecular Diagnostics”

*Date* : 28<sup>th</sup> & 29<sup>th</sup> September,2021 (11.00 am to 12.00)

*Platform* : Google Meet & Live Streamed on Youtube

*Resource Persons* : **Dr. Fabian Davamani Amalraj**  
Faculty, Biomedical Science  
School of Health Science  
International Medical University  
Kuala Lumpur, Malaysia

**Dr. Berty Ashley**  
Senior Research Scientist  
Dystrophy Annihilation Research Trust  
Bangalore, India.

*Convener* : Dr.Sheela.S

*Objective of the Programme* : To expose the students to understand that molecular diagnostics is now a clinical reality with its roots deep into basic study of gene expression and function

*Total participants* : 265

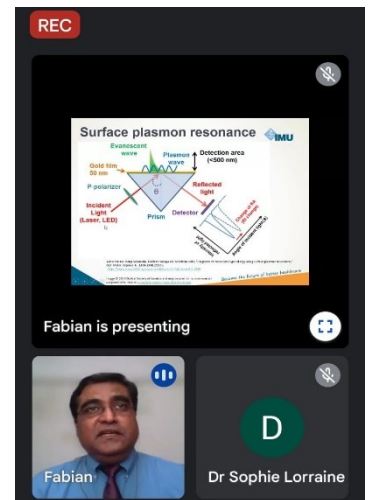
*No. of Institutions Participated across India:* 67

A webinar series was organized on 28<sup>th</sup> and 29<sup>th</sup> of September, 2021 on the theme “Biotechnological Tools in Molecular Diagnostics” to enlighten the students about its importance and current applications.

The First Day of the webinar series was on “Surface Plasmon Resonance based diagnosis for Biomarkers”.

The resource person of the webinar was Dr. Fabian Davamani Amalraj, Senior lecturer, International Medical University, Kula Lumpur, Malaysia.

The program started with an opening remark delivered by Dr. Tanya Pereira, Assistant Professor and Dr. S. Sheela, Co-ordinator followed by the felicitation by Dr. J. Joel Gnanadoss, Head, Department of Plant Biology & Biotechnology. The resource person was introduced by Dr. Prem Kumar, Assistant Professor.

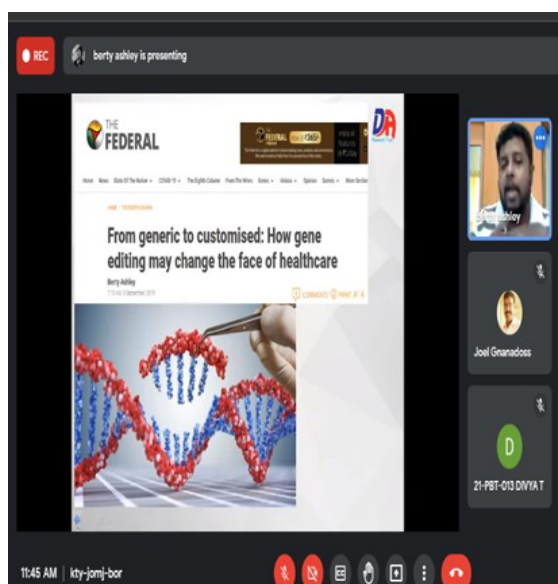


Dr. Fabian, in his presentation, highlighted the working, principle, application, and potential artifacts of “Surface Plasmon Resonance based diagnosis for Biomarkers “. He also shared about his experiments on SPR using a protein and a mutant, Enhancement in SPR using Ramen Effect and Infra-Red Rays and uses on SPR in Cancer Treatment.

With his lecture participants understood that SPR is a label-free technology for studying Biomolecular interactions in real-time.

The session ended with a round of discussion and vote of thanks by Ariba Khan, Student, MSc., Biotechnology, Department of Plant Biology and Biotechnology, Loyola College.

The second day of the webinar series was a very interesting and interactive session about “Antisense Oligonucleotide Technology and its future as therapy for rare genetic disorders”.

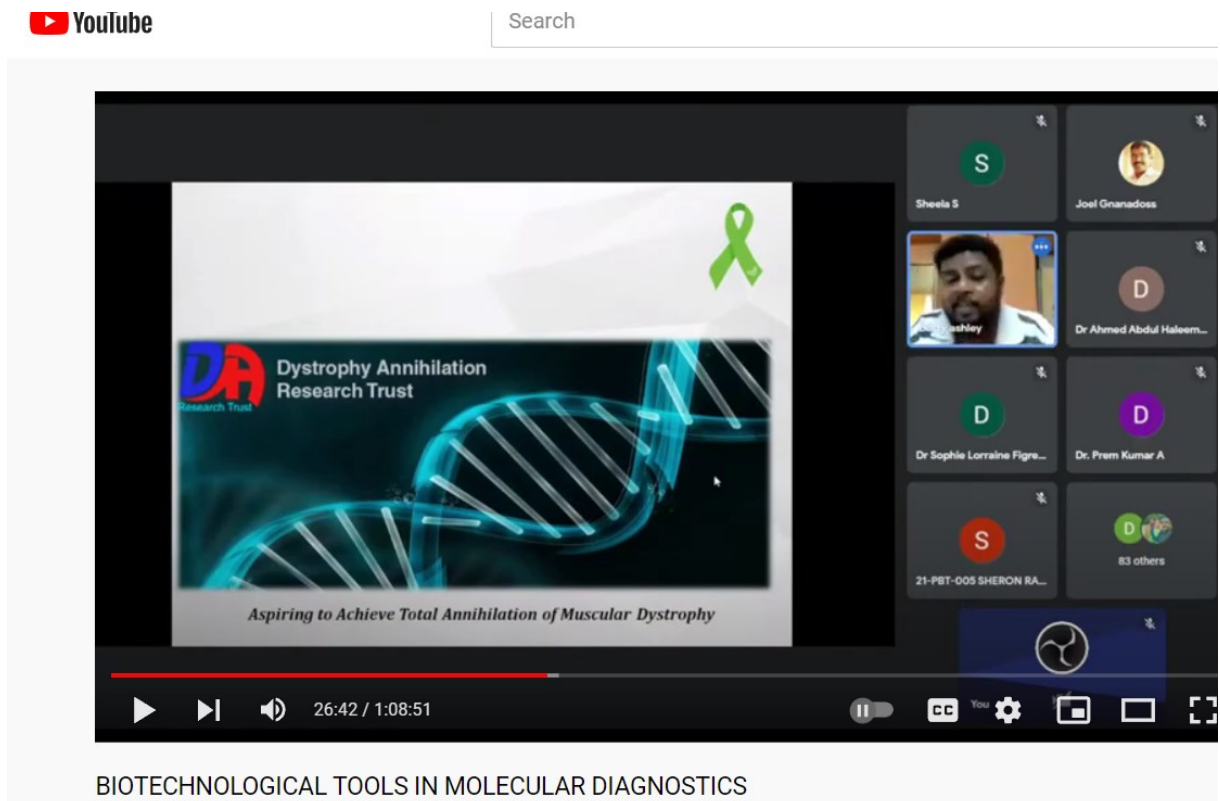
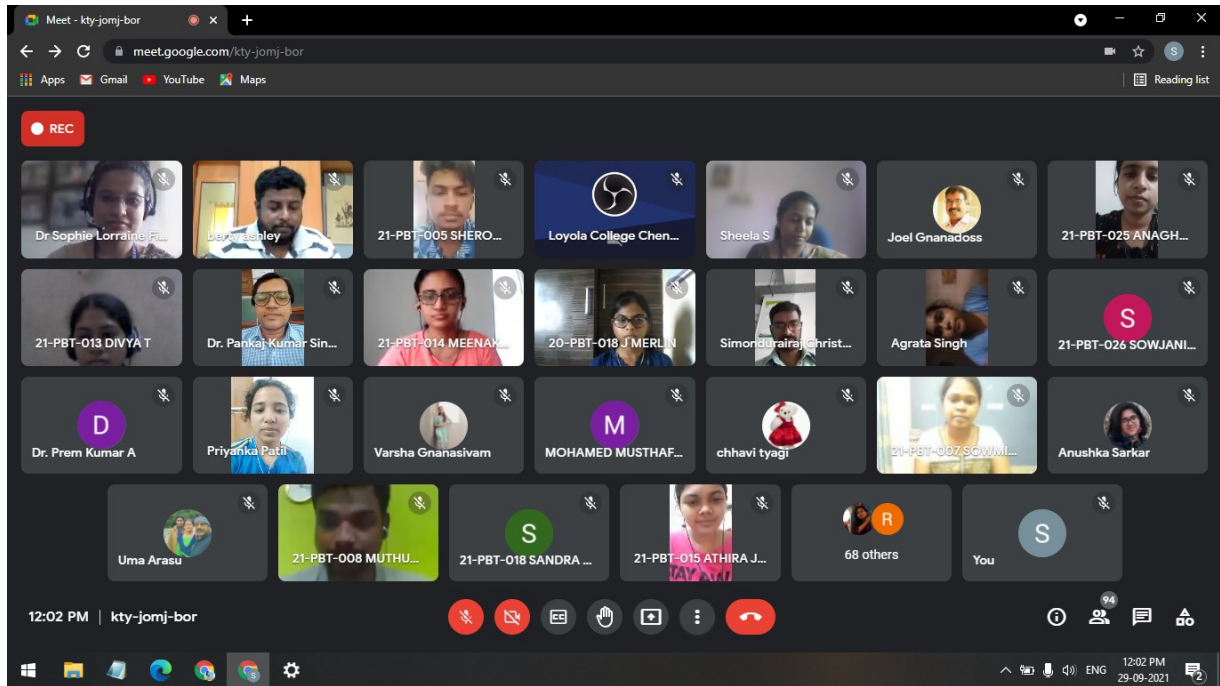


The program started with an opening remark by Dr. Sophie Lorraine Figredo and Dr. Sheela S, the Convener of the webinar. It was followed by felicitation by Dr. J. Joel Gnanadoss, Head of Department of Plant Biology and Biotechnology, Loyola College and a brief introduction of the resource person by Assistant Professor Dr. Prem Kumar.

Mr. Berty Ashley with his very interesting presentation, highlighted the use Antisense Oligonucleotide Technology as a therapy for rare genetic disorders especially in Duchenne Muscular Dystrophy (MSD). He also shared his experiments on exon skipping and its different steps in detail. He made

a clear idea about MSD, its symptoms, cause and treatment. His presentation was intellectual stimulating and very interactive.

The session ended with a round of discussion and vote of thanks by Sheron Raja, Student, MSc., Biotechnology, Department of Plant Biology and Biotechnology, Loyola College.



BIOTECHNOLOGICAL TOOLS IN MOLECULAR DIAGNOSTICS

### *Outcome of the Webinar*

Biotechnology plays an important role in the development of diagnostic assays in response to an outbreak or critical disease response need. The current example being diagnosis of COVID and studying the variants.

This webinar enlightened the innovation of molecular technologies together with a multidisciplinary interaction of several fields focussing on the detection of pathogenic events at the genome level.

### *Few feedbacks given by the participants:*

- Both the sessions were very informative and conceptual. It actually makes one think how fast-analysis one needs to do to be productive as well as creative in this field
- The intellectual world of biotechnology, genetics, biochemistry interlinked altogether with the medical field has a crucial role to play, in the absence of which the advancements made today in this discipline from scientific researches to curing malignant diseases or defects would have been impossible. Indeed being a part of this incredible branch feels like a boon
- The Webinar sessions really inspired me to know about interesting researches going on in the world and helped me widen my knowledge in these different fields.
- Excellent updated topic

On behalf of the department I thank Rev.Fr. Principal, Rev.Fr. Secretary and Deputy Principal for supporting us in conducting this event.

Thank You

Dr.Sheela.S  
Coordinator  
PG Biotechnology