

# Lady Tata Memorial Trust

## Online Teacher's Training Workshop

*Genome Editing*

**5 - 6 November, 2022**

Conducted by:

**Dept. of Biosciences**

**Union Christian College, Aluva – 683 102**



## Lady Tata Memorial Trust



### Lady Meherbai Tata

The Lady Tata memorial Trust was established by Sir Dorabji Tata for research on alleviation of human suffering from diseases in memory of his wife Lady Meherbai who passed away due to Leukemia in the year 1932. Teacher's Training Program is one of the programs of the Trust intended to benefit teachers at undergraduate, post graduate and research levels.

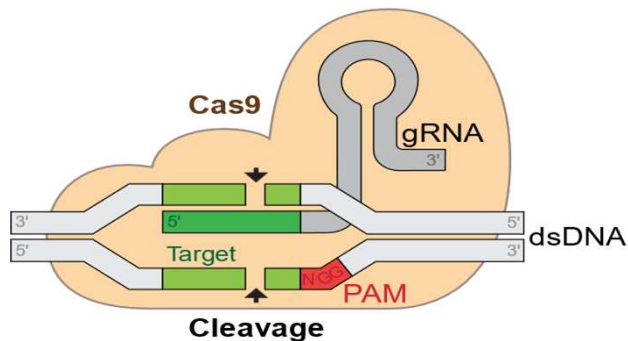
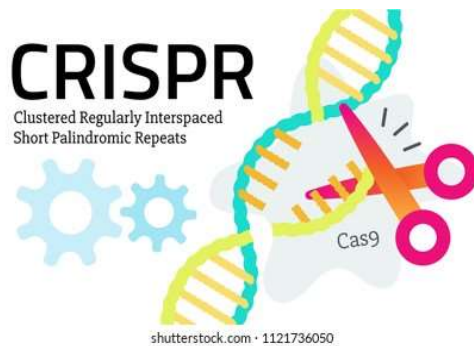
## Union Christian College



### Union Christian College

Union Christian College, Aluva was established in 1921 as an ecumenical Indian Christian initiative in the field of higher education in Kerala. The institution is run, based on the values of integrity and social commitment, promoting learning and culture. Affiliated to M G University, Kottayam, it is known for its academic excellence and research potential. The college has 18 academic departments, with around 1900 students and 160 faculty members. It is presently ranked 97th by NIRF and 'A' Grade institution by NAAC.

# Genome Editing



Genome editing is a group of technologies that give scientists the ability to insert, delete, modify or replace DNA in living organisms. A well known gene editing technology, CRISPR gene editing is considered highly significant in biotechnology and medicine, as it enables easy editing of genomes *in vivo* very precisely and cost effectively. In 2020, Emmanuelle Charpentier and Jennifer Doudna were awarded Nobel Prize in Chemistry for their pioneering work in CRISPR Cas-9. This technique has wide applications in genetic diseases and cancer treatment. The workshop will cover various aspects of gene editing.

# Resource Persons

01.

**DR. DEVASHISH RATH**

Senior Scientist, BARC, Mumbai

02.

**DR. SUDHIR SINGH**

Senior Scientist, BARC, Mumbai

03.

**DR. CHITRA S. MISRA**

Senior Scientist, BARC, Mumbai

04.

**MS. GARGI BINDAL**

Scientist, BARC, Mumbai

Course Convenor:

**Dr. Sareen Sarah John**

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Department of Biosciences,  
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Course Advisor:

**Dr. Susan Eapen**

Adjunct Professor,  
Union Christian College, Aluva.

**DAY 1 - Saturday, November 5, 2022**

<b>Session</b>	<b>Time</b>	<b>Speaker</b>	<b>Topic</b>
1	09.45 AM - 10.00 AM		Inauguration
2	10.00 AM - 11.15 AM	Dr. Devashish Rath	Introduction to Genome Editing
3	11.15 AM - 11.30 AM		TEA BREAK
4	11.30 AM - 12.45 PM	Dr. Devashish Rath	Tools for Genome Editing: ZFNs, TALENs and CRISPR-Cas
5	12.45 PM - 01. 30 PM		LUNCH BREAK
6	01.30 PM- 02.30 PM	Dr. Chitra S. Misra	Historical Development of CRISPR - Cas
7	02.30 PM - 03.30 PM	Dr. Chitra S. Misra	Genome Editing in Bacteria (Talk-1)
8	03.30 PM - 03.50 PM		TEA BREAK
9	03.50 PM - 05.00 PM	Dr. Chitra S. Misra	Genome Editing in Bacteria (Talk-2)

**DAY 2 - Sunday, November 6, 2022**

Session	Time	Speaker	Topic
1	09.45 AM - 11.00 AM	Dr. Sudhir Singh	Genome Editing in Plants (Talk-1)
2	11.00 AM - 11.15 AM		TEA BREAK
3	11.15 AM - 12.30 PM	Dr. Sudhir Singh	Genome Editing in Plants (Talk-2)
4	12.30 PM - 01.15 PM		LUNCH BREAK
5	01.15 PM - 02.15 PM	Ms. Gargi Bindal	Genome Editing in Cells and Animals (Talk-1)
6	02.15 PM - 03.15 PM	Ms. Gargi Bindal	Genome Editing in Cells and Animals (Talk-2)
7	03.15 PM - 03.30 PM		TEA BREAK
8	03.30 PM - 05.30 PM	Dr. Devashish Rath Dr. Chitra S. Misra Dr. Sudhir Singh Ms. Gargi Bindal	Tutorial on gRNA Design, off - Target Analysis and Genotyping for Confirmation of Genome Editing
9	05.30 PM - 06.00 PM		Concluding Session and Feedback

## **Online Teacher's Training Workshop Details**

Eligibility: Science Teachers teaching Under Graduate and Post Graduate students in Colleges/ Universities.

Course Duration: 5<sup>th</sup> & 6<sup>th</sup> November 2022

Timings: November 5, 2022 (Saturday) - 9.45 AM to 5.00 PM

November 6, 2022 (Sunday) - 9.45 AM to 6.00 PM

Course Mode: Online through ZOOM platform

Course Fees: Nil

Total number of Seats: 60 (20 for UC College and rest to teachers from other colleges/ universities)

To register: <https://forms.gle/4uw9w6Bzpttu3F8s6>

(If link is not working, Copy the above link to your browser)

Last Date of Registration: 25<sup>th</sup> October 2022.

(Selected candidates will be informed on or before 30<sup>th</sup> October, 2022)

Certificates will be issued only for those who complete the course and submit feedback form.