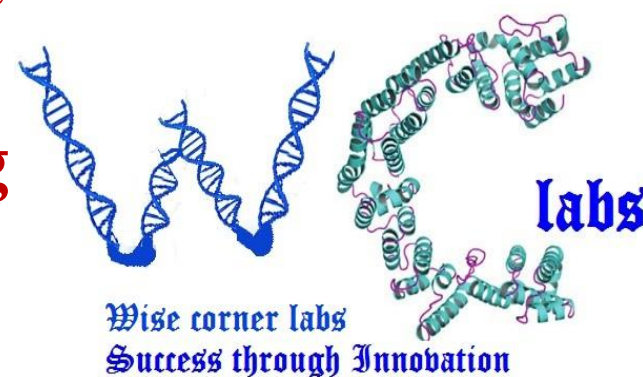


# CRISPR – The Future of Modern Molecular Medicine

## Four Day Hands-on Workshop on “Targeted Genome Engineering using CRISPR CAS9”



**27<sup>th</sup> – 30<sup>th</sup> December 2018 @ Coimbatore**

### **About WiseCorner Laboratories Pvt Ltd**

We are a Bio-technology based start-up company primarily focussed on the emerging trends in biological research. Our vision is to provide high-quality solutions to the problems that arise in the realms of Drug Design and Development, Omics Data Analysis, Bio-Nanotechnology, Biomolecular Simulations, Protein and Genetic Engineering.

### **About the Workshop:**

Targeted Genome Engineering has been described as a “Game Changing Technology”. The powerful gene editing technology known as CRISPR CAS9 has the potential to transform biological science at an astonishingly rapid rate. The technology is a targeted tool used to edit genomes with unparalleled precision, efficiency, and flexibility. We at Wisecorner Laboratories Pvt Ltd are committed to helping you stay ahead and advance your science through education. This workshop will offer guest lectures on genome editing tools and **hands-on training (Computational and Wet Lab)** to all the participants.



**Guest Lectures** will brief you about CRISPR-CAS9 Technology and its numerous applications in health care.

**Bioinformatics Hands-on Training** will be given on **Software tools** used for

- (i) Selecting rational CRISPR/Cas targets from an input sequence,
- (ii) Design of CRISPR guide RNA sequences,
- (iii) Design of Homology Directed Repair Templates,
- (iv) Exhaustive genomic searches to identify potential off-target sites for guide strand choice,
- (v) Analyzing CRISPR-Cas9 genome editing outcomes from sequencing data,
- (vi) Design & analysis of HT CRISPR screens.

**Wet Lab Hands-on Training** will be given on Bacterial Genome Engineering. This hands-on session will demonstrate the precision genome editing made by CRISPR CAS9 system. A specific pinpoint mutation will be made in ribosomal subunit protein rpsL that prevents streptomycin from binding it and so the bacteria can grow just fine on the media containing the antibiotic streptomycin. The genome of the *E. coli* bacteria that is to be engineered contains over 4 million DNA bases in size and CRISPR will find the single one that needs to be mutated! This mutation will cause an amino acid change in the ribosomal subunit proteins that are being made.

## Workshop Schedule

Day	Time	Events
1	9 .00am –9.30am	Registration
1	9.30am – 10.45am	Guest Lecture on “CRISPR-CAS9 based Gene Editing – How it Works ?”
1	11.15am –5.00pm	Tools for CRISPR sgRNA design (Hands-On Session)
2	9.00am – 5.00pm	Wet Lab Bacterial Genome Editing (Hands-On Session)
3	9.00am – 10.30am	Guest Lecture on “Experimental Methods to Validate CRISPR Edits”
3	11.00am – 5.00pm	Homology Directed Repair Template Design for Precise Editing (Hands-On)
4	9.00am – 12.00pm	Analysis of CRISPR-Cas9 genome editing outcomes from sequencing data
4	12.00pm – 3.15pm	Data Analysis for High-Throughput CRISPR Screens (Hands-On)
4	3.30pm - 5.00pm	Lecture on “Applications of CRISPR-CAS9 in Health Care”

### Workshop Fee

For UG /PG participants - INR 5,000/-, Research Scholars - INR 6,000/-, Faculty/PDF – INR 7,000/-  
Industry Professionals - INR 10,000.

**Fee Payment details:** Account transfer / DD in favour of **Wisecorner Laboratories Private Limited**, Acc No: **918020017144603**, **Axis Bank**, Tambaram, Chennai IFSC code: **UTIB0000428**.

**Venue:** Wisecorner House, 6/16, Sivasakthi Nagar, Thanneer Pandhal, Peelamedu Post, Coimbatore 641004, Tamil Nadu

### Instructions to participants

1. Workshop Participants are expected to bring their own Laptop for the Hands-on Training Session.
2. The Fee includes Workshop manual, Certificate, Lunch and Refreshments.
3. The Workshop Fee is Non-Refundable.
4. Last date for Registration is December 24<sup>th</sup> 2018. On spot registration will cost 10% extra.

**NOTE:** Filled in Registration form along with details of DD/NEFT / IMPS Transfer can be e-mailed to wisecornerlabs@gmail.com. The registration forms can be downloaded from website <http://www.wisecornerlabs.com>

Accommodation can be arranged only after full payment of Registration fees plus Accommodation fee of Rs.4000 (1000 per day)

Contact	Phone	Workshop date
<b>WISECORNER LABORATORIES Pvt Ltd</b> wisecornerlabs@gmail.com <a href="http://www.wisecornerlabs.com">http://www.wisecornerlabs.com</a>	+91 9566052730 +91 9751352730	<b>27<sup>th</sup> – 30<sup>th</sup> Dec 2018</b>