

*Marudhar Kesari Jain College and Society of  
Chemical and Synthetic Biology jointly organize*



## TEN DAYS NATIONAL LEVEL WORKSHOP FOR WOMEN ON MOLECULAR TECHNIQUES FOR DEVELOPMENT OF RESEARCH IN RURAL AREAS (MTDRA)

Limited seats  
only (25 nos.)

**Marudhar Kesari Jain College (MKJC)** for Women is a charitable organization, committed towards providing education for women in all areas of arts and science. MKJC has always been in front end in promoting women empowerment by providing and supporting the skill development of women in rural areas.

**Society of Chemical and Synthetic biology (SCSB)** is a non-profit organization. It aims to initiate, access and allow synthetic and chemical biology to Indian researchers by connecting young researchers, industry, academia through organizing conferences and workshops besides imparting information about research, training and education, employment.

<https://www.scsbindia.com/>

Molecular techniques play a vital role in the scientific research and development. Being witnesses of the impact of COVID-19, it has necessitated the importance of molecular techniques in studying biomolecular system. While most students in rural areas have the privilege of gaining a theoretical knowledge of such techniques, a hands-on experience remains at a distance for many aspiring scholars. Therefore we, MKJC, in association with SCSB have organized a 10 days workshop for scholars of rural areas to have a privilege of an hands-on-experience on some of the key molecular biology techniques.

### How to apply

Interested candidates may send their short CV by email to [research\\_coordinator@mkjc.in](mailto:research_coordinator@mkjc.in) on or before **30-09-2021**.

### Who can attend?

Any Post graduate students and Ph.D scholars who has a major in any stream of LifeSciences from rural areas.

### When and Where?

**Date: 09-11-2021 to 19-11-2021**

**Place:** Marudhar Kesari Jain College for Women, Vaniyambadi, Vellore District, Tamil Nadu.

**The selected participants will be intimated through e-mail.**

*Selection of  
participants is based  
on merits*

**MARUDHAR KESARI JAIN COLLEGE FOR WOMEN**  
Recognized Under sec 2(f) & 12(B) of UGC Act of 1956  
Permanently Affiliated to Thiruvalluvar University

Re-Accredited with "A" Grade by NAAC || An ISO 9001:2015 Certified Institution  
Marudhar Nagar, Chinnakallupalli, Vaniyambadi – 635 751.  
Website: [www.mkjc.in](http://www.mkjc.in)

## Key note speakers

### **Dr. ArunKumar Dhayalan**

Assistant Professor  
Department of Biotechnology  
Pondicherry University  
Pondicherry

### **Dr. R. Rajasekaran**

Associate Professor-Sr  
Department of Biotechnology  
VIT University  
Vellore

## Technical details of the workshop

Lectures and HANDS-ON-TRAINING will be provided on the following techniques

- Isolation of genomic DNA by using magnetic nanoparticles
- Isolation of plasmid DNA by using magnetic nanoparticles
- Primer designing, PCR- Polymerase Chain
- Reaction, Agarose gel electrophoresis
- Nested PCR
- MPN test - Most Probable No. Test
- Biological Databases and its application
- Gene Annotation and its application
- Vector Construction
- Protein sequence analysis and 3D modeling
- Active site prediction and binding site analysis
- Protein interaction studies
- Protein-DNA Docking

**Registration kit & certificates will be provided for all the participants**

## Managing Trustees

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## Organizing Committee

**Chair:** Dr. M. Inbavalli, Principal

**Co-Chair:** Ms. B. Sakthimala, PRO

**Convenor:** Dr. R Jesu Jaya Sudan,  
Research Coordinator

### **Coordinators:**

Dr. M. Gomathi, HOD-Biotechnology  
Dr. J. Lesitha Jeeva Kumari, Research Associate

### **Registration fee:**

Selected candidates should register for the workshop by taking a Demand draft of Rs. 1500/- in favor of

**Principal, Marudhar Kesari Jain College for Women, Vaniyambadi.**

**A/c No. 0951101039157**

**IFSC Code: CNRB0000951**

**Last date for registration: 31-10-2021**

Contact: **9894170894** to confirm your registration.

### **Food and Accommodation**

Food and In-campus accommodation will be provided for all the participants. TA/DA will be provided for all participants attending the programme.

For accommodation

**Contact :** Dr. M Gomathi

**Email:** hod.biotechnology@mkjc.in

**Phone No.** +91-9159891623

**For further details please visit: [www.mkjc.in](http://www.mkjc.in)**

**Marudhar Kesari Jain College for women (MKJC) and Society of Chemical and Synthetic Biology (SCSB) Jointly Organize**

**“TEN DAYS NATIONAL LEVEL WORKSHOP FOR WOMEN ON MOLECULAR TECHNIQUES FOR DEVELOPMENT OF RESEARCH IN RURAL AREAS (MTDRA)”**

**TECHNICAL SESSIONS IN BRIEF:**

<b>DATE</b>	<b>DAY</b>	<b>TOPICS</b>	<b>Resource Person (In-House / Outside Experts)</b>
09/11/2021	TUESDAY DAY - 1	Isolation of genomic DNA by using magnetic nanoparticles	Dr. Karthik, Dr. Vishnu SCSB - Outside Experts
10/11/2021	WEDNESDAY DAY - 2	Isolation of plasmid DNA by using magnetics nanoparticles	Dr. Karthik, Dr. Vishnu SCSB
11/11/2021	THURSDAY DAY - 3	Primer designing, PCR- Polymerase Chain Reaction, Agarose gel electrophoresis	Dr. Karthik, Dr. Vishnu SCSB
12/11/2021	FRIDAY DAY-4	Nested PCR	Dr. Karthik, Dr. Vishnu SCSB
13/11/2021	SATURDAY DAY - 5	MPN test - Most Probable No. Test	Dr. Karthik, Dr. Vishnu SCSB
15/11/2021	MONDAY DAY - 6	Biological Databases and its application	Dr. Jesu Jaya Sudan Dr. Lesitha Jeeva Kumari In-House
16/11/2021	TUESDAY DAY - 7	Gene Annotation and its application Vector Construction	Dr. Jesu Jaya Sudan Dr. Lesitha Jeeva Kumari In-House
17/11/2021	WEDNESDAY DAY - 8	Protein sequence analysis and 3D modeling	Dr. Jesu Jaya Sudan Dr. Lesitha Jeeva Kumari In-House
18/11/2021	THURSDAY DAY - 9	Protein Active Site Analysis and Protein-Ligand Docking	Dr. Jesu Jaya Sudan Dr. Lesitha Jeeva Kumari In-House
19/11/2021	FRIDAY DAY - 10	Protein-Ligand Docking	Dr. Jesu Jaya Sudan Dr. Lesitha Jeeva Kumari In-House

*Note: SCSB – Society of Chemical and Synthetic Biology*

## **TECHNICAL SESSIONS IN DETAIL:**

### **Day – 1**

09:00 am – 10:00 am	<b>Registration</b>
10:00 am – 11:00 am	<b>Inaugural Ceremony</b>
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 012:00 pm	Prof. Arunkumar Dhyalan
12:00 pm – 01:00 pm	Prof. R. Rajasekaran
01:00 pm – 02:00 pm	<b>Lunch Break</b>
02:00 pm – 06:00 pm	Isolation of genomic DNA by using magnetic nanoparticles – Practical session

### **Day – 2**

09:30 am – 11:00 am	Isolation of genomic DNA by using magnetic nanoparticles – Practical session
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 01:00 pm	Isolation of Plasmid DNA by using magnetic nanoparticles – Theoretical session
01:00 pm – 02:00 pm	<b>Lunch Break</b>
02:00 pm – 04:00 pm	Isolation of Plasmid DNA by using magnetic nanoparticles – Practical session

### **Day – 3**

09:30 am – 11:00 am	Isolation of Plasmid DNA by using magnetic nanoparticles – Practical session
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 01:00 pm	Primer designing, PCR- Polymerase Chain Reaction, Agarose gel electrophoresis – Theoretical session
01:00 pm – 02:00 pm	<b>Lunch Break</b>
02:00 pm – 04:00 pm	Primer designing, PCR- Polymerase Chain Reaction, Agarose gel electrophoresis – Practical session

#### **Day – 4**

09:30 am – 11:00 am	Primer designing, PCR- Polymerase Chain Reaction, Agarose gel electrophoresis – Practical session
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 01:00 pm	Nested PCR – Theoretical session
01:00 pm – 02:00 pm	<b>Lunch Break</b>
02:00 pm – 04:00 pm	Nested PCR – Practical session

#### **Day – 5**

09:30 am – 11:00 am	Nested PCR – Practical session
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 01:00 pm	MPN Test – Theoretical session
01:00 pm – 02:00 pm	<b>Lunch Break</b>
02:00 pm – 04:00 pm	MPN Test – Practical session

#### **Day – 6**

09:30 am – 11:00 am	Biological Databases and its application – Theoretical Session
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 01:00 pm	Biological Databases and its application – Practical session
01:00 pm – 02:00 pm	<b>Lunch Break</b>
02:00 pm – 04:00 pm	Biological Databases and its application – Practical session

#### **Day – 7**

09:30 am – 11:00 am	Gene Annotation and its application and Vector Construction –Theoretical session
11:00 am – 11:15 am	<b>Tea Break</b>
11:15 am – 01:00 pm	Gene Annotation and its application and Vector Construction –Practical session
01:00 pm – 02:00 pm	<b>Lunch Break</b>

02:00 pm – 04:00 pm

Gene Annotation and its application and Vector Construction – Practical session

**Day – 8**

09:30 am – 11:00 am

Protein sequence analysis and 3D modeling – Theoretical session

11:00 am – 11:15 am

**Tea Break**

11:15 am – 01:00 pm

Protein sequence analysis and 3D modeling – Practical session

01:00 pm – 02:00 pm

**Lunch Break**

02:00 pm – 04:00 pm

Protein sequence analysis and 3D modeling – Practical session

**Day – 9**

09:30 am – 11:00 am

Protein Active Site Analysis and Protein-Ligand Docking – Practical session

11:00 am – 11:15 am

**Tea Break**

11:15 am – 01:00 pm

Protein Active Site Analysis and Protein-Ligand Docking – Theoretical session

01:00 pm – 02:00 pm

**Lunch Break**

02:00 pm – 04:00 pm

Protein Active Site Analysis and Protein-Ligand Docking – Practical session

**Day – 10**

09:30 am – 11:00 am

Protein-Ligand Docking – Practical session

11:00 am – 11:15 am

**Tea Break**

11:15 am – 01:00 pm

Glimpse of all topics - Revision

01:00 pm – 02:00 pm

**Lunch Break**

02:00 pm – 04:00 pm

**Valedictory Function**