

Ref. No. MSRCASC/A/WS/CIR 2024-25/

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Dated: 05-04-2025

### **CIRCULAR**

The Department of Biotechnology and Genetics is pleased to announce a Two-Day Workshop on "Exploring Drosophila-Practical Approaches from Handling to Behaviour" exclusively designed for BSc Genetics students. This program aims to provide knowledge on Behavioural Genetics of Drosophila. We encourage all Genetics students to participate and get advantage of this unique learning opportunity to enhance their academic and professional competencies.

### Details of the Program are as follows:

Dates: April 8th and 9th 2025

• Venue: Genetics Lab, MSRCASC

• Time: 9:00 am to 4:00 pm

Ms. Beaulah Angel

Dr. Pavithra Kumari H.G

**Co-ordinators** 

Dr. Ramakrishnaiah T N

Department of Genetics
M.S. Ramaiah College of
Arts, Science & COMMERCE

Dr. Pushpa H

Principal





Department of Biotechnology & Genetics organises Two-Day Workshop on

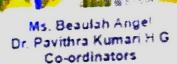
"Exploring Drosophila

- Practical Approaches from Handling to Behaviour"

e: April 8th and 9th 2025

Time: 9am to 4pm

e : Genetics Lab, MSRCASC



Dr. Ramakrishnaiah T N HOD - Biotechnology & Genetics

Dr. Pushpa H





### M. S. Ramaiah college of Arts, Science and Commerce-Autonomous

### Department of Biotechnology and Genetics

### Organizes

Two-day Workshop on "Exploring Drosophila- Practical approaches from Handling to Behaviour"

### Workshop Schedule

Batch 1: B.Sc II Sem Genetics Batch 2: B.Sc IV Sem Genetics Batch 3: B.Sc VI Sem Genetics

Date	Batch	Timings
08:04:25 ( Tuesday)	Batch 2	9:30am-11:30am
	Batch 3	11:30am-1:30pm
Sind The Color Of the	Batch 1	2:00pm- 4:00pm
09:04:25 (Wednesday)	Batch 3	8:30am-10:30am
The state of the s	Batch 2	10:30am-12:30pm
	Batch 1	1:00pm-3:00pm
	Valedictory	3:30pm-4:30pm



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### Report on Two-day Workshop

### "Exploring Drosophila- Practical Approaches from Handling to Behaviour"

> Date:08:04:2025 & 09:04:2025

Name of the resource person: Ms. Beaulah Angel

> Participants: Students of UG Genetics

➤ Venue: Genetics lab

> Time:9:00Am-4:00Pm

The Department of Biotechnology and Genetics organized an insightful Two-day Workshop on "Exploring Drosophila- Practical Approaches from Handling to Behaviour" 08<sup>th</sup> and 09<sup>th</sup> April 2025, titled for undergraduate Genetics students to equip students and with practical skills in handling *Drosophila melanogaster*, a powerful model organism widely used in genetic and biomedical research.

## Highlights of the Workshop:

### Day 1: Introduction, Handling, and Behavioral Assays

### Session 1: History, Handling, and Rearing of Drosophila

The workshop commenced with a theoretical overview of the history and scientific contributions of *Drosophila melanogaster* in genetics and developmental biology. Participants were then introduced to practical aspects of fly handling, stock maintenance, and rearing conditions. This included demonstrations on:

- Fly anesthesia techniques
- Identifying males and females
- Preparing standard Drosophila culture media
- Fly flipping and sorting

Participants practiced these techniques under supervision, gaining confidence in basic fly lab skills.

#### Session 2: Vortex Assay

The second session introduced participants to the **vortex assay**, a method used to simulate seizure-like activity in flies. Groups of flies were subjected to mechanical stress using a benchtop vortex mixer. Participants observed the immediate responses and recorded **seizure recovery time**, which is used as a behavioral indicator in neurological studies. This assay emphasized the utility of *Drosophila* in modeling human neurodegenerative and epileptic disorders.

### Day 2: Sensory and Molecular Assays

### Session 3: Olfactory Assay

This session explored the olfactory behavior of *Drosophila* using a simple yet effective Y-maze setup. Participants learned to collect early third instar larvae and assess their preference toward an odorant (e.g., ethyl acetate) compared to a control. The assay was used to demonstrate how genetic mutations or environmental conditions can influencesensory perception and learning behavior in flies.

### Session 4: Study of Immune Response Using GFP Protein

The final session introduced participants to the use of GFP (Green Fluorescent Protein) in studying immune responses in transgenic *Drosophila* lines. After a brief explanation of fluorescence microscopy and filter settings (blue excitation, green emission), participants observed GFP-tagged immune cells under the microscope. This session demonstrated how genetic tools and fluorescent markers enable real-time tracking of immune cell activity and protein expression in live organisms.

The workshop successfully combined theoretical learning with extensive hands-on experience. Participants expressed increased understanding and confidence in working with *Drosophila melanogaster*. They also gained insight into how fruit flies serve as powerful models for studying complex biological processes such as behavior, immunity, and neurological functions.



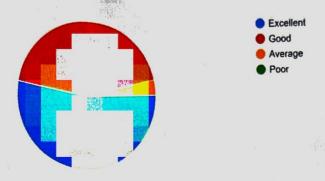
Students participation in the workshop



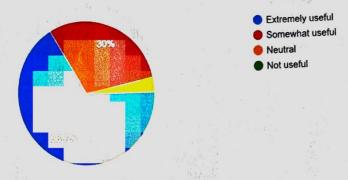
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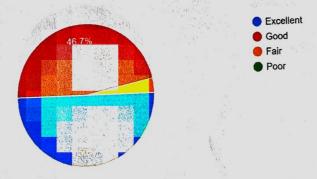
1. How would you rate the overall organization of the workshop?
30 responses



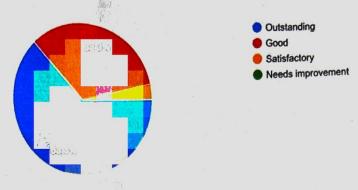
2. How useful was the workshop content for your learning? 30 responses



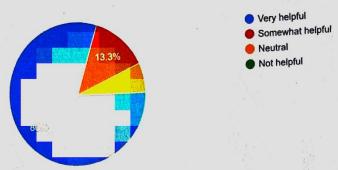
3. How was the quality of the presentations and demonstrations?
30 responses



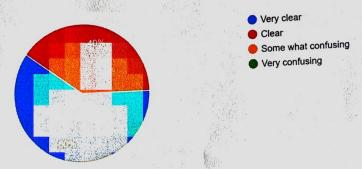
4. How would you rate the instructor's knowledge and delivery?
30 responses



5. Were the practical sessions (hands on activities) helpful? 30 responses



6. How clear and understandable were the workshop materials (handouts, manuals)? 30 responses



7. What is your overall satisfaction with the workshop? 30 responses



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Department of Biotechhology & Genetics

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"EXPLORING DROSOPHILA-PRACTICAL APPROACHES FROM HANDLING TO BEHAVIOUR"
ATTENDANCE LIST: 8/4/2025 GENETICS LAB

### II SEM GENETICS STUDENT LIST

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	ANUSHKA DAYANAND	
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### IV SEM GENETICS STUDENT LIST

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"EXPLORING DROSOPHILA-PRACTICAL APPROACHES FROM HANDLING TO BEHAVIOUR"
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### VI SEM GENETICS STUDENT LIST

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#### **WORKSHOP ON**

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