M S Ramaiah College of Arts, Science and Commerce - Autonomous
Department of Biotechnology and Genetics
In Association with
Vertex Research and Education
Organizes
Skill based Hands on Training cum Workshop on

"Fins to Findings: Zebrafish in Embryonic Development, Drug Discovery, Disease Modeling, and Regeneration"

Resource Person: Dr. Gokul Kesavan, Founder and Proprietor
Vertex Research and Education

Program Schedule

Batch: 1 (B.Sc. IV Sem A sec)
Date: **24.4.2024 (day1) – 25.4.2024 (day2)**
Time: **11.00- 13.45 (day1); 10:30 to 13:30 (day2)**
Batch size: 50 students
Day 1: Genetics Lab (Level 5)

Module	Topic	Duration
Theory	Introduction to Zebrafish as a research model	11:00 am - 11:30 pm
Practical	Observing developmental stages	11.30 am -12:00 pm
Practical	Staining: Alcian blue Staining: Alizarin red	12:00 pm - 13:00 pm
Theory	Drug screening, disease modelling in zebrafish	13:00 pm -13.20 pm
Practical	Drug treatment (Ethanol and VitD3)	13:20 pm - 13: 45 pm

Day 2: Genetics Lab (Level 5)

Module	Topic	Duration
Theory	Regeneration in Zebrafish Gene Manipulation (transgenics, knock out and knock ins)	10:30 am - 11:00 am
Practical	Observing developmental stages; drug treated embryos	11:00 am - 11:30 am
Practical	Staining: Alcian blue Staining: Alizarin red	11:30 am - 12:30 pm
Practical	Imaging and image analysis	12:30 pm -13.15 pm
Theory	Q & A, Discussion session	13:15 pm - 13: 30 pm

Batch: 2 (B.Sc. IV Sem B sec)
Date: **27.4.2024 (day1) – 29.4.2024 (day2**)
Time: **10.30- 13.30**
Batch size: 50 students
Day 3: Genetics Lab (Level 5)

Module	**Topic**	**Duration**
Theory	Introduction to Zebrafish as a research model	10:30 am - 11:00 am
Practical	Observation of developmental stages	11:00 am -11:30 am
Practical	Staining: Alcian blue Staining: Alizarin red	11:30 am - 12:30 pm
Theory	Drug screening, disease modelling in zebrafish	12:30 pm -12.50 pm
Practical	Drug treatment (Ethanol and VitD3)	12:50 pm - 13: 30 pm

Day 4: Genetics Lab (Level 5)

Module	**Topic**	**Duration**
Theory	Regeneration in Zebrafish Gene Manipulation (transgenics, knock out and knock ins)	10:30 am - 11:00 am
Practical	Observation of developmental stages; drug treated embryos	11:00 am - 11:30 am
Practical	Staining: Alcian blue Staining: Alizarin red	11:30 am - 12:30 pm
Practical	Imaging and image analysis	12:30 pm -13.15 pm
Theory	Q & A, Discussion session	13:15 pm - 13: 30 pm

Batch: 3 (B.Sc. IV Sem C sec)
Date: **30.4.2024 (day1) – 02.5.2024 (day2)**
Time: **10.30- 13.30**
Batch size: 50 students

Day 5: Genetics Lab (Level 5)

Module	**Topic**	**Duration**
Theory	Introduction to Zebrafish as a research model	10:30 am - 11:00 am
Practical	Observing developmental stages	11:00 am - 11:30 am
Practical	Staining: Alcian blue Staining: Alizarin red	11:30 am - 12:30 pm
Theory	Drug screening, disease modelling in zebrafish	12:30 pm - 12.50 pm
Practical	Drug treatment (EtoH and VitD3)	12:50 pm - 13: 30 pm

Day 6: Genetics Lab (Level 5)

Module	**Topic**	**Duration**
Theory	Regeneration in Zebrafish Gene Manipulation (transgenics, knock out and knock ins)	10:30 am - 11:00 am
Practical	Observing developmental stages; drug treated embryos	11:00 am - 11:30 am
Practical	Staining: Alcian blue Staining: Alizarin red	11:30 am - 12:30 pm
Practical	Imaging and image analysis	12:30 pm - 13.15 pm
Theory	Doubt clearing; Q & A	13:15 pm - 13: 30 pm

Day 7: Valedictory Session (3rd May 2024 -10.30am onwards) - Auditorium

Welcome Address	**Dr. Radha Dayanidhi, HOD (UG)**	**10.35 am - 10.45 am**
Presidential Remarks	Dr. Vatsala G, Principal	10:45 am - 10.55 am
Introduction of Resource Person and company	Dr. Geetika Pant	10.55 am - 11.00 am
MOU Exchange		
Address by the Resource Person	Dr. Gokul Kesavan	11:00 am - 11:30 am
Q & A session & Distribution of certificates, Students Feedback		
Dr. Vinutha M.	Vote of Thanks	11:40 am - 11.50 am