



## **MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI**

(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)

(Deemed University u/s 3 of UGC Act 1956)

Grade "A" Accredited by NAAC

Sector 1, Kamothe Navi Mumbai-410209, Tel.No.:022-27437631,27432890

Email. [sbsnm@mgmuhs.com](mailto:sbsnm@mgmuhs.com) / Website : [www.mgmsbsnm.edu.in](http://www.mgmsbsnm.edu.in)

---

**Date: 23.12.2021**

**Title of Faculty Development programme: "Zebra Fish Husbandry and training".**

**Location:** Dept. of Medical Biotechnology, MGMSBS, Navi Mumbai

**Duration:** Two weeks

**Dated on: 6 Dec, 2021 to 18 Dec, 2021**

Training program was organized by **Dept of Medical Biotechnology, MGMSBS, Navi Mumbai**, named **Zebra Fish Husbandry and training**. The training was conducted for two weeks at the ZEBCOG- Zebrafish lab, Central research lab. A total of 05 participants attended the training program. The organizers were **Dr. Himanshu Gupta** and **Dr. Mansee Thakur**.

The value of zebra fish as a model organism was covered during this course. Zebra fish fundamentals and scientific details were discussed. Zebra fish are a remarkable model animal for biomedical research, including investigations of biological processes and human disorders. Zebra fish have a fully sequenced genome, facile genetic modification, high fertility, external fertilization, and rapid development. Both the theoretical and practical information were offered. One MCQ test was given to the registrants prior to the theoretical session to gauge their level of familiarity with the zebra fish.

The care of zebra fish must be taken very seriously. The correct way to set up the tanks, timers for the diurnal cycle (14H/10H), and pH were all explained to the participants. These larvae and adults have different feeding habits; the former consumes larval feed, while the latter consumes artemia. She spoke on the teratogenicity of zebra fish, the OECD FET standards, the idea of toxicity, and LC50. She concentrated on Alizarin red staining and Calcein staining, respectively, while using Alcian Blue for cartilaginous structural staining to observe the immobilized and live staining of the zebra fish.

The following topics were covered in the practical session: -Identifying male and female zebra fish, and handling and caring for fish properly.

- The setup and process for breeding.
- Housing for zebrafish and their essential needs.
- using the Motic and Evos microscopes to acquire images.
- Visualizing various phases of the embryo and endpoint monitoring.
- Microscope investigation of zebra fish embryos stained.
- Examining mature zebra fish under a microscope when stained.
- Oral gavage of zebrafish was carried out, which can be utilized to administer zebrafish with precise doses of drugs or test substances for biomedical research.

The comparison of zebra fish and human traits was shown in a theoretical study. The explanations included aspects like anatomy, food and metabolism, growth, lifespan, and cardiovascular system. The Comet assay (single cell gel electrophoresis), as well as common fish diseases including mouthrot, enlarged eyes, ragged fins, rapid gill movements, etc., were explained to the participants. An overview of the anatomy, histology, and TEM imaging of the fish reproductive system was provided. The live tracking program for zebra fish body movements received particular attention. The lectures generated a strong desire for more research on zebra fish as a model organism. The informative and hands on session lit the inquisitiveness about the research amongst the participants.

Posttest mcq was conducted to gauge the understand of the workshop and a feedback was also taken from the participants.

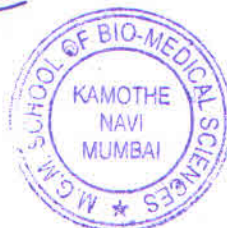
Report Prepared by:

Dr.Himnashu Gupta,  
Assistant Professor,  
Medical Biotechnology



Report Verified by:

Dr.Mansee Thakur,  
FDP Coordinator,  
HOD - Medical Biotechnology,



**Director**  
**MGM School of Biomedical Sciences**  
**MGM Institute of Health Sciences**  
**Kamothé, Navi Mumbai- 410 209, India**





**MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI**

**(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)**

(Deemed University u/s 3 of UGC Act 1956)

Grade "A" Accredited by NAAC

Sector 1, Kamothe Navi Mumbai-410209, Tel.No.:022-27437631,27432890

Email. [sbsnm@mgmuhs.com](mailto:sbsnm@mgmuhs.com) / Website : [www.mgmsbsnm.edu.in](http://www.mgmsbsnm.edu.in)

**Date: 23.12.2021**

### List of Attendees

Sr.No	Name	Designation	Department
1	Dr.Mini Mol	Assistant Professor	Department of Anatomy, MGM Medical College
2	Dr.Sumi Elizebeth	Assistant Professor	Department of Anatomy, MGM Medical College
3	Mr. Yogesh Patil	Tutor	Medical Biotechnology, MGM SBS
4	Ms.Rafiya S	Tutor	MGM SBS
5	Dr.Neelam Yerram	Tutor	MGM SBS

*Huu*

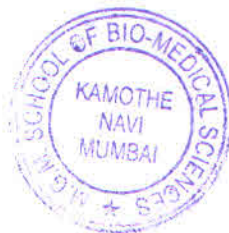
Signature of Faculty development programe Coordinator:

*[Handwritten Signature]*

Signature of Head of the Department:

**Director**

**MGM School of Biomedical Sciences**  
**MGM Institute of Health Sciences**  
Kamothe, Navi Mumbai- 410 209, India





# MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

A CONSTITUENT UNIT OF MGM INSTITUTE OF HEALTH SCIENCES

Deemed University u/s UGC act, 1956

Grade "A", Accredited by NAAC

## 2 WEEK FACULTY DEVELOPMENT PROGRAM ON Zebrafish Husbandary & Education

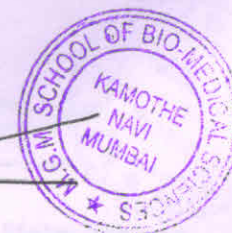
### CERTIFICATE OF COMPLETION

This is to certify that Dr. Neelam Veram  
Tutor from MGM School of Biomedical Sciences  
Navi Mumbai

has actively completed 2 weeks Faculty Development Program on "Zebrafish Husbandary & Education" held from 6th to 18th December 2021 organized by Department of Medical Biotechnology at ZEBCOG, MGM School of Biomedical Sciences, MGMIHS, Kamothe, Navi Mumbai.

Dr. Himanshu Gupta  
Incharge ZEBCOG lab  
Assistant Professor,  
Department of Medical Biotechnology,  
Kamothe, Navi Mumbai

Dr. Mansee Thakur  
Professor & Head Dept. of Medical Biotechnology,  
Office incharge- CRL,  
Director,  
MGM School of Biomedical Sciences,  
Kamothe, Navi Mumbai



Director  
MGM School of Biomedical Science  
Kamothe, Navi Mumbai





# MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

A CONSTITUENT UNIT OF MGM INSTITUTE OF HEALTH SCIENCES

Deemed University u/s UGC act, 1956

Grade "A", Accredited by NAAC

## 2 WEEK FACULTY DEVELOPMENT PROGRAM ON Zebrafish Husbandary & Education

### CERTIFICATE OF COMPLETION

This is to certify that Dr. Yogesh Patil  
Tutor from MGM School of Biomedical Sciences,  
Navi Mumbai

has actively completed 2 weeks Faculty Development Program on "Zebrafish Husbandary & Education" held from 6th to 18th December 2021 organized by Department of Medical Biotechnology at ZEBCOG, MGM School of Biomedical Sciences, MGMIHS, Kamothe, Navi Mumbai.

Dr. Himanshu Gupta  
incharge ZEBCOG lab  
Assistant Professor,  
Department of Medical Biotechnology,  
Kamothe, Navi Mumbai

Dr. Mansee Thakur  
Professor & Head Dept. of Medical Biotechnology,  
Office Incharge- CRL,  
Director,  
MGM School of Biomedical Sciences,  
Kamothe, Navi Mumbai



Director  
MGM School of Biomedical Science  
Kamothe, Navi Mumbai



# MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

A CONSTITUENT UNIT OF MGM INSTITUTE OF HEALTH SCIENCES

Deemed University u/s UGC act, 1956

Grade "A", Accredited by NAAC

## 2 WEEK FACULTY DEVELOPMENT PROGRAM ON Zebrafish Husbandary & Education

### CERTIFICATE OF COMPLETION

This is to certify that Ms. Rafiya Sangameshwari  
Lecturer from MGM School of Biomedical Sciences,  
Navi Mumbai

has actively completed 2 weeks Faculty Development Program on "Zebrafish Husbandary & Education" held from 6th to 18th December 2021 organized by Department of Medical Biotechnology at ZEBCOG, MGM School of Biomedical Sciences, MGMIHS, Kamothe, Navi Mumbai.

Dr. Himanshu Gupta  
incharge ZEBCOG Lab  
Assistant Professor,  
Department of Medical Biotechnology,  
Kamothe, Navi Mumbai

Dr. Mansee Thakur  
Professor & Head Dept. of Medical Biotechnology,  
Office incharge- CRL,  
Director,  
MGM School of Biomedical Sciences,  
Kamothe, Navi Mumbai



MGM School of Biomedical Sciences  
Kamothe, Navi Mumbai





# MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

A CONSTITUENT UNIT OF MGM INSTITUTE OF HEALTH SCIENCES

Deemed University u/s UGC act, 1956

Grade "A", Accredited by NAAC

## 2 WEEK FACULTY DEVELOPMENT PROGRAM ON Zebrafish Husbandary & Education

### CERTIFICATE OF COMPLETION

This is to certify that Dr. Sumi Elizebeth  
Asst Professor from Dept. of Anatomy, Mam Medical  
College, Navi Mumbai

has actively completed 2 weeks Faculty Development Program on "Zebrafish Husbandary & Education" held from 6th to 18th December 2021 organized by Department of Medical Biotechnology at ZEBCOG, MGM School of Biomedical Sciences, MGMIHS, Kamothe, Navi Mumbai.

Dr. Himanshu Gupta  
incharge ZEBCOG lab  
Assistant Professor,  
Department of Medical Biotechnology,  
Kamothe, Navi Mumbai

Dr. Mansee Thakur  
Professor & Head Dept. of Medical Biotechnology,  
Office Incharge- CRL,  
Director,  
MGM School of Biomedical Sciences,  
Kamothe, Navi Mumbai



Director  
MGM School of Biomedical Science  
Kamothe, Navi Mumbai



# MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

A CONSTITUENT UNIT OF MGM INSTITUTE OF HEALTH SCIENCES

Deemed University u/s UGC act, 1956

Grade "A", Accredited by NAAC

## 2 WEEK FACULTY DEVELOPMENT PROGRAM ON Zebrafish Husbandary & Education

### CERTIFICATE OF COMPLETION

This is to certify that Dr. Mini Mol  
Asso. Professor from Dept. of Anatomy, MGM Medical College  
Navi Mumbai

has actively completed 2 weeks Faculty Development Program on "Zebrafish Husbandary & Education" held from 6th to 18th December 2021 organized by Department of Medical Biotechnology at ZEBCOG, MGM School of Biomedical Sciences, MGMIHS, Kamothe, Navi Mumbai.

Dr. Himanshu Gupta  
incharge ZEBCOG lab  
Assistant Professor,  
Department of Medical Biotechnology,  
Kamothe, Navi Mumbai

Dr. Mansee Thakur  
Professor & Head Dept. of Medical Biotechnology,  
Office incharge- CRL,  
Director,  
MGM School of Biomedical Sciences,  
Kamothe, Navi Mumbai



Director  
MGM School of Biomedical Science  
Kamothe, Navi Mumbai