

Report on the National Workshop on **“Emerging Trends in the Use of Zebrafish and Drosophila in Experimental Pharmacology”**, sponsored by Indian Pharmacological Society, organized and hosted by MES's H.K. College of Pharmacy, Mumbai on March 25th 2025.

The National Workshop on **“Emerging Trends in the Use of Zebrafish and Drosophila in Experimental Pharmacology”** was organized and hosted by Maharashtra Educational Society's H.K. College of Pharmacy, a NAAC “A” accredited institution, affiliated to the University of Mumbai.

The Organizing Committee comprised of the following members:-

- Dr. Tushar Lokhande (Convener), Principal MES's H.K. College of Pharmacy
- Dr. M.N. Saraf (Chairperson), Professor & Head. Department of Pharmacology, MES's H.K. College of Pharmacy
- Dr. Archana Upadhyaya (Organizing Secretary), Associate Professor, MES's H. K. College of Pharmacy
- Dr. Anuradha Pai (Program Co-ordinator), Assistant Professor, MES's H.K. College of Pharmacy
- Mrs. Roja Rani Budha (Program Co-ordinator), Assistant Professor, MES's H.K. College of Pharmacy
- Ms. Nikhat Khan (Program Co-ordinator), Assistant Professor, MES's H.K. College of Pharmacy

A total of 25 participants which included Post Graduates/Ph.D. research scholars & Faculty from various institutions, registered for the workshop.

The details of the workshop are enclosed herewith.

WORKSHOP DETAILS

Resource Persons

1) Dr. Rohan Khadilkar

Scientific Officer E/ Principal Investigator,
Khadilkar Lab, CRI, Tata Memorial Centre -ACTREC
Sector-22, Owe Camp, Kharghar, Navi Mumbai-410210

Title of Talk: Leveraging the power of Drosophila-a genetically tractable model for therapeutic screening

2) Dr. Dimple Jhonsa

Assistant Professor, Department of Pharmacology, Bombay College of Pharmacy,
Kalina, Mumbai-400098

Title of Talk: Drosophila melanogaster as a model organism for Parkinson's disease

3) Dr. Himanshu Gupta

PhD-Medical Genetics
Associate Professor-Department of Medical Biotechnology
InCharge-ZEBCOG-Zebrafish Laboratory, MGM School of Biomedical Sciences, MGM
Institute of Health Sciences, Navi Mumbai (Deemed University u/s of UGC Act, 1956) ,
Grade A++, Accredited by NAAC, Kamothe, Navi Mumbai-410209

Title of Talk: Zebrafish: A Game Changer in Translational Pharmacology

4) Dr. Kalidas N.Kohale

Scientific Officer (F), Department of Biological Science, Tata Institute of Fundamental
Research (TIFR), Dr. Homi Bhabha Road, Colaba, Mumbai-400005

Title of Talk: Zebrafish Model in Biomedical Research: Advantages and Applications

WORKSHOP PARTICIPANTS

Total no. of participants registered for workshop: **25**

Details of participants:

Sr. No	Name of the participant	Institution/Industry Details	Participant Details
1	Ms.Krutika Kailas Gholap	SIRAC Somaiya Vidyavihar University	Ph.D. Student
2	Firdaus Mohammad Shakil Khan	Anjuman-I-Islam's Kalsekar Technical Campus New Panvel	Post-graduate Student
3	Dr. Gayathri N.	MES's The D. G. Ruparel College of Arts, Science and Commerce	Faculty
4	Mr. Yogendra Nitin Salunkhe	MES's H. K. College of Pharmacy	Post-graduate Student
5	Mr. Suraj Suresh Kumbhar	MES's H. K. College of Pharmacy	Post-graduate Student
6	Ms.Jueeli Mahesh Shiriskar	VES College of Pharmacy	Ph.D. Student
7	Ms.Renugadevi Poovarajan	MES's H. K. College of Pharmacy	Post-graduate Student
8	Mr.Mahesh Patil	D Y Patil Deemed To Be University Nerul, Navi Mumbai	Ph.D. Student
9	Ms. Pooja Deepak Dhangar	Konkan Gyanpeeth Rahul Dharkar College of Pharmacy and Research Institute Karjat	Faculty
10	Ms. Ritu Kashyap	Shobhaben Pratapbhai Patel School of Pharmacy & Technology Management NMIMS Mumbai, Maharashtra	Ph.D. Student
11	Ms. Sneha Tiwari	Shobhaben Pratapbhai Patel School of Pharmacy & Technology Management NMIMS Mumbai, Maharashtra	Ph.D. Student
12	Ms. Jyoti Deora	MES's H. K. College of Pharmacy	Faculty
13	Ms. Neha Rai	MES's H. K. College of Pharmacy	Post-graduate Student
14	Ms. Palak Karia	V. E. S. College of Pharmacy, Chembur	Ph.D. Student
15	Mr. Afzal	MES's H. K. College of Pharmacy	Post-graduate Student
16	Mr.Aneri Prashantbhai Desai	Maliba Pharmacy College, Uka Tarsadia University, Bardoli, Gujarat	Ph.D. Student
17	Parmar Jaimini Rajendrasinh	Maliba Pharmacy College, Uka Tarsadia University, Bardoli, Gujarat	Ph. D. Student
18	Ms. Alina bi Shaikh	MES's H. K. College of Pharmacy	Post-graduate Student

19	Ms.Kalpana	Shri Jagdishprasad Jhabarmal Tibrewala University, Churela, Rajasthan	Ph.D. Student
20	Ms.Maheen mulla	MES's H. K. College of Pharmacy	Post-graduate Student
21	Mr.Shaikh Muskan Arsheen Yousuf	MES's H. K. College of Pharmacy	Post-graduate Student
22	Mr.Rizwan Anees Pathan	MES's H. K. College of Pharmacy	Post-graduate Student
23	Ms.Khan Mahhak Tariq	MES's H. K. College of Pharmacy	Post-graduate Student
24	Mr.Ansari Yasir Hasan	MES's H. K. College of Pharmacy	Post-graduate Student
25	Ms.Priya Bholanath Yadav	MES's H. K. College of Pharmacy	Post-graduate Student

WORKSHOP SCHEDULE

The schedule of the event on the 25th March 2025, day of the workshop was as follows:-

WORKSHOP SCHEDULE	
TIME	PROGRAM
8:15-8:45 am	Breakfast & Registration
9:00-9:30 am	Inauguration
9:30-10:15 am	Dr. Rohan Khadilkar Leveraging the power of Drosophila-a genetically tractable model for therapeutic screening
10:15-11:00am	Dr. Rohan Khadilkar Hands on Training /Demonstration (Drosophila)
11:00-11:15 am	Tea Break
11:15am-12:00 pm	Dr. Dimple Jhonsa Drosophila melanogaster as a model organism for Parkinson's disease
12-12:30 pm	LUNCH
12:30-1:30 am	Dr. Himanshu Gupta Zebrafish: A Game Changer in Translational Pharmacology
1:30-2:30 pm	Dr. K.N. Kohale Zebrafish Model in Biomedical Research: Advantages and Applications
2:30-2:45 pm	Tea Break
2:45-4:00 pm	Dr. K.N. Kohale Hands on Training/Demonstration (Zebrafish)
4:00-4:30 pm	Valedictory Function, Distribution of certificates for participants

WORKSHOP ACTIVITIES

The registrations began on the day at 8:00 am as planned.

The registrants were given a registration kit comprising

1) Note Pad 2) Pen 3) Identification Badge 4) Proceedings of the workshop (which gave details of the resource persons and basic protocols of the fruit fly (*Drosophila*) and the zebrafish (*Danio rerio*)).

The Inaugural function began at 9:05 am with short welcome speeches from Dr. M.N. Saraf and the Principal of Maharashtra Educational Society's H.K. College of Pharmacy, Dr. Tushar Lokhande.

In his welcome speech, Dr. M.N. Saraf thanked the Executive Committee of the Indian Pharmacological Society (IPS) for its generous financial support for the workshop. He informed the audience that the IPS is one of the oldest professional bodies in India with the mission of promoting need-based research in pharmacology and other allied sciences and to improve quality of life through inventions.

Dr. Rohan Khadilkar, the first speaker of the day, spoke about the features of the fruit-fly, *Drosophila melanogaster*, and its tremendous potential for cancer research. He gave the example of testing of drugs using the intestinal model of cancer in the organism.

The participants were then led to Lab 307 of H.K. College of Pharmacy for the demonstration on *Drosophila melanogaster*. Dr. Khadilkar taught the participants on how to differentiate the adult fruit fly, pupae with respect to the sex of the fruit fly. His research student who had accompanied him demonstrated how to dissect the fruit fly and separate the intestines. Dr. Khadilkar also spoke about the culturing of fruit-fly and procedures to anesthetize the same.

After the workshop, the next lecture was conducted by Dr. Dimple Jhonsa. Dr. Dimple Jhonsa elaborated on the genetic crossing of the fruit fly, the phenotypic features that help in identification of the genotype in the progeny of the cross. She also explained the other methods besides the phenotype of the flies, to identify the genetic make-up of the fly strain that could be used as a model organism for Parkinson's disease. She explained the methods to assay the drugs using the model such as negative geotaxis (locomotor assay).




After lunch, which was provided to the participants, Dr. Himanshu Gupta conducted her lecture. She spoke about the diseases for which zebrafish (*Danio rerio*) could be used as a model and described some assays for the same. She spoke about the translational research which could be carried out using the zebrafish as a model.

Dr. Kalidas Kohale's lecture followed Dr. Himanshu Gupta's session. He spoke about the husbandry behind the maintenance of zebrafish. He also made the audience aware of the various larval stages of the zebrafish and the assays of toxicity that can be performed on them.



Dr. Kalidas Kohale then gave a demonstration of the various zebrafish using microscopes and projecting instruments for all the participants. He then demonstrated how to withdraw blood from the anaesthetized zebrafish. All the participants were invited to anesthetize fish and techniques used to recover the fish from the anesthesia were explained with hands on training of the same.

The workshop ended with a valedictory function, distribution of certificates to the participants, filling of feedback form, vote of thanks and reciting of the national anthem.

Brochure/Photo Gallery:



**NATIONAL WORKSHOP
ON
EMERGING TRENDS IN THE USE OF
ZEBRAFISH AND DROSOPHILA IN
EXPERIMENTAL PHARMACOLOGY**



MARCH 25, 2025

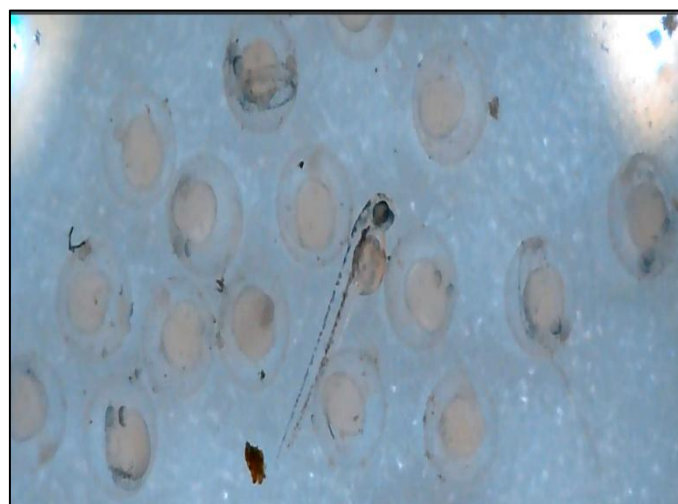
Organized by
**Maharashtra Educational Society's
H.K. College of Pharmacy,
Jogeshwari (W), Mumbai 400102.**
NAAC Accredited Grade 'A'

Vision: To be recognised as the institution providing quality education in pharmacy to serve the healthcare sector.

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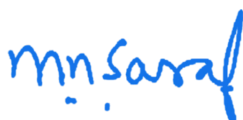
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Facebook	https://www.facebook.com/photo/?fbid=1146634404142867&set=a.470185965121051
Instagram	https://www.instagram.com/p/DJOgr_KCWGF/?utm_source=ig_web_copy_link&igsh=MzRlODBiNWFiZA==



Dr. Tushar Lokhande

(Convener of Workshop)

Principal



Dr. M. N. Saraf

(Chairperson of Organizing Committee)

Professor & Head of
Department, Pharmacology



Dr. Archana Upadhya

(Organizing Secretary)

Associate Professor

