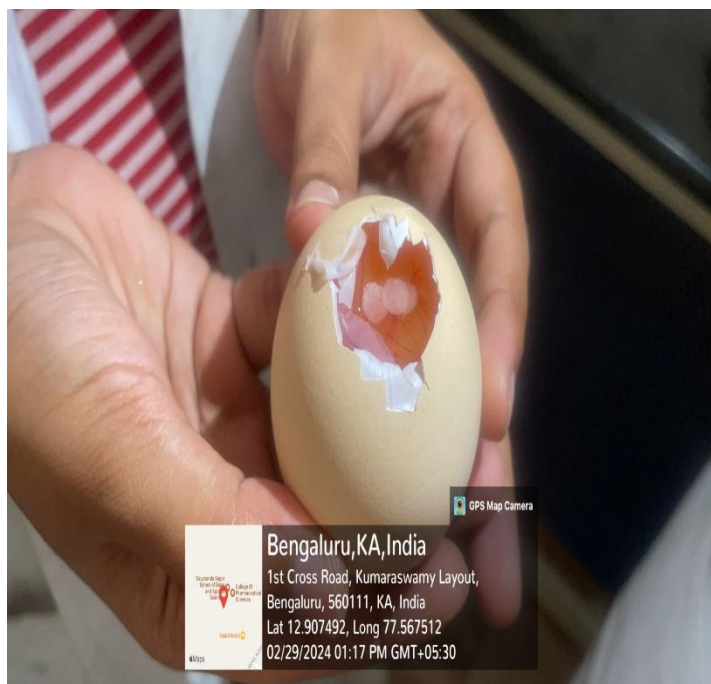


Chick embryo: emerging preclinical animal model (29/2/2024 to 1/03/2024)

A workshop on “**Chick embryo: emerging preclinical animal model**” was organized by Department of Biotechnology, School of Basic and Applied Sciences, Dayananda Sagar University, Bangalore on 29/2/2024 to 1/03/2024. Around 35 students of M.Sc. were participated. Workshop Organized and conducted by Dr. Vineetha MS, Assistant Professor, Department of Biotechnology, School of Basic and Applied Sciences, Dayananda Sagar University. The workshop provided hands on training on chick embryo model handling for various studies. Students were trained on candling eggs, toxicity studies using various phytocompound, angiogenesis studies and haemorrhage studies. We are looking forward to many more illuminating sessions one such as this in the future.





DAYANANDA SAGAR UNIVERSITY



**SCHOOL OF BASIC & APPLIED SCIENCES
DEPARTMENT OF BIOTECHNOLOGY**

PRESENTS

TWO-DAY WORKSHOP ON THE

**“CHICK EMBRYO:
AN EMERGING PRECLINICAL ANIMAL MODEL”**

PRESIDENT

**DR. SUNIL. S MORE
PROFESSOR & DEAN
SBAS, DSU**



**29 FEBRUARY 2024
THURSDAY
&
01 MARCH 2024
FRIDAY**

ORGANIZING COORDINATOR

**DR. VINEETHA. M. S
ASSISTANT PROFESSOR
DEPT. OF BIOTECHNOLOGY
SBAS, DSU**



**PG BIOTECHNOLOGY LAB
CD SAGAR BUILDING
DAYANANDA SAGAR UNIVERISTY**





Bengaluru, KA, India
1st Cross Road, Kumaraswamy Layout,
Bengaluru, 560111, KA, India
Lat 12.907417, Long 77.567534
03/01/2024 11:58 AM GMT+05:30



DAYANANDA SAGAR UNIVERSITY

School of Basic & Applied Sciences

Department of Biotechnology

Watson & Crick Student Club

Organizing

Skill Development Series- for PG students

Hands on Workshop

on

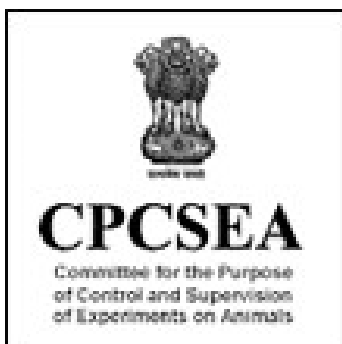
" Basics of Laboratory Animal handling (Mice/Rat)"

Theme: "Understanding the methodologies and Basics of Research with *in vivo* Murine Model"

On

20th September-2023

Time: 10:00 am onwards



HIGHLIGHTS

- **CPCSEA Regulations Ethics and Welfare**
- **Anesthesia & Euthanasia**
- **Biosafety and Occupational Hazard**
- **Hands on training on animal experiment (Mice model)**
- **Dissection and collection of Organs**
- **Restraining, Handling, Intraperitoneal injection etc**
- **Routes of Drug administration**

Every participant will receive certificate at the end of workshop

REPORT

Skill Development “Hands on Workshop

on

” Basics of Laboratory Animal handling (Mice/Rat)”

Theme: “Understanding the methodologies and Basics of Research with *in vivo* Murine Model”

Faculty members of Biotechnology conducted a one day Hands on workshop for their MSc final year students on 20th Sep 2023. Total 55 MSc Biotechnology students attended and got trained on for animal handling. Dr. Susweta Das completed the workshop for the students with the help of organizing team including two alumni students of MSc Biotechnology -Ms. Ashika & Ms. Meha , PhD scholar -Ms. Adrija Saha, Lab technician-COPS -Mr Mahesh and Lab attender – Mr Gautham. The senior students extended support to their juniors during the workshop with their skills on animal handling. Dr Susweta along with Lab technician Mr. Mahesh (COPS, DSU) who has > 20 years of experience on animal handling, trained the students during the workshop along with the help of lab attender Mr. Gautham.

The highlights of the workshop content were as follows:

- CPCSEA Regulations Ethics and Welfare
- Anesthesia & Euthanasia
- Biosafety and Occupational Hazard
- Hands on training on animal experiment (Mice model)
- Dissection and collection of Organs
- Restraining, Handling, Intraperitoneal injection etc
- Routes of Drug administration

Certificates were given to all participants and certificate of appreciation was given to the senior students of organizing committee.



Animal handling workshop- 20th Sep 2023



Animal handling workshop- 20th Sep 2023'
Senior students (Alumni for PG Biotech 2021 batch)
supporting the Biotech juniors of 2022 batch during workshop





Certificate

of Appreciation

Special Recognition to

.....
*in appreciation of his/her esteemed support as
Organizing Committee member and TRAINER for the*

***Hands on workshop on
Basics of Laboratory Animal handling
(Mice/Rat)"***

***Theme: "Understanding the methodologies and
Basics of Research with *in vivo* Murine Model "***

organized by

*Department of Biotechnology, School of Basic & Applied
Sciences, Dayananda Sagar University on 20th September 2023*

Prof. Sunil S More
Dean, SBAS, DSU

Prof. K. N. B . Murthy
Vice Chancellor, DSU



Dayananda Sagar University
School of Basic & Applied Sciences
Department of Biotechnology

Kumar swamy Layout,
Bangalore, Karnataka, India



Certificate of Participation
1 day HANDS on WORKSHOP

“Basics of Laboratory Animal handling (Mice/Rat)”

Theme: “Understanding the methodologies and Basics of Research with *in vivo* Murine Model”

20th September 2023

This is to certify that Mr/Ms.....has participated in Hands on workshop on “Basics of Laboratory Animal Handling” organized by Department of Biotechnology, SBAS, DSU.

Workshop Content

- **CPCSEA Regulations Ethics and Welfare**
- **Anesthesia & Euthanasia**
- **Biosafety and Occupational Hazard**
- **Hands on training on animal experiment (Mice/Rat)**
- **Dissection and collection of Organs**
- **Restraining, Handling, Intraperitoneal injection etc.**
- **Routes of Drug administration**

Prof. Sunil S More
Dean, SBAS, DSU

Prof. K. N. B . Murthy
Vice Chancellor, DSU



DAYANANDA SAGAR UNIVERSITY

SCHOOL OF BASIC & APPLIED SCIENCES

Department of Biotechnology

Watson & Crick Student club



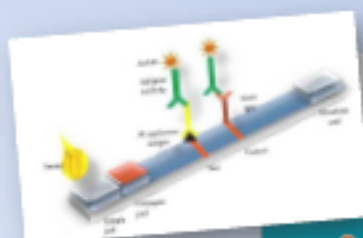
Organizing

Hands on Workshop on Immunotechniques

For

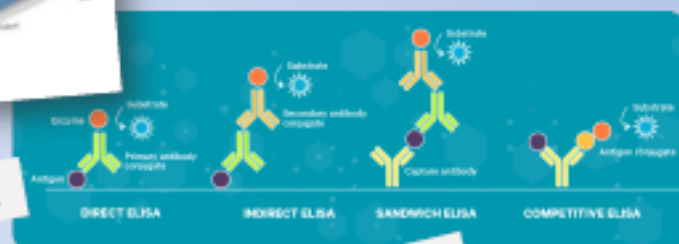
MSc Biotechnology

Final Year students



Immunochromatographic assay

ELISA



Immunization



Date: 4th to 5th December 2023

Time: 9.00 am to 5: 00 pm

Venue: PG biotech lab, Second floor, CD Sagar,
Building 10.

Workshop coordinator

Dr Triveni K

Assistant Professor-

Biotechnology

SBAS

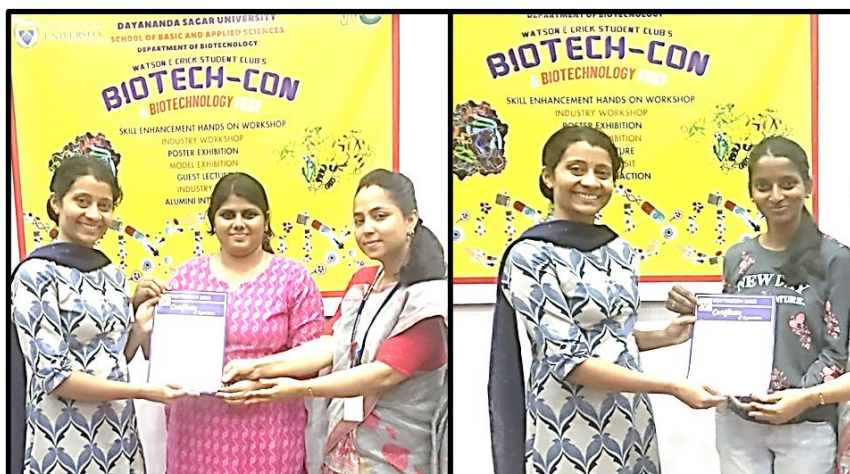
Certificate will be given to all the participants based on attendance & submission of workshop report

4th December to 5th December: Hands on Workshop on Immunotechniques

Dr. Triveni K, Asst Professor- Biotech, organized three days hands on workshop on “Immunotechniques” and trained the students with immunochromatographic assay, ELISA and Immunization from 4th to 5th December 2023 for 60 final year MSc Biotechnology students. Two Biotech alumni students of 2021 MSc batch, Ms. Varsha and Ms. Deekshitha were invited to be part of the workshop to help their juniors during the training and were acknowledged with certificate of appreciation from SBAS.



MSc Biotech students performing ELISA during hands on workshop on Immunotechniques on 4th December 2023



PG Biotech Alumni 2021-Ms Varsha and Ms. Deekshitha receiving certificate of appreciation for their support to conduct hands on workshop on Immunotechniques on 5th December 2023

Biotechniques in Industry (06/12/2023)

A workshop on “Biotechniques in Industry” was organized by Department of Biotechnology, School of Basic and Applied Sciences, Dayananda Sagar University, Bangalore in association with Sartorius, Merck and Biocon Academy for benefit of 5th semester B. Sc students and M. Sc students on 06/12/2023. Around 108 of B.Sc. and M.Sc. students were participated. Workshop Organized by Dr. Vineetha MS, Assistant Professor, Department of Biotechnology, School of Basic and Applied Sciences, Dayananda Sagar University. The workshop provided hands on training on Bio-Processing technique to meet the current day Industry need. Students were trained on Upstream process and Downstream process. The speaker, enlightened students on “Introduction to USP application in Biopharmaceuticals manufacturing, “Introduction to DSP application in Biopharmaceutical manufacturing”, Demonstration of DSP and USP Unit operation, Bio pharmaceuticals overview and new modalities in the market, Platform technology in Biopharmaceuticals manufacturing Downstream. Prof SS Eshwaran from Biocon Academy was chief guest and addressed valedictory session. We are looking forward to many more illuminating sessions one such as this in the future.



DAYANANDA SAGAR UNIVERSITY



WATSON & CRICK
STUDENT CLUB

**SCHOOL OF BASIC & APPLIED SCIENCES
DEPARTMENT OF BIOTECHNOLOGY**

**IN ASSOCIATION WITH
SARTORIUS, MERCK & BIOCON ACADEMY
PRESENTS**

**1 DAY WORKSHOP
"BIOTECHNIQUES IN INDUSTRY"
UNDER SKILL DEVELOPMENT SERIES**



**06 DECEMBER 2023
WEDNESDAY**



**CD SAGAR AUDITORIUM
PG BIOTECHNOLOGY LAB**









DAYANANDA SAGAR UNIVERSITY

School of Basic & Applied Sciences

Department of Biotechnology

Watson & Crick Student Club



Organizing

Skill enhancement

**Hands on Certificate Workshop
on**



**“Animal cell culture and its role in
research & industry”**

Mini Project included:

**“Primary cell culture from caudal fin
explants
of Zebra Fish”**

DURATION:

**26th February
to**

28th February 2024

Timings: 10.00 am to 5: 00 pm

Every participant will receive certificate at the end of workshop

Hands on training content - Highlights

Day1

- Cell culture: Dos and Dents (sterile techniques)
- Cell culture Lab equipments, media, reagents
- Types of cell culture (primary, secondary)
- Types of cell culture (Adherent, nonadherent); Epithelial vs Mesenchymal cells
- Introduction to Mesenchymal Stem cells and applications

Day 1

Preparing Primary cell culture (fibroblast); explant from zebrafish fin

Day2

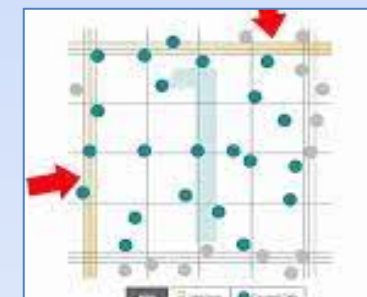
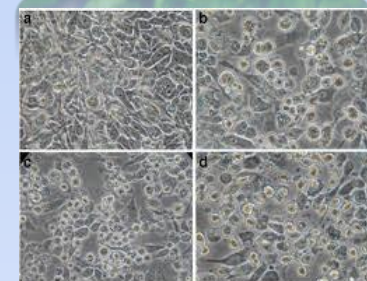
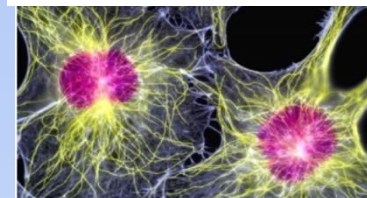
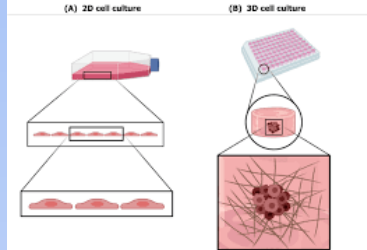
- Thawing Cells
- Cell Viability assay (Trypan blue)
- Seeding cells 2D (well plates) and 3D
- Real time-Live imaging.

Day3

- Observe seeded cells (2D vs 3D)
- Inverted Microscope
- Zebrafish primary cells observe
- Pre-prepared MSC differentiation to adipogenic lineage; stain

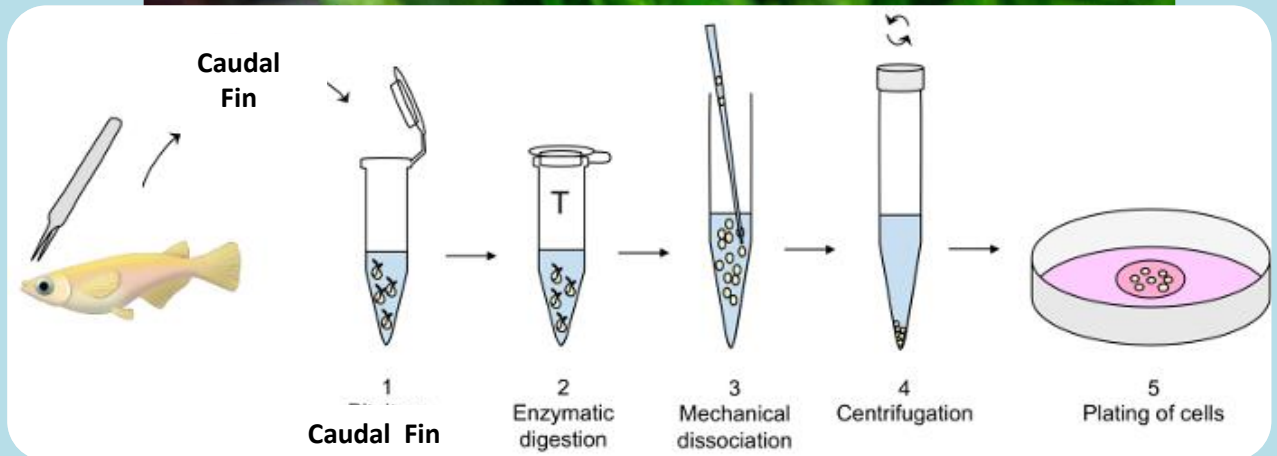
Day 4 & 5

Maintenance of cell



Mini Project included:

Primary cell culture from caudal fin explants of Zebra Fish



**Collecting cells for
DNA/RNA/protein analysis**

Resource person:

Dr Gokul Kesavan

Principal Scientist & Founder

Vertex Research & Education

Coordinator: Dr. Susweta Das

Associate Professor Biotechnology

Hands on workshop-

Animal cell culture “Primary cell culture from caudal fin explants of Zebra Fish”

Dr. Susweta Das, faculty of Department of Biotechnology, SBAS conducted a three days hands on workshop on “**Animal cell culture and its role in research & industry**” with a mini project titled: “**Primary cell culture from caudal fin explants of Zebra Fish**” from 26th Feb to 28th Feb 2024 for final year MSc Biotechnology students. Dr. Gokul Kesavan, Principal Scientist, Vertex Research & Education was the key resource person invited for the three days workshop.

The workshop covered **theoretical sessions** on 2D versus 3D cell culture, stem cells and types, stem cell differentiation, essential media requirements etc followed by **practical sessions**, where students were trained on viability assays, cell counting, seeding for cell culture, trypsinization of adherent cells, primary cell culture, real time live imaging, inverted microscopy, cartilage and bone staining etc.

The session concluded with question answer session where students gained deeper insights on the establishment of a cell line, characterization of stem cells based on different surface markers. Students understood the workflow of how the cell culture invitro system is used for testing drugs besides understanding different diseases by gene expression studies using the cell culture.

MSc Biotech student viewing cells from caudal fin under Inverted Microscope during workshop.



Dr Gokul Kesavan, (Principal Scientist from Vertex Research & Education) training students for imaging



MSc Biotech student dispensing cell culture media in 12 well, 24 well tissue culture plates and T-flasks.



Participants (MSc Final year Biotechnology student) along with Trainers- Dr Susweta Das, SBAS and Dr Gokul Kesavan, Vertex Research and Education, Bangalore during Hands on Workshop on Animal Cell culture techniques on 28th Feb 2024
