

HONOURS CERTIFICATE PROGRAMME PROPOSAL

AY 2022-2023

General Information of the Activity		
1.	Department and Hub	Biological Hub
2.	Title of the Activity	Exploring <i>Computational and Invitro</i> tools for understanding cancer biology.
3.	Name of the Professor taking the course	Ms. Norine D'Souza Dr. Shiney Peter
4.	Name/s of the Resource person/s	Ms. Norine D'Souza Dr. Shiney Peter
5.	Name of the Dept Coordinator and Email address	Dr. Shiney Peter
6.	Name of the Hub Coordinator and Email address	Dr Priya Sunderrajan
7.	Number of credits for the activity and number of hours	2
8.	Fees	3000
9.	Eligibility	TY Biological Sciences students and TY chemistry students with any biological sciences combination till SY. Interested SY students can also apply.
10.	Number of students	15
11.	Duration and Time	Module 1- Exploration of <i>Insilico</i> tools. Once a week (7 weeks) Wednesday- 5:00pm - 6:30pm (online mode) Module 2- Lecture series-5 (Friday/Saturday- 2:45-4pm) Module 3- Hands on training in animal tissue culture -3hrs/day- 1 week (November 2022 or January 2023)

Details of the Activity	
1	Title: Exploring <i>Invitro</i> and <i>Insilico</i> tools for understanding cancer biology.
2	Learning Objectives: <ul style="list-style-type: none"> ✓ To train in understanding biological data and tools available to analyze it ✓ To learn basic concepts in Cancer biology ✓ To learn <i>invitro</i> techniques that will help in understanding cancer
3	Learning Outcomes: <ul style="list-style-type: none"> ✓ Learner will be able to use bioinformatic resources for exploration and analysis ✓ Learner will be able to demonstrate understanding of basics of animal tissue culture and its applications.
4	Description: This course is designed to provide an overview of <i>Insilico</i> and <i>invitro</i> approaches for understanding biological concepts. The course is provided in three modules, each emphasizing on <i>Insilico</i> aspects, core concepts and hands on training in <i>invitro</i> tools to understand cancer biology.
5	Modules Module 1 (14 hrs.) <i>Insilico</i> tools. <ul style="list-style-type: none"> ✓ Molecular insights into Model organism used for studying cancer biology ✓ Exploration of Databases ✓ Introduction to OMICS in Biological Science ✓ Computational software and tool aided visualization of Macromolecules ✓ Exploring Biochemical Pathways using Computational Tools ✓ Role of computers in deciphering advances in biological systems. Module 2- Lectures (5 hrs) on <i>invitro</i> tools in understanding Cancer. Module 3- <i>Invitro</i> techniques (12 hrs)- Hands on training in animal tissue culture <ul style="list-style-type: none"> ✓ Understanding the basics of animal cell culture ✓ Establishing cell culture using primary tissue ✓ Charecterisation of the established cell culture

Activity Details

Duration:

Module 1- Exploration of computational tools. Once a week (7 weeks)

Wednesday- 5:00pm -6:30pm (online mode)

Module 2- Lecture series- 4 sessions (Friday/Saturday- 2:45-4pm)

Module 3- Hands on training in animal tissue culture -3hrs/day- 1 week

(November 2022 or January 2023)

Activity fees: 3000/-

Contact:

**To register pl email to
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shiney.peter@xaviers.edu**



HUB: BIOLOGICAL SCIENCES

CREDITS: TWO (2)

HIGHLIGHTS :

- ⇒ Exploring bioinformatics tools and data analysis
- ⇒ Hands on skill in establishing *invitro* fibroblast Culture

Eligibility:

TY Biological Sciences students and **TY chemistry** students with any biological sciences combination till SY.

Interested **SY students** can also apply.

Venue: PG Department of Biotechnology, 2nd floor, besides SCAVI



Honours certificate programme activity

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Exploring Computational and Invitro tools for understanding cancer biology.



Activity Registration form:

<https://forms.gle/5a17WCQUu9F5spgc6>