



Module PMRF-ISSS086/IV/2025

SURVIVAL MECHANISM IN MATRIX-DEPRIVED CANCER CELLS

Name of the PMRF student

Sayoni Maiti

Details of the content of the module

Required background of the students taught

Undergraduate in science or engineering in biology, biochemistry, biotechnology, cell biology, cancer biology, analytical techniques in biotechnology.

Introduction to cancer metastasis and anoikis resistance

- What is cancer?
- What is metastasis?
- What is anoikis and anoikis resistance?

Introduction to cancer metabolism

- Glycolysis
- Oxidative phosphorylation
- Tricarboxylic acid cycle and ETC
- PPP pathway

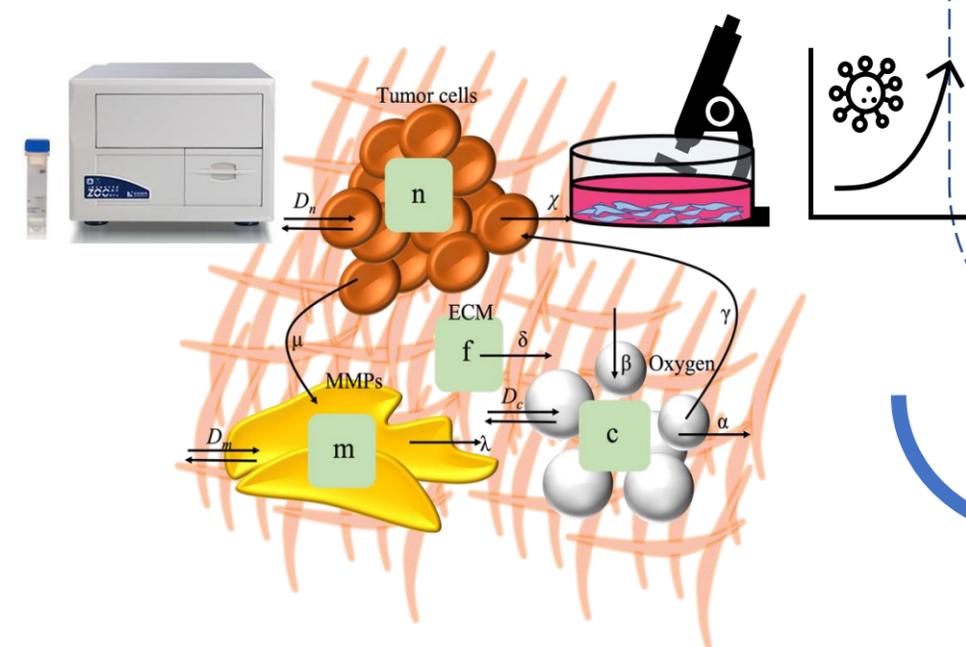
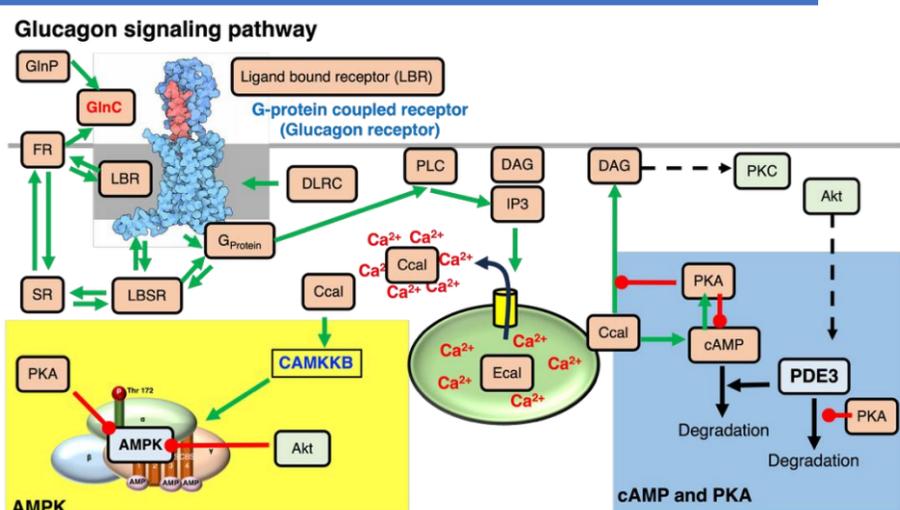
Experimentation

- Glucose uptake assay
- ATP determination assay
- Western blotting
- ROS assay
- NADPH assay

Analysis of results and understanding survival mechanisms

- How metabolic adaptations enable survival
- Several model systems for studying anoikis resistance

Nature of module: Lectures, discussions and assignments



Schedule of the module

Start date: 8th September 2025

End date: 26th September 2025

Day and time: Monday, Wednesday, Friday 7-9 pm

Meeting link: will be shared later

Contact email ID: sayonimaiti@iisc.ac.in

Registration

link: <https://forms.gle/7uvjxNFCYcktT8Dx8>