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LECTURE



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The edge of a cell: a living fabric

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The edge of a living cell is a flimsy four nanometer wide lipidic membrane bilayer that separates the outside of the cell from the inside. Its structure and organization has been the subject of research for close to a hundred years. In fact 50 years ago almost to date, a unifying model called the fluid-mosaic model was proposed to provide an explanation for some of its physical and chemical properties. This model declared that the plasma membrane was a complex mixture of lipids and proteins which were well mixed. Today we recognize that the membrane is far from being well-mixed. Its organization, form and physico-chemical properties are impacted not only by its dynamically maintained composition but by its interaction with the extracellular environment as well as the energy consuming scaffold (also called the cortical cytoskeleton) that it is draped over. My talk will describe the evolution of our thinking about the membrane and provide a perspective on how we see this part of the cell behave as an active actin membrane composite, and how as a uniquely living material it influences many decisions that the cell must make.

5.30 pm, Tuesday,
13 December 2022

Chandrasekhar Auditorium

YouTube Link: <https://youtu.be/ABirPvswWCc>

Web Link: <https://www.icts.res.in/lectures/a-living-fabric>

