

Mind the gap: Spatial organization and signaling at cell-cell contacts

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Membrane interfaces formed at junctions between cells are often associated with characteristic patterns of membrane protein organization, such as in epithelial tissues and between cells of the immune system. Together with the influences of receptor clustering, lipid domain formation, and cytoskeletal dynamics, cell surface molecular height can directly contribute to the spatial arrangement of membrane proteins and downstream signaling. This talk will introduce an optical method for characterizing molecular height on cell surfaces and discuss several biological problems where cell surface molecular height plays a key role in regulating cell-cell signaling.