

Control of secretion at the immunological synapse.

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There are many different cells in the immune system. In order to mount an effective immune response they need to communicate with each other. One way in which this is done is by the formation of 'immunological synapses' between cells. The role of the immunological synapse has been controversial, with studies suggesting roles in both enhancing and down-regulating signaling. Our own work has focused on the intracellular organization at the immune synapse. In cytotoxic T lymphocytes (CTL), we have found that the centrosome (which is the microtubule organizing center in T cells) polarizes to the cSMAC of the immune synapse, delivering the specialized lytic granules to the secretory domain where they release their contents and destroy their target. This talk will describe our recent advances in imaging these events, and understanding the signals that regulate secretion at the immunological synapse.

