

Porosome: The Secretory Portal in Cells, by Bhanu P. Jena,*
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The Supporting Information was omitted from the original publication.

SUPPORTING INFORMATION AVAILABLE

In this animation of cell secretion, secretory vesicles (violet) are transported via a railroad system to specific locations at the cell plasma membrane, where they dock and transiently fuse at the base of cup-shaped organelles called “porosomes” (blue cups), the secretory portals in cells. T-SNAREs at the porosome base interact with v-SNARE at the secretory vesicle membrane in a circular array to form a tight ring complex and, in the presence of calcium, establish continuity across the opposing bilayers. Secretory vesicle swelling results in increased intravesicular pressure, required for the expulsion of vesicular contents via the t-/v-SNARE channel (coiled green-blue strands) and the dilated porosome opening to the outside. NSF (green spheres between the vesicle and the porosome base), the right-handed molecular motor, disassembles the t-/v-SNARE complex, and dynamin enables dissociation of the vesicle membrane from the porosome base, allowing partial release of vesicular contents. This mechanism enables secretory vesicles to undergo a number of transient docking—fusion—partial expulsion cycles, prior to complete emptying and recycling [three-dimensional animation generated by Dale K. Myers (Dale K. Myers Animation Studio) in consultation with Bhanu P. Jena]. This material is available free of charge via the Internet at <http://pubs.acs.org>.