

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: A 3D model reconstructed from FIB-SEM stacks acquired from the generator using Dragonfly 2024.1. This movie highlights the interface between the living generator tissue and the non-living lamellae. The vesicles containing the MSP-1 protein (shown in pink) within the tissue are encased in a membrane (yellow) that ruptures during the secretion process. As the vesicles move toward the interface, the cilia (red) redistribute, facilitating the transformation of the vesicles into the OLL, depicted in purple.