



Fig. S2. Enlarged view of the 3-dimensional (3D) reconstructed area marked by a white box in Fig. S1A¹ (see Movie S1¹ TOVIS.avi). Connections are visible in the 3D-reconstructions of the tomography of vitreous sections (TOVIS) data-set (B) at the positions marked with arrows in the 2D image of the same data (A). *White dotted line* in (A) marks the interface between viable and cornified epidermis. *Black dots* in (A) represent 10-nm quantum dots (PbS) used as fiducial markers for alignment of the tilt series images during 3D-reconstruction. *White arrows*: connections between different lamellar bodies; *Black arrows*: connections between lamellar bodies and the extra-cellular space between stratum granulosum (SG) and stratum corneum (SC); (D) transition desmosomes located between the SG and the SC; Scale bar: 100 nm.