

Description of Additional Supplementary Files

Title: Supplementary Data 1

Description: Table of key resources used for this research.

Title: Supplementary Movie 1

Description: Dynamic modeling of oxygen diffusion through HPSs cultured atop PFC membranes.

Title: Supplementary Movie 2

Description: Dynamic modeling of oxygen diffusion through HPSs cultured atop transwells.

Title: Supplementary Movie 3

Description: Imaging of the Ca²⁺ stimulation of an islet within a human pancreatic slice cultured for 10 days atop a PFC membrane. The video shows stimulation with 16.7 mM glucose and subsequently KCl depolarization.

Title: Supplementary Movie 4

Description: Imaging of the Ca²⁺ stimulation of a human pancreatic slice cultured for 10 days atop a PFC membrane with KCl and carbachol. Only the islet featured in the field responds to the former, whereas only the surrounding exocrine tissue responds to the latter.