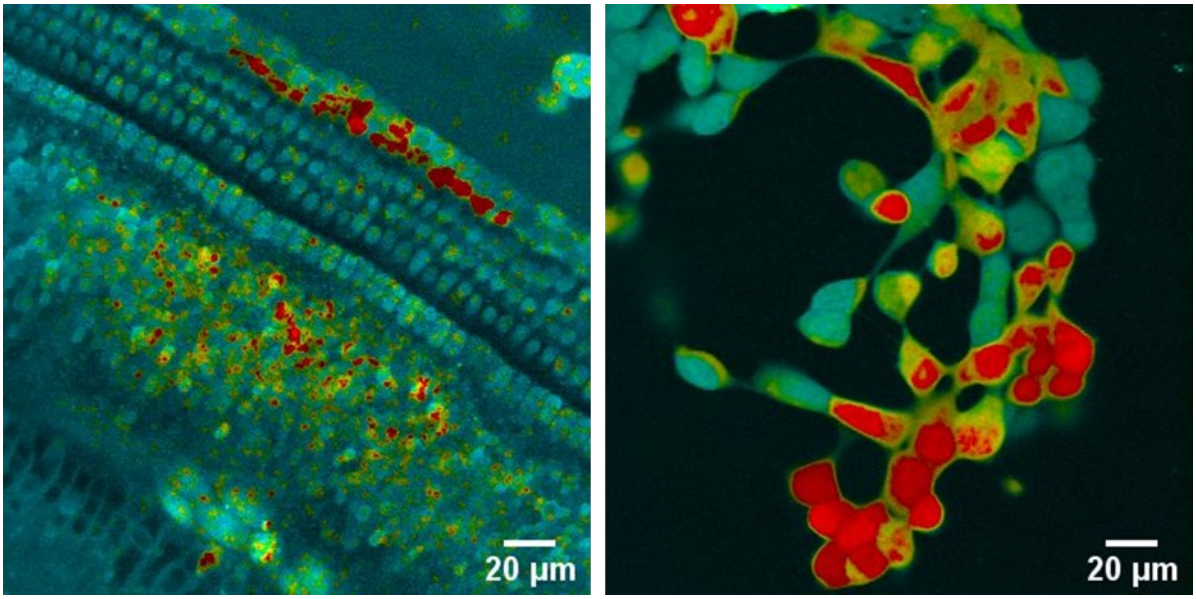
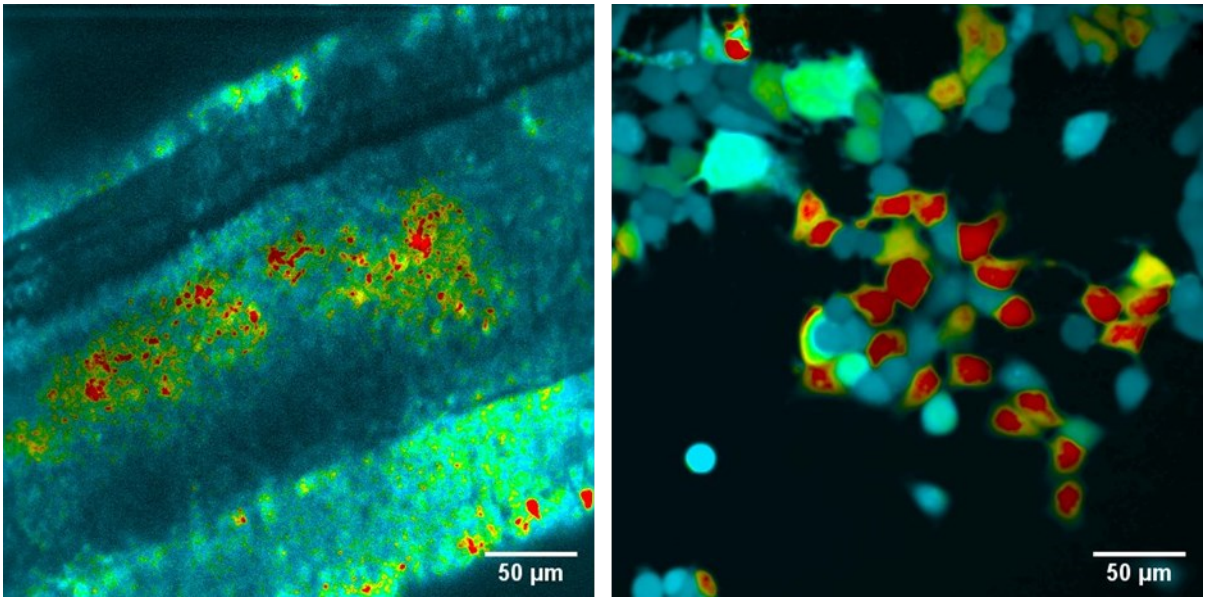
Electronic Supplementary Material (ESI) for Lab on a Chip.

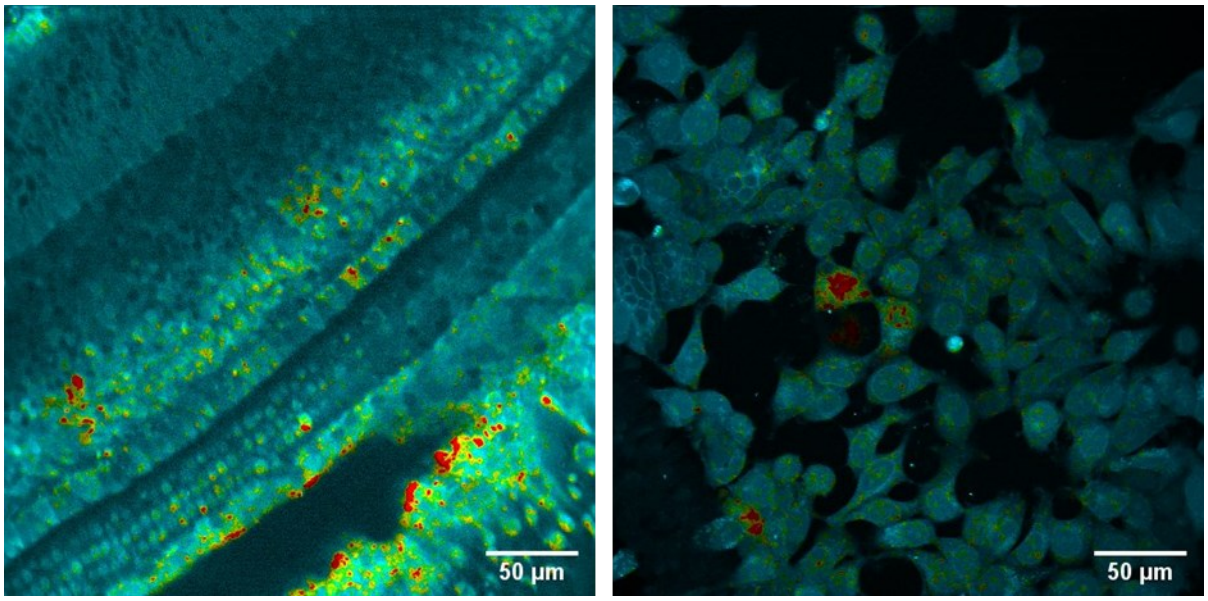
Supplementary Video Descriptions



Video S1. ATP-WCBs response to ATP release after stimulated Ca^{2+} signals in wild type cochlea. The cochlear organotypic culture (left) and the ATP-WCBs (right) are mounted in the microfluidic chamber facing one another on two different planes and loaded with Fluo-8. Images were acquired at 1 Hz for 80 s and played back in the video at 10 Hz.



Video S2. Simultaneous two-focal planes imaging on Panx1$^{-/-}$ cochlear organotypic cultures and on ATP-WCBs. Activation of ATP-WCBs (right) triggered by local release of ATP molecules during ATP-mediated Ca^{2+} waves in non-sensory cells of the GER of postnatal cochlea from Panx1$^{-/-}$ (left). Images were acquired at 1 Hz for 180 s and played back in the video at 10 Hz.



Video S3. Simultaneous two-focal planes imaging on Gjb6$^{-/-}$ cochlear organotypic cultures and on ATP-WCBs. Lack of spontaneous Ca^{2+} signals in non-sensory cells of the GER of postnatal cochlea from Gjb6$^{-/-}$ (left) and consequent absence of signals on ATP-WCBs (right). Images were acquired at 1 Hz for 110 s and played back in the video at 10 Hz.