

Supplementary Figures

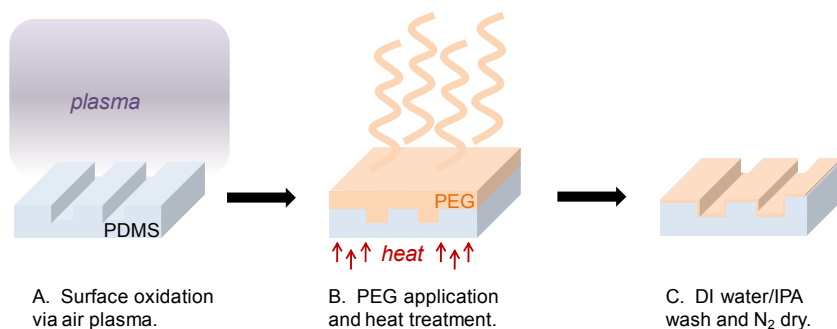


Figure S1. Schematic of the PEG-coating process for generating hydrophilic surfaces on PDMS microchannels. The 3-step fabrication process can be completed in less than 30 min.

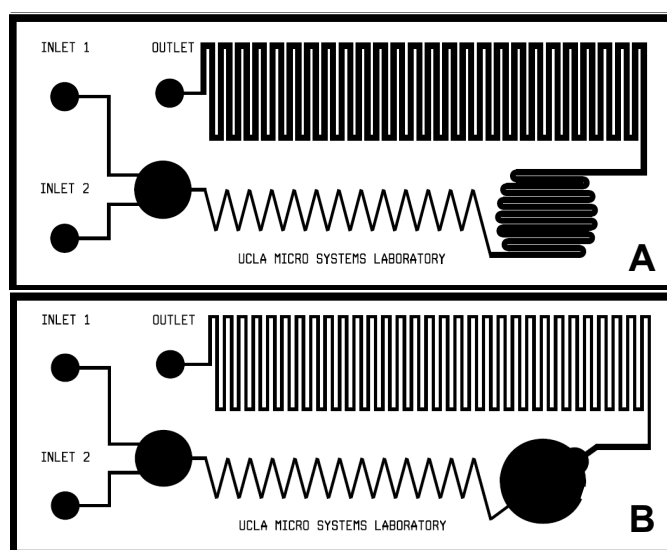


Figure S2. Schematic illustrations of two design variations of the fluidic network for the proposed lab-on-a-chip. (A) Design 1: the electrode is overlaid by a closely-packed serpentine channel, which flows into a 400 μm wide rectangular serpentine channel. (B) Design 2: the electrode is encased in a circular chamber which flows into a 200 μm wide serpentine channel.

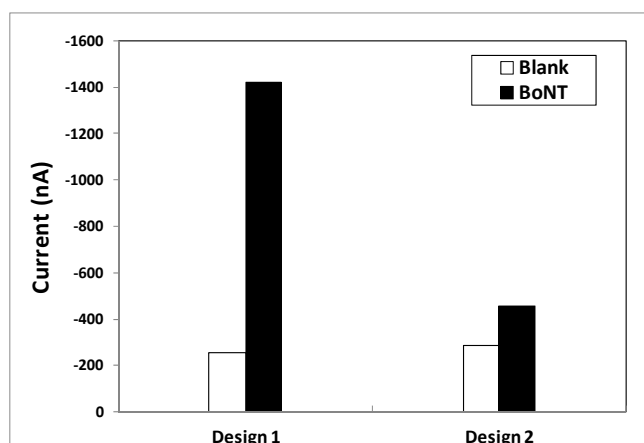


Figure S3. Comparison of detection sensitivity for two designs of the BoNT/A detection chip. Designs 1 and 2 refer to the illustrations in Figure S2. The entire detection process was achieved within 15 minutes.