Stimulation and release from neurons via a dual capillary collection device interfaced to mass spectrometry

Yi Fan, Chang Young Lee, Stanislav S. Rubakhin, Jonathan V. Sweedler

Department of Chemistry and the Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign, Illinois 61801

Supporting Information
Figures S1–S4
Figure S1. SEM images of the capillary inner wall (A) before and (B) after octadecyl modified silica nanoparticle deposition; (C) zoomed view of B.
Figure S2. Comparison of the peptide collection efficiency from ASW using: (A) an OSND capillary and (B) an octadecyl-modified capillary without silica nanoparticles. The eluents from the columns were dried and redissolved in loading solution for CapLC-UV characterization. Peak identities (from left to right): angiotensin II, angiotensin I, substance P, bombesin, ACTH(18-39), and somatostatin.
**Figure S3.** Binding curves for substance P (shown as filled squares) and bombesin (shown as empty triangles) using the OSND capillary. Substance P and bombesin were prepared in ASW at 3.0 and 2.5 μM, respectively. Each data point represents average extraction results from three individual columns ± standard deviation.
**Figure S4.** MALDI MS spectra from bag cell cluster releases (A) pre-stimulation (showing few peaks) and (B) during/after KCl stimulation of the cluster showing α-BCP(1–7) at m/z 922.6, α-BCP at m/z 1122.7, AP(1–20) at m/z 2233.4, AP at m/z 2959.6, and ELH at m/z 4383.5.