

Supplementary Figure

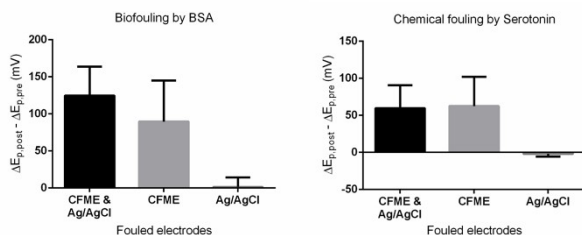


Figure S1. The ΔE_p difference after fouling by (a) BSA and (b) serotonin for both CFME and Ag/AgCl electrodes fouled, for only CFME fouled, and for only Ag/AgCl electrode fouled.

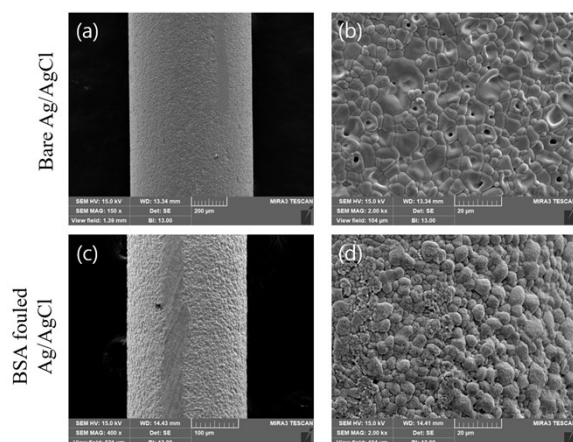


Figure S2. (a) 150x and (b) 2000x SEM images of bare Ag/AgCl reference electrode before implantation. (c) 400x and (d) 2000x SEM images of Ag/AgCl reference electrode after in-vitro fouling by BSA.

(a) Background subtracted voltammograms for dopamine detection

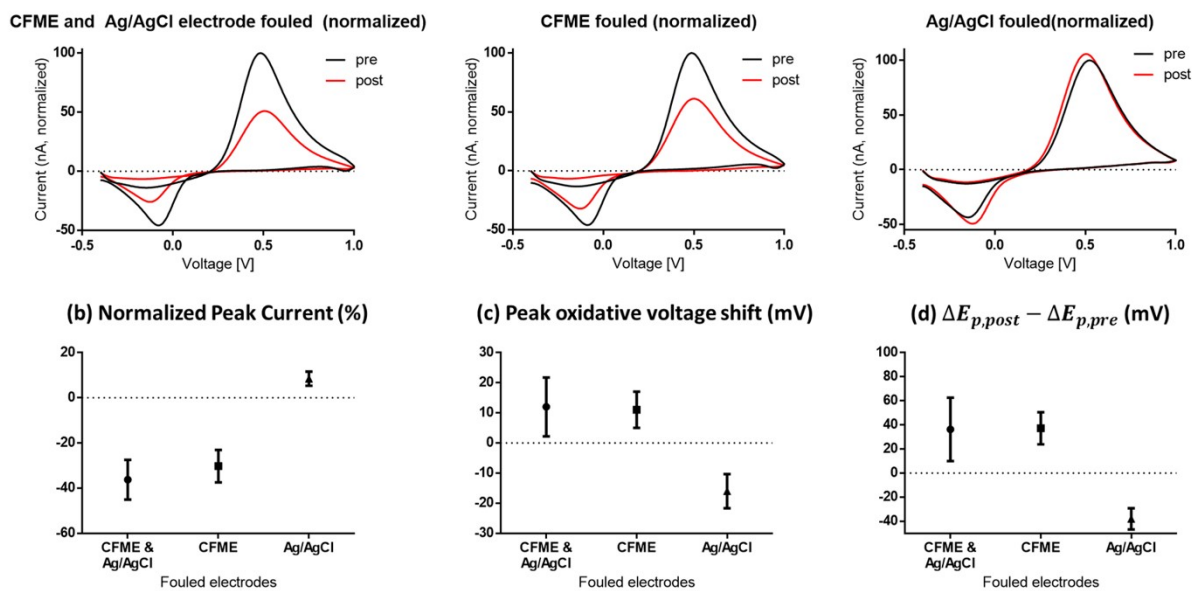


Fig S3. (a) Representative in vitro FSCV background-subtracted voltammograms using $1\mu\text{M}$ dopamine before and after fouling the electrodes by F12-K for both CFME and Ag/AgCl electrode fouled, only CFME fouled, and only Ag/AgCl electrode fouled. (b) Normalized peak current decrease after fouling (Mean \pm SD; $n=4$). (c) Peak voltage shift after fouling. (Mean \pm SD; $n=4$). (d) The difference between ΔE_p before and after fouling (Mean \pm SD; $n=4$).

(a) Background subtracted voltammograms for dopamine detection

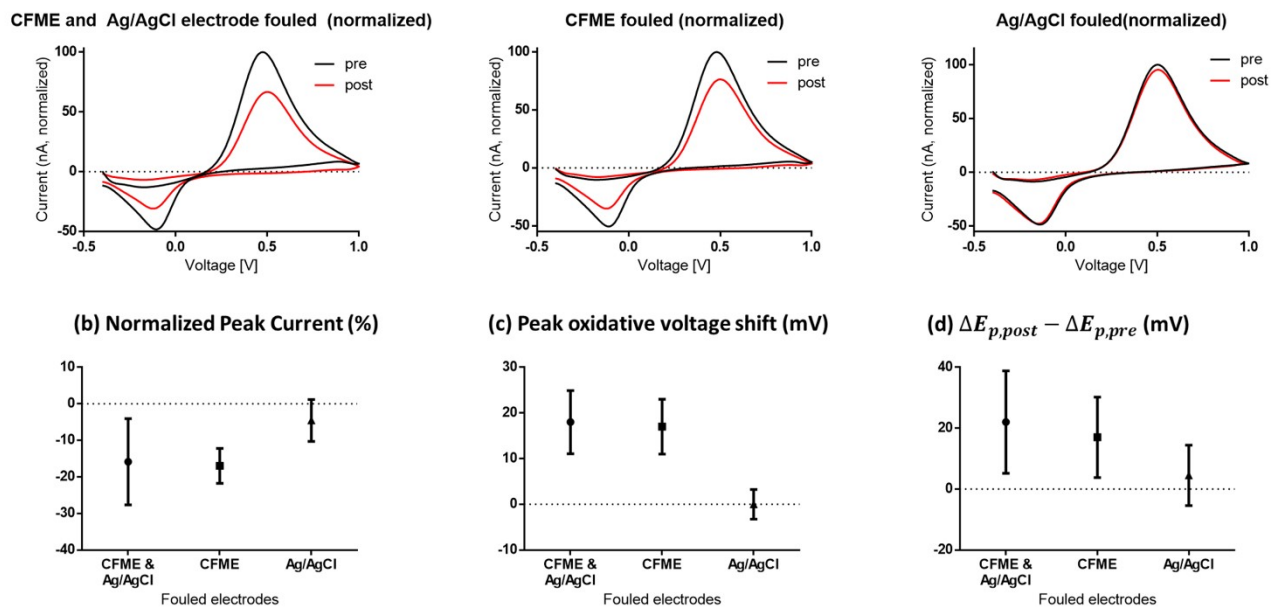


Fig S4. (a) Representative in vitro FSCV background-subtracted voltammograms using $1\mu\text{M}$ dopamine before and after fouling the electrodes by 1mM dopamine for both CFME and Ag/AgCl electrode fouled, only CFME fouled, and only Ag/AgCl electrode fouled. (b) Normalized peak current decrease after fouling (Mean \pm SD; $n=4$). (c) Peak voltage shift after fouling. (Mean \pm SD; $n=4$). (d) The difference between ΔE_p before and after fouling (Mean \pm SD; $n=4$).