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Supplementary Materials: Amperometric Self-Referencing Ceramic Based Microelectrode Arrays for D-Serine Detection

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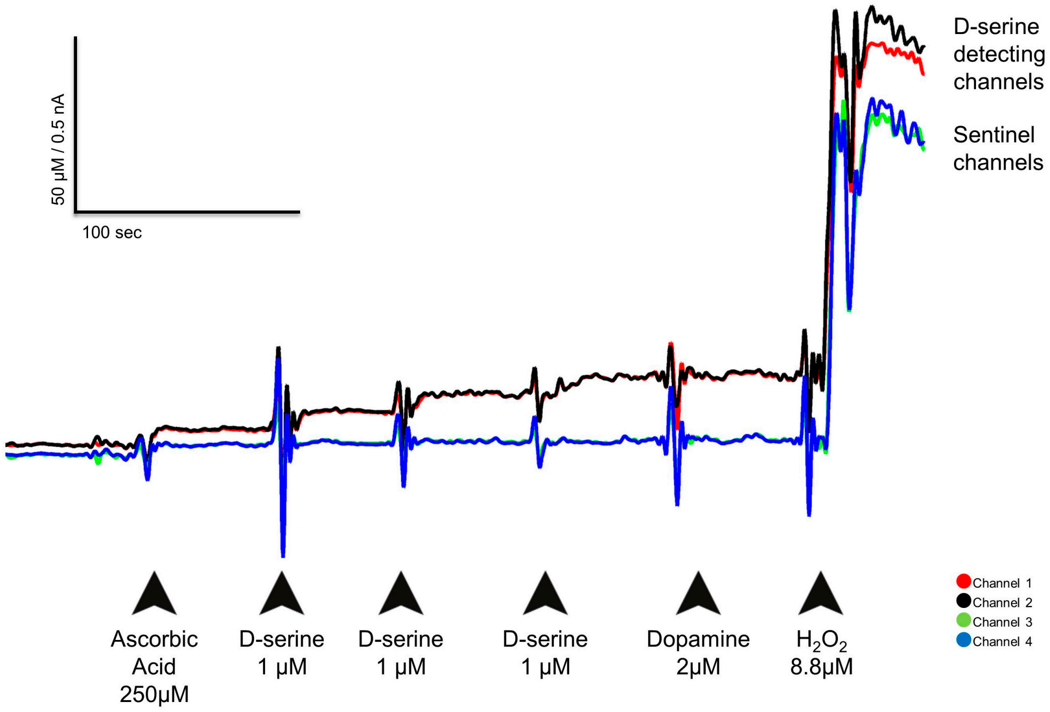

Figure S1. In vitro calibration of one D-serine detecting Microelectrode Array (MEA) using 1 mM D-serine challenges. Arrows indicate when substances were added and the resultant concentration obtained in the calibration media. The figure reflects the current (nA) and corresponding concentration (µM) measured by the MEA after each challenge. Channels 1 and 2 are D-serine detecting, and channels 3 and 4 are sentinel channels, respectively. Note that the higher resolution of the picture leads to a higher visibility of background noise.

Table S1. In vitro calibration measurements for the RgDAAO coated D-serine detecting MEAs using final concentrations of 1 µM D-serine in the solution media (n=5; mean ± SEM). There was a minimal decrease in linearity as compared to the standard calibration and the limit of detection (LOD) increased slightly.

Parameters	Sensitivity	LOD	Linearity (R^2)
1 µM challenge calibration measurements	8.67 ± 0.0018 pA/µM	0.25 ± 0.06 µM	0.9884 ± 0.0048

Table S2. In vitro calibration measurements obtained from the calibration of the RgDAAO coated D-serine detecting MEA depicted in Figure 2.

Parameters	Sensitivity	LOD	Linearity (R^2)	Selectivity against AA
Measurements	9.32 pA/µM	0.16 µM	0.9997	263.82

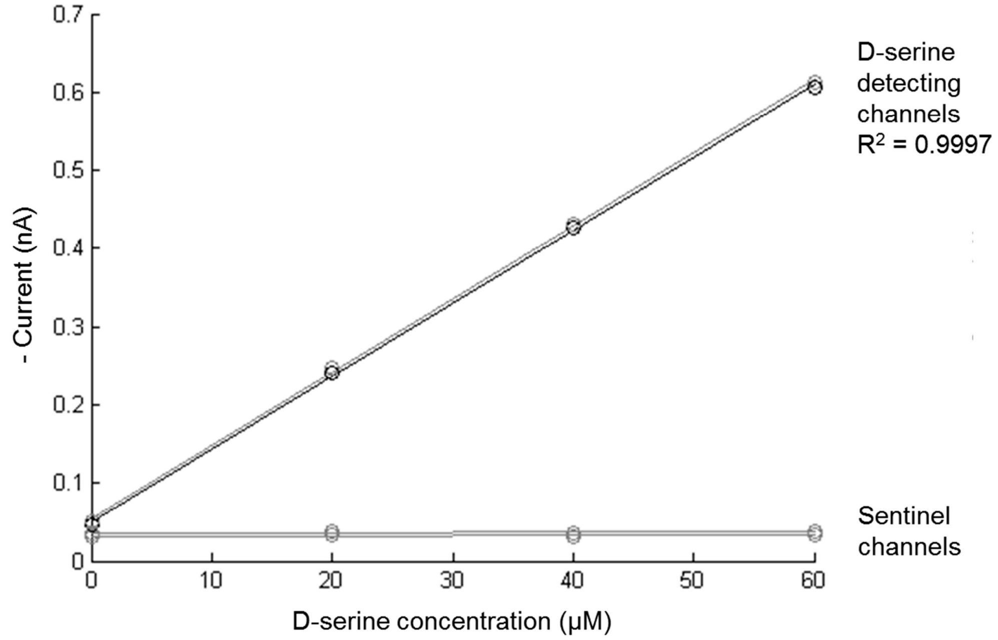

Figure S2. Linearity (R^2) curve obtained from the calibration of the RgDAAO coated D-serine detecting MEA depicted in Figure 2.