Supplementary Material

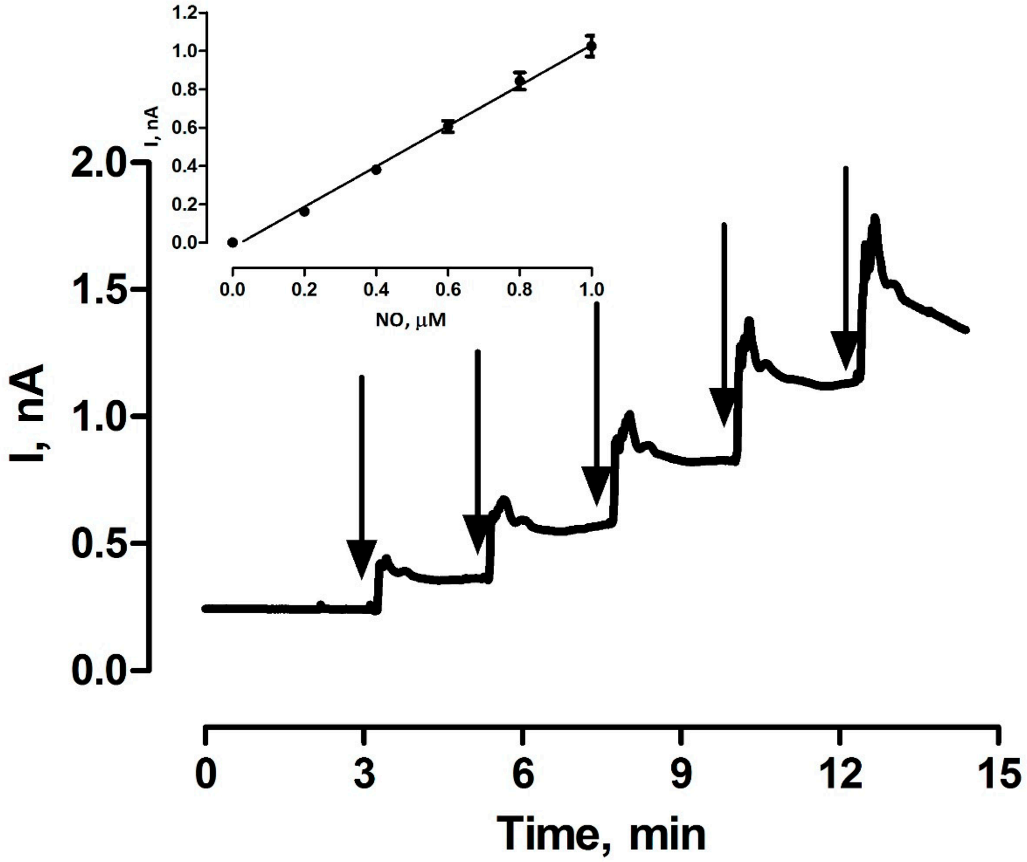

Figure S1: Typical *in vitro* data obtained for a 0 to 1 μM NO calibration using Nafion® coated Pt disk sensors. Arrows indicate addition of 0.2 μM NO aliquots. *Inset*: Current concentration profile for NO calibration on Nafion® coated Pt disk sensors (*n* =23), r^2 = 0.99. All concentration profile data is presented as mean ± SEM.

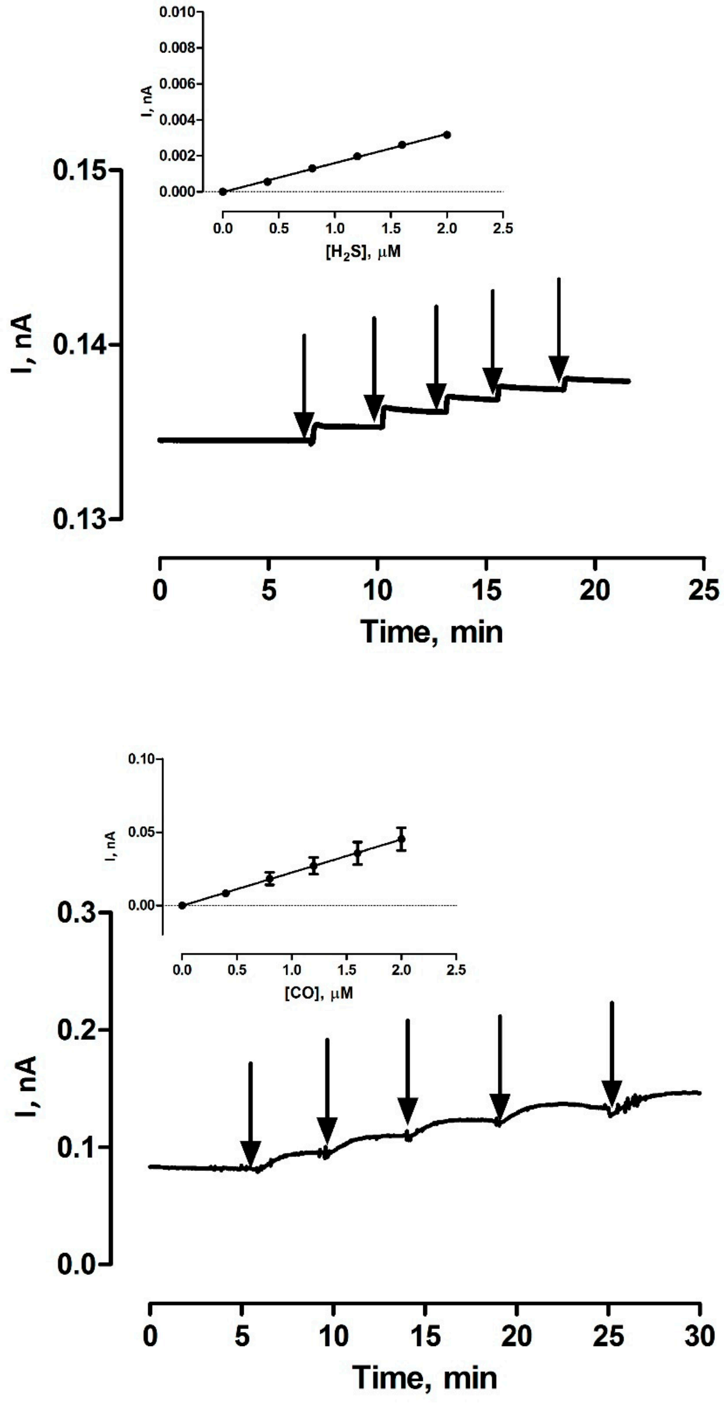

Figure S2: Typical *in vitro* data obtained for (top, main) 0 to 2 µM H_2S and (bottom, main) 0 to 2 µM CO calibrations on Nafion® coated Pt disk NO sensors. Arrows indicate addition of 0.4 µM aliquots. *Inset*: Current concentration profile for (top) H_2S and (bottom) CO calibration on Nafion® coated Pt disk NO sensors (*n* =4), $r^2 = 0.99$. All concentration profile data is presented as mean ± SEM.

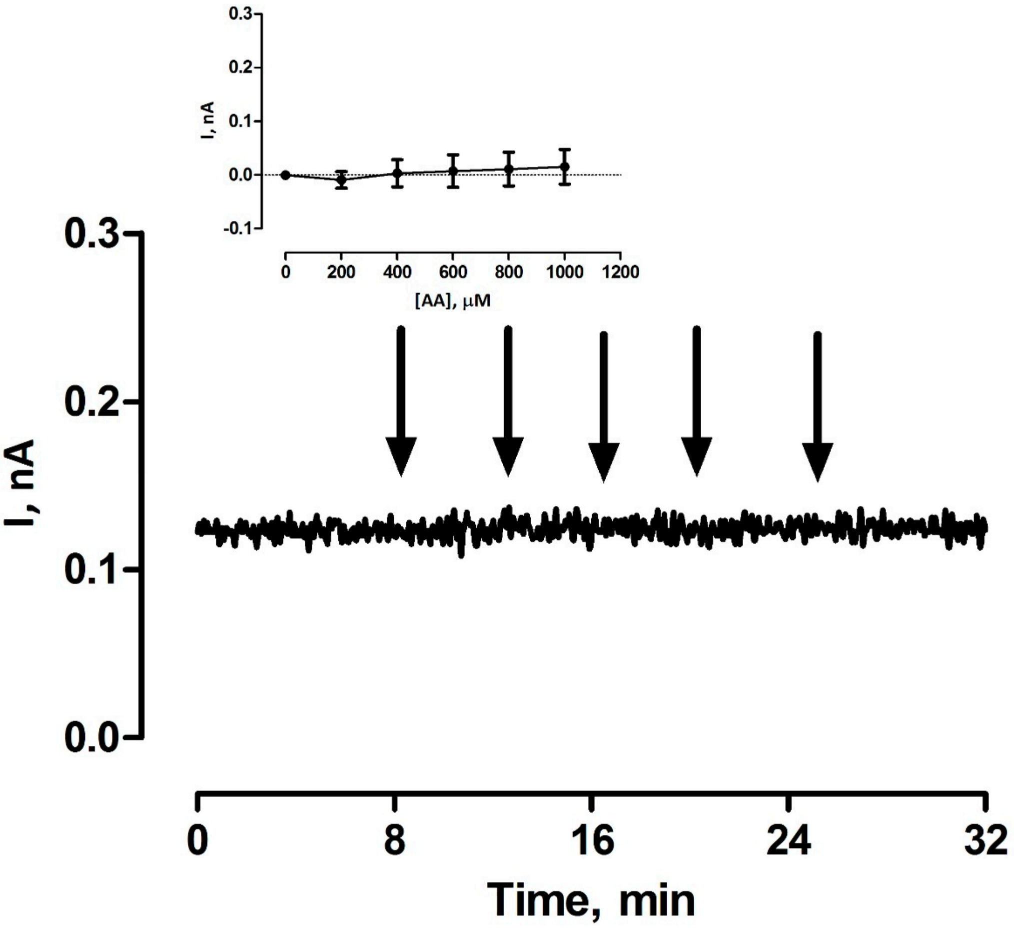

Figure S3: Typical *in vitro* data obtained for a 0 to 1000 μM AA calibration using Nafion® coated Pt disk NO sensors. Arrows indicate addition of 200 μM AA aliquots. *Inset*: Current concentration profile for AA calibration on Nafion® coated Pt disk NO sensors (*n* =17), $r^2 = 0.99$. All concentration profile data is presented as mean ± SEM.

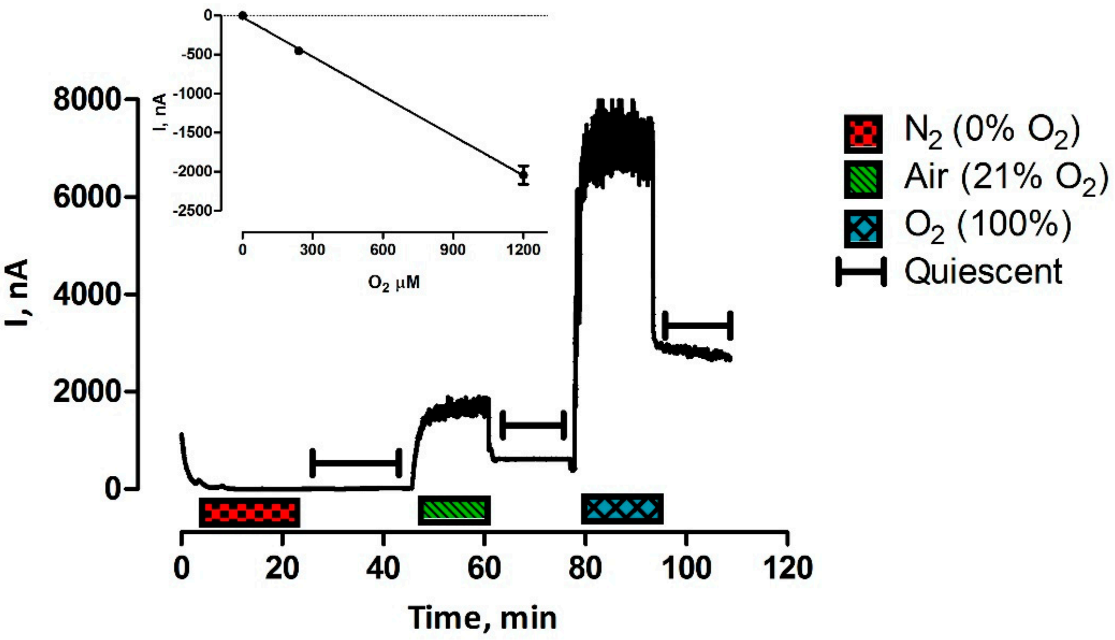

Figure S4: Typical *in vitro* data obtained for a 0 to 1200 μM O_2 calibration using CPE. *Inset*: Current concentration profile for O_2 calibration on CPEs (*n* =17), $r^2 = 0.99$. All concentration profile data is presented as mean ± SEM.

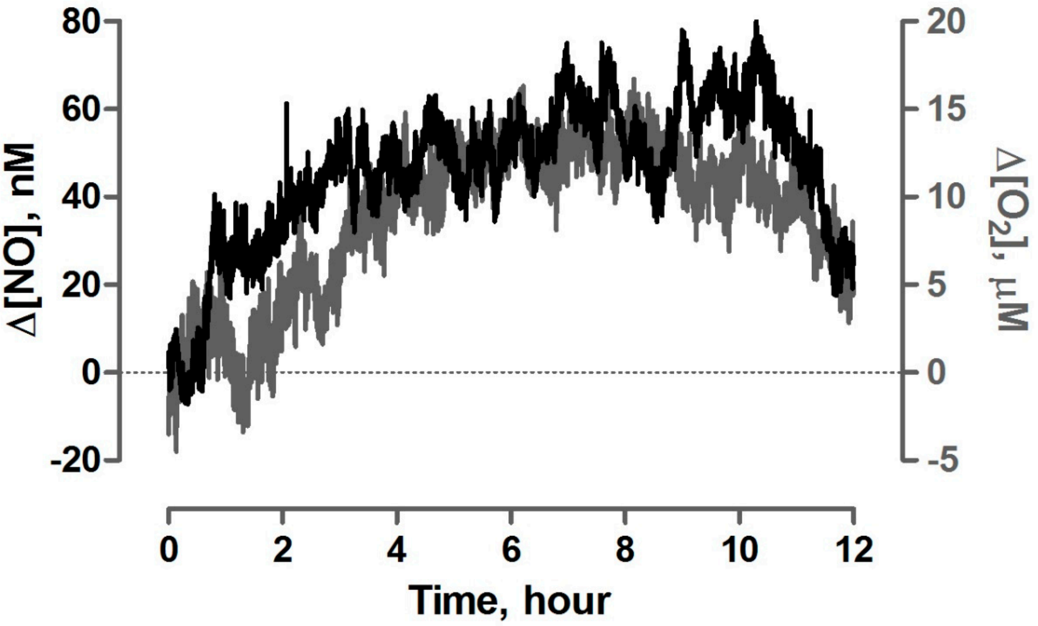

Figure S5: Comparison of averaged dark phase (19.00 – 07.00) concentration dynamics measured using NO (black trace, left y-axis) and O_2 (grey trace, right y-axis) sensors implanted in the striatum of NOD SCID mice.