

**Supplemental Figure 1.** Voltammetric changes following an intravenous nicotine infusion (0.3 mg/kg; arrow). **(A)** Changes in dopamine concentration and pH resolved by principal component regression. **(B)** Voltammetric data plotted with time as the abscissa, applied potential ( $E_{app}$ ) as the ordinate, and the current expressed in false color. The plot encodes 1800 background-subtracted cyclic voltammograms recorded over a 3 min interval. The dashed white line is at the potential for dopamine oxidation; pH changes can be detected at  $\sim + 0.2$  V vs. Ag/AgCl on the positive going scan. **(C)** The residual ( $Q$ ) from the principal component regression of the voltammetric data for dopamine and pH.

**Supplemental Figure 2.** Rimonabant attenuates the psychomotor stimulant effects of cocaine. Locomotor activity was measured during the first 10 min after injection of saline, cocaine (3 mg/kg) or cocaine in the presence of rimonabant (0.3 mg/kg delivered i.v. 10 min prior to cocaine). Data are expressed as total distance traveled. Cocaine significantly enhances locomotion compared to saline injection ( $n = 5$ ). Pretreatment with rimonabant significantly attenuated the activating effects of cocaine. \*\*  $p < 0.01$  saline vs. cocaine; &  $p < 0.01$  cocaine vs. cocaine in the presence of rimonabant, 5 rats per group.