

Neurosteroid Service Core

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The Neurosteroid Core will develop and validate a gas chromatography mass spectroscopy assay for GABAergic neuroactive steroids in plasma and brain. The $3\alpha,5\alpha$ and $3\alpha,5\beta$ - reduced derivatives of progesterone, deoxycorticosterone and androsterone will be measured simultaneously in samples following stress and/or ethanol administration in mice, monkeys and man. Our goal is to complete the validation of the assay in Year 1 of funding and devote the subsequent years to the analysis of core samples provided by INIA investigators. We plan to analyze plasma and brain samples in monkeys (Grant, Friedman) and man (Adinoff). Mouse brain samples (Becker) will be analyzed for $3\alpha,5\alpha$ -THP by RIA due to the low yield of plasma and brain tissue. We predict that endogenous, stress-induced and ethanol-induced increases in GABAergic neuroactive steroids will influence ethanol drinking behavior across species.