Investigator:

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Primary Research Interest:

Description of Research:

We are exploring the effect of stress on the molecular machinery of excitatory neurotransmission in the extended amygdala, a brain region implicated in PTSD. We are using electron microscopy to determine the subcellular distribution of glutamate receptors and CaMKII 1, 6 and 14 days after repeated immobilization stress in rats. In addition, we are examining the effect of stress on another component of the extended amygdala, the bed nucleus of the stria terminalis (BNST). We are currently examining the distribution of adrenergic receptors and potassium channel subunits in the BNST.

Relevance to VA:

Our research if focused on understanding how severe stress alters brain regions implicated in fear, anxiety and PTSD. A better understanding of the effect of stress on the brain is important to developing better treatments for PTSD and other psychiatric illnesses exacerbated by stress such as depression, schizophrenia and substance abuse.