

Targeting Trends

Reporting the latest news in Molecular Surgery



Noradrenergic inputs to the medial amygdala originate in the A1 and A2 cells groups and release norepinephrine after mating stimulation sufficient to induce pseudopregnancy

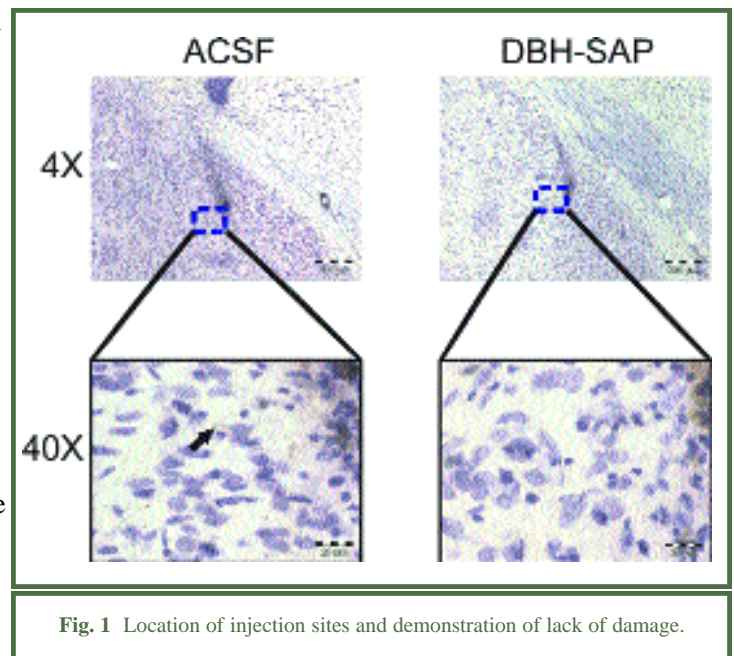
Contributed by Lesley E. Northrop, Nicole Cameron and Mary Erskine,
Department of Biology, Boston University

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The posterodorsal medial amygdala (MePD) is involved in processing the information from genito-sensory stimuli which is needed for mating-induced pseudopregnancy. The amygdala complex is known to be involved in memory storage and consolidation, processes known to be influenced by amygdalar norepinephrine (1). In addition, previous research has shown the MePD and the A2 noradrenergic cell group show increases in c-fos expression after mating, indicating that cellular activation has occurred in these areas. It is not clear whether there are noradrenergic projections from the A2 nuclei into the MePD.

In the first experiment, we infused anti-dopamine- β -hydroxylase-saporin (anti-DBH-SAP), a ribosome-inactivating neurotoxin which selectively destroys noradrenergic neurons, into the MePD to determine the source of norepinephrine in the MePD. A second experiment examined whether norepinephrine is released in the MePD during and after mating using a microdialysis technique.



Experiment 1: Ovariectomized female rats were infused with 20 ng anti-DBH-SAP in 0.2 μ l of aCSF into the left MePD (relative to bregma; AP-2.7 mm, ML 3.5 mm, DV -6.7 mm from dura) according to the atlas of Paxinos and Watson (2). Eight days after infusion, animals were perfused and 30 μ m sections through the brainstem were stained immunocytochemically using a DBH antibody. The forebrains were sliced and sections were stained with cresyl violet for injection site verification.

Figure 1 shows the location of the

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Denise Higgins, Editor

