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Boston University School of Medicine

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BOSTON UNIVERSITY
SESQUICENTENNIAL

Office of Media Relations

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October 26, 1989

Dear Member of the Media,

Several researchers from Boston University School of Medicine (BUSM) are investigating how different drugs of abuse affect the central nervous system by using animal models of drug-induced euphoria. They will be presenting their findings at the 1989 Annual Meeting of the Society for Neuroscience in Phoenix, Arizona, from October 29-November 3, 1989.

Here are brief descriptions of the findings the researchers will present.

1. PERSISTENCE AND DOPAMINE IN MORPHINE INDUCED STEREOTYPY--Jondavid Pollock, an M.D., Ph.D. candidate from BUSM, and Conan Kornetsky, Ph.D., a professor of pharmacology and experimental therapeutics and psychiatry at BUSM, found that when rats were given a number of high doses of morphine, they exhibited a compulsive repetitive movement (gnawing). Subsequently, when given a low dose of morphine, the gnawing behavior could be manifested as long as 270 days. These effects are mediated by changes in the dopamine system and suggest that this opiate-induced effect may be a model for tardive dyskinesia, a syndrome marked by facial movements, caused by repeated treatment with anti-psychotic drugs. Embargo date: 10/30, 5 p.m.

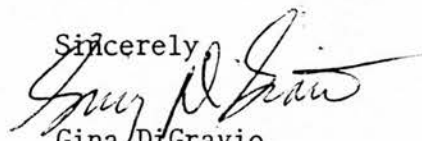
2. ORAL SELF-ADMINISTRATION OF ETHANOL VERSUS EXPERIMENTALLY ADMINISTERED ETHANOL FACILITATES REWARDING ELECTRICAL BRAIN STIMULATION--Marjorie Moolten, a graduate student from BUSM, and Conan Kornetsky, Ph.D., found that when rats were allowed to drink an ethanol-sucrose solution, they showed an increase in sensitivity in the brain linked to pleasure or reward. Rats injected with ethanol did not show any increase. These findings suggest that learning and/or other nonpharmacologic factors interact with alcohol's pharmacological effects on those centers in the brain having to do with pleasure. Embargo date: 10/30, 5 p.m.

3. BOTH MORPHINE AND COCAINE INCREASE GLUCOSE METABOLISM IN THE OLFACTORY TUBERCLE IN FREELY-MOVING RATS--David Huston-Lyons, a graduate student from BUSM, and Conan Kornetsky, Ph.D., studied metabolic activity of the brain after the administration of morphine and cocaine. Although these two drugs are very different and bring on different behaviors in rats and humans, the researchers found that both substances stimulate the area of the brain responsible for feelings of reward and euphoria. Embargo date: 10/31, 5 p.m.

4. THE EFFECTS OF SCH 23390 ON REWARDING BRAIN STIMULATION: EVIDENCE FOR PARTIAL D1 MEDIATION OF THE THRESHOLD LOWERING EFFECTS OF MDMA--Michael Bird, a graduate student from BUSM, and Conan Kornetsky, Ph.D., studied the drug "ecstasy" (MDMA) to see what area of the brain it affects. Bird and Kornetsky concluded that MDMA stimulates the dopamine system--a system in the brain believed responsible for the pleasurable effects of many abused drugs. Embargo date: 11/2, 5 p.m.

The above abstracts are enclosed. If you would like to interview any of the presenters, give me a call at (617) 638-8491. The embargo dates are listed.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gina DiGravio".

Gina DiGravio
Media Specialist
Boston University School of Medicine