Thrill-seeking females work hard for their next fix

March 11 2011

It seems that women become addicted to cocaine more easily than men and find it harder to give up. New research published in BioMed Central's open access journal *Biology of Sex Differences* reinforces this position by showing that the motivation of female rats to work for cocaine is much higher than males.

Researchers from the Molecular and Behavioral Neuroscience Institute, University of Michigan, found that rats bred to have an elevated stress response and increased impulsiveness are more easily trained to reward themselves with cocaine. They are also more determined, than similar rats with low impulsivity and lower stress responses, in pursuit of their next fix.

While cocaine dependency has something to do with thrill seeking and impulsivity, it is also affected by the differences between males and females. At a low dose, for both sets of rats, it was the females who were quickest to learn self-administration and were the most willing to work harder for their next fix. At higher doses, the differences in behaviour between the male and female rats were less apparent.

Whilst certain personality types are perhaps predisposed towards drug addiction Dr Jennifer Cummings explained, "An individual's sex continues to increase the likelihood of drug abuse."

More information: Effects of a selectively bred novelty-seeking phenotype on the motivation to take cocaine in male and female rats,

Jennifer A Cummings, Brooke A Gowl, Christel Westenbroek, Sarah M Clinton, Huda Akiland and Jill B Becker, *Biology of Sex Differences* (in press)

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