

the study is that a handful of chronically bored and possibly depressed cage-raised and restrained squirrel monkeys that have been specially taught to self-administer IV cocaine will also self-administer IV THC. This is the first time any animal has been taught to self-administer THC under *any* conditions. To extend this very limited result to include human behavior is grossly unscientific.

Furthermore, any researcher worth his grant money should have noticed the ceiling effect of reasonable THC doses in these monkeys. These captive and drug-trained monkeys liked THC, but only in a very limited way. Why did they reduce lever pressing at the higher dose of THC? Were they “stoned” and passive or drifting off? This is not mentioned in the poster. Perhaps this is the well-known ceiling effect of THC (seen in humans) that was not recognized as a worthwhile finding, as it indicates that THC self-administration has intrinsic limits that are far short of the toxic dose of THC.

But why labor over the “NIDA-Speak” in the study poster at all? One seasoned neurophysiologist remarked that he always ignores the obvious propaganda-laced conclusions, and goes right to the graphs and technical data to find what really occurred in NIDA studies. That may be fine if one is a neuroscientist, but politicians may read only the conclusions and rush to legislate public policy with drastic results. Indeed, Dr. Goldberg proudly told me that the conclusions of this study had already been influential in the recent British debate in parliament where the conservatives had insisted on draconian penalties for simple marijuana possession. The “addictive” properties of THC shown by this study had been one of the main arguments for the increased penalties.

In conclusion, this interesting and provocative study includes some well carried out primate research into THC use, but the scientific data are sullied by untenable “conclusions” consisting almost entirely of NIDA propaganda. Discussion of this state of affairs brought out an appropriate quote from a Russian Neurophysiologist at the Meeting: “The American approach to the drug problem is like a doctor who treats a cough with a strong laxative. The treatment may stop the cough for a while, but it does nothing for the underlying problem.”

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Response to Critique of THC Study

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I do appreciate the opportunity to review the critique by Dr. Campbell. There are inaccuracies and problems of interpretation in the critique, which I should note. The major findings in this poster were published in a leading peer-reviewed journal, *Nature Neuroscience*, the month of the Neuroscience Meeting (2000, volume 3, pages 1073-1074). It was a press release by *Nature Neuroscience* about the article that resulted in public debate in Great Britain just before the Meeting.

As Dr. Campbell suggests, these findings should not be “unduly extended” and, of course, need to be replicated by independent laboratory experiments, but our research does provide preclinical evidence of what has long been clear from

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clinical experience, that marijuana has abuse potential like other abused drugs and is a potential medical problem. The principal guide for the medical community in diagnosing psychiatric disorders is the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-4, 2000) published by the American Psychiatric Association. It

clearly describes marijuana (cannabis) as an abused drug capable of producing dependence and intoxication (pages 236 to 242). Marijuana is indeed illegal in the United States, Great Britain and much of the rest of the world. When I am writing about caffeine, I do refer to it being the most used psychoactive agent in the world, but marijuana is not caffeine and it is illegal.

Finally, the presence of a “ceiling effect” as the injection dose of THC was increased in our self-administration studies is exactly the same effect seen with other abused drugs such as cocaine or heroin under the same conditions. It is commonly referred to as an inverted u-shaped dose-response curve. However, the presence of an inverted u-shaped dose-response curve under controlled experimental conditions does not mean that a drug such as cocaine or heroine (or THC in marijuana) is free of toxicity and safe for human consumption.