

AIDS Treatment News broke the story in 1997:

# Suppressed Federal Study Found That Treatment With THC Reduced Cancer Rate, Increased Longevity in Rats

By John S. James

AIDS Treatment News has obtained a 126-page draft report of a major toxicology study of THC, the main psychoactive ingredient of marijuana. The study was completed over two and a half years ago, and passed peer review for publication, but has been kept quiet until this month, when someone leaked copies of the draft report. As far as we know, the public has never been told about this research—for example, the drug-reform movement seems not to have known about its existence. This work may have been hushed because its findings are not what the drug-war industry would want.

*the more THC the animals were given, the fewer tumors they developed.*

The study gave huge doses of THC to rats and mice by stomach tube, and looked for cancers and other evidence of toxicity. First there were small toxicity studies, which used enough THC to kill some of the animals; later, two-year studies were run in both rats and mice, using doses which were still much higher than those of marijuana smokers. The two-year studies tested THC in several hundred rats and several hundred mice.

In rats, those given THC had a clear survival advantage over the untreated controls; this effect was statistically significant in all dose groups, and in both males and females. In mice (which were given much larger doses than the rats relative to body weight) there was no survival difference among the groups—except that those given the highest dose (which was close to the lethal dose for mice) had worse survival.

In both mice and rats, in both males and females, “the incidence of benign and malignant neoplasms... were decreased in a dose-dependent manner”—meaning that the more THC the animals were given, the fewer tumors they developed.

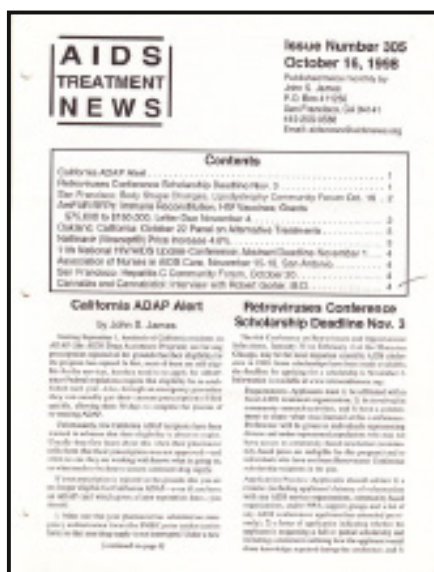
The treated animals weighed less than the controls (even though both ate about the same amount of food); the researchers speculated that the lower body weight may have partly accounted for the increased survival and reduced tumors in the THC-treated animals.

The doses were large enough to cause seizures and convulsions in many of the animals, especially when they were dosed or handled. These did not start immediately, but after many weeks, depending on the dose. The researchers looked for brain lesions in animals which had seizures, but found none.

No evidence of carcinogenic activity in the rats, but there was “equivocal evidence” of one kind of thyroid tumor in the mice—with no evidence of a dose-dependent response. Other tumors were less common in the treated animals than in the controls—except in one case, which the toxicologists believed was due to the fact that the treated animals lived longer, and therefore had more opportunity to develop tumors.

The report includes a professionally objective review of the biological effects, possible toxicities, and possible medical uses of THC and marijuana.

The title of the report is “NTP Technical Report on the Toxicology and Carcinogenesis Studies of 1-Trans-Delta(9)-Tetrahydrocannabinol (CAS No. 1972-08-3) in F344/N Rats and B6C3F(1) Mice (Gavage Studies).” Over 35 researchers contributed to this study, and 12 others reviewed their work; several institutions, including the National Toxicology Program and SRI International, were involved. The document we received is report NTP TR 446, NIH Publication No. 94-3362, of the U.S. Department of Health and Human Services. (“NTP” stands for National Toxicology Program, which is made up of four Federal agencies within Health and Human Services.) Each page of the draft is stamped “not for distribution or attribution.” In addition to the 126-page document we have reviewed here, there are 11 appendices,



which we have not seen.

According to the draft, the report will be available from NTP Central Data Management, 919/ 541-3419. AIDS Treatment News requested a copy of the final report when it is ready, and also requested a copy of the draft. Now that the existence of the report has become publicly known, we have heard that draft copies are being sent if requested—despite the notice on each page not to distribute them.

### Comment

It would be wrong to interpret this study as showing a beneficial or protective effect of marijuana. The animals were given very large doses, resulting in substantially lower body weight, which may itself have caused much of the survival and tumor improvements. Also, this study used THC, not marijuana smoke—which like any smoke contains many chemicals, some of which are likely to be harmful.

But the study does provide strong evidence that there is no significant cancer risk (if any at all) from the main psychoactive ingredient of marijuana; any such risk would be from incidental substances in the smoke. And if there is such a risk, the modern high-potency marijuana would likely reduce it, by reducing the amount of smoke required to obtain the desired effect.

Also, there is no known case of any human death from overdose of marijuana or THC, or from any other acute toxicity of these substances—a remarkable safety record, compared with alcohol, aspirin, or many other common drugs. (The toxicology report does not say there have been no deaths, but the authors listed none, after doing an exhaustive survey of the literature.)

The literature review on the effects of THC and marijuana shows how medical research has been politically skewed (although the paper itself does not state this point). There are almost no studies of possible medical uses of marijuana, but many studies looking for possible harm. Any positive findings, therefore, can be used to support the drug war—while negative findings (those which fail to show any effect) are usually ignored. Although many doctors and patients have reported important medical benefits, scientific studies of medicinal use have seldom been allowed to happen, since positive findings could challenge the official public-relations tactic of demonization. The drug war itself has controlled the medical research agenda, since it controls legal access to marijuana. Like most permanent wars, it strives for self preservation.

The newly available Federal toxicology study provides the best evidence yet that the risks of THC are small. What other drug would increase life expectancy of rats when given in huge overdoses daily for two years? The recent federal attacks on medical marijuana—against doctors and desperately ill patients—are needlessly cruel, and bizarrely inappropriate to scientific and medical understanding.



JOHN JAMES (CENTER, LOOKING DOWN) with Mike Alcalay, MD, and author/organizer Peter McWilliams in Sacramento for a hearing re medical marijuana circa 1998.

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photo by Liz Hafalta, San Francisco Chronicle