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Response to Stacey and Moller's Letter to the Editor

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To the Editor

We appreciate the authors' interest in the study and belief that rigorous studies are needed to address the potential role, or not, of cannabinoids in pain research, particularly in the area of neuropathic pain, where upwards of 40–60% of patients fail to get relief from current treatments.⁴ We agree that much is still unknown regarding the potential use of cannabis as medicine, such as How frequently would it need to be administered? Is any benefit sustainable? What are the short- and long-term effects on daily functioning (positive and negative)? What is the therapeutic window?

Although we believe that our study provided important data regarding the initial effects of cannabis, and in particular at low doses, in patients who were no longer getting relief from commonly used medications, larger and long-term studies are needed to address the above issues. Unfortunately, implementation of such studies has been hampered in part by the “unique” cultural and scientific context surrounding cannabis, as noted by the authors. In this context, it is ironic that public approval is now believed to be driving medical marijuana legalization efforts without the scientific background normally required to justify a new medication's introduction.² Developing such a scientific base, however, is particularly challenging given cannabis's classification as a DEA Schedule 1 drug.

Of note, we were particularly interested in whether lower doses would result in effective pain relief, with the aim of determining if lower levels of adverse effects could also be achieved. Although it's true that in the end we could not precisely control the amount of cannabis inhaled by each participant, it is perhaps not critical in this method of administration, because ultimately self-titration may be the preferred approach, as not all individuals metabolize all medications similarly.

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We do not have data directly assessing the daily functioning impact of this dosage of cannabis; certainly, this could be an important aim for future research involving studies weeks in duration. That said, “brief” human laboratory experiments evaluating abuse potential are essential elements of investigative research. Data from these studies contribute to the development of product labeling and drug scheduling recommendations.³ As cannabis remains a DEA Schedule I drug, a categorization reserved for street drugs with high abuse potential, such as heroin, quaaludes, lysergic acid diethylamide, and 3,4-methylenedioxymethamphetamine,⁵ such studies are highly relevant. And although the authors have noted some studies addressing possible negative consequences associated with cannabis, our study has demonstrated that a low-dose, 1.3% delta-9-tetrahydrocannabinol (9-THC) can result in pain relief with fewer side effects.⁸ To place this concentration into perspective, cannabis with a 9-THC concentration below 1.0 percent is believed not to be capable of inducing a psychoactive effect.⁷ By comparison, 9-THC levels in seized samples of marijuana in 2008 averaged 10.1%.⁶

Many of the cumbersome procedures cited by the authors (using a hood, having the participant be driven home), as well as the selection of participants with prior exposure, were implemented in part because this was a new study without many precedents, as well as the schedule I status of cannabis. We agree that some of these may not be practical in home use, but under current conditions they were important to include in this study.

We agree with the authors that it is important to move beyond emotional-based discussions and to foster careful and rigorous studies regarding the potential benefits, and costs, associated with cannabis/cannabinoids as a possible treatment for patients with pain that is not resolved using current treatments. Furthermore, we believe that our carefully designed and controlled study adds important new, and valid, data regarding the short-term effects of cannabis on treatment-resistant neuropathic pain, and that larger and longer-term studies are needed. The American Medical Association has called for “further adequate and well-controlled studies of marijuana and related cannabinoids in patients who have serious conditions for which preclinical, anecdotal, or controlled evidence suggests possible efficacy and the application of such results to the understanding and treatment of disease”.¹ Furthermore, they have urged the National Institutes of Health to “implement administrative procedures to facilitate grant applications and the conduct of well-designed clinical research into the medical utility of marijuana.” These would seem to be very prudent recommendations.

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