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*“We change laws.”*

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Board of Physicians  
Medical Marijuana Program  
Department of Consumer Protection  
165 Capitol Avenue, Suite 145  
Hartford, CT 06106

In concert with our supporters in Connecticut, the Marijuana Policy Project works toward sensible and compassionate marijuana policy reform. We write today to encourage the Board of Physicians to recommend that the Department of Consumer Protection extend protections to seriously ill patients suffering from Tourette disorder, severe psoriasis, psoriatic arthritis, sickle cell disease, and post laminectomy syndrome so that they might find relief from the use of medical marijuana.

These are serious medical conditions that dramatically undermine patients’ quality of life. Unfortunately many pharmaceutical medications used to treat symptoms associated with these conditions can be harmful to patients, especially when used over a long period of time. Even then, they are not always effective. Patients should have the option of having regulated access to medical marijuana when their physicians believe it can help. In the vast majority of other medical cannabis states, patients with these conditions would qualify for the program: Most of the programs allow physicians to recommend cannabis to patients with debilitating, intractable, or severe pain or persistent spasms. In Connecticut, too, these patients should not be considered criminals by the state for seeking a safer alternative.

### **Tourette Syndrome**

This condition is a neurological disorder characterized by involuntary, repetitive, involuntary movements and vocalizations called tics. The National Institutes of Health estimates that around 200,000 people in the U.S. have the most severe form of Tourette syndrome, and as many as one in 100 exhibits milder and less complex symptoms such as chronic motor or vocal tics.<sup>1</sup> Tourette syndrome can affect a person for life.

Certain prescription drugs can be used to treat symptoms of Tourette syndrome, although no one medication is helpful to all people suffering from the condition, and there is no pharmaceutical medication known to completely eliminate symptoms.<sup>2</sup> Most commonly, neuroleptic drugs — used to treat psychotic or other disorders — can help suppress the tics associated with the condition, although side effects can be significant, including

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<sup>1</sup> National Institute of Neurological Disorders and Stroke, National Institutes of Health, Tourette Syndrome Fact Sheet, [http://www.ninds.nih.gov/disorders/tourette/detail\\_tourette.htm](http://www.ninds.nih.gov/disorders/tourette/detail_tourette.htm)

<sup>2</sup> Id.

sedation, weight gain, cognitive impairment, tremors, involuntary twisting movements, and Parkinson's-like symptoms can also occur. There are also unique side effects that come from long term use of neuroleptic drugs, including involuntary jerking that is distinct from the tics caused by the condition itself. Other drugs are also used, but most have either not been extensively studied, nor are they as commonly used as neuroleptics.<sup>3</sup>

There have been a number of studies related to the treatment of Tourette syndrome with medical marijuana or its components. A 2003 review of the data published in the journal *Expert Opinions in Pharmacotherapy*, reported that therapy with THC should be tried when established drugs fail to improve tics or when side effects are significant.<sup>4</sup> A more recent review of available literature indicated that THC is recommended for Tourette syndrome when first line treatments failed to improve the patient's condition.<sup>5</sup>

Patients have testified and spoken to the media about how whole plant cannabis alleviates their motor tics that are caused by Tourette syndrome. In Rhode Island, during the state's medical marijuana debate, one of the most vocal patient advocates testified to how cannabis decreased his involuntary movements, which were so bad they caused dislocated joints.<sup>6</sup> Several patients have been filmed showing how cannabis calms their tics.<sup>7</sup>

### **Psoriasis and psoriatic arthritis**

Psoriasis is a common skin condition that causes skin redness and irritation affecting as many as 7 million people in the United States. About one fourth of these individuals have moderate to severe psoriasis, which results in thick, red skin with flaky, silver-white patches called scales, and can be accompanied by arthritis. Treatments include corticosteroids, the drug methotrexate and a combination of ultraviolet light with the drug psoralen (photochemotherapy). These treatments, although often effective, don't work for everyone, and can have negative side-effects, particularly if taken over a long period of time.<sup>8</sup>

When used to alleviate the symptoms of psoriasis specifically, many medical marijuana patients in other states report that medical marijuana can be applied topically to affected areas of the skin. Side effects caused by either short term or long term effects of medical marijuana use are not as severe other treatments, and medical marijuana is generally

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<sup>3</sup> Id.

<sup>4</sup> Kirsten Muller-Vahl. 2003. Cannabinoids reduce symptoms of Tourette's syndrome. *Expert Opinions in Pharmacotherapy* 4: 1717-25.

<sup>5</sup> Kirsten Muller-Vahl. 2013. Treatment of Tourette syndrome with cannabinoids. *Behavioral Neurology* 27: 119-124.

<sup>6</sup> Warren Dolbashian, "Life of Pain or Life of Crime?," *The Call*, May 29, 2005.

<sup>7</sup> See: <http://archive.wcsh6.com/news/local/story.aspx?storyid=266502> and <http://www.youtube.com/watch?v=plnkduXOQac>

<sup>8</sup> Mayo Clinic, "Prednisone and other corticosteroids," December 1, 2012, <http://www.mayoclinic.org/steroids/art-20045692?pg=2>, see also WebMD, "Methotrexate, Side Effects," <http://www.webmd.com/drugs/2/drug-3441/methotrexate-anti-rheumatic-oral/details/list-sideeffects>, and Wolff K., "Side-effects of psoralen photochemotherapy (PUVA)," *US National Library of Medicine National Institutes of Health*, 1990 Jun;122 Suppl 36:117-25, <http://www.ncbi.nlm.nih.gov/pubmed/2196078>

regarded as having a relatively positive safety profile, although supportive studies are limited.<sup>9</sup> Side effects typically associated with the use of medical marijuana would not apply to its topical use because it is not smoked or otherwise ingested.<sup>10</sup>

Up to 30 percent of people with psoriasis also develop psoriatic arthritis, which can result in severe stiffness and inflammation in and around the joints. There is no known cure, and long term, the condition can result in progressive joint damage. It can affect any part of the body, including the fingertips and spine.

Treatments to manage symptoms of the condition include the use of nonsteroidal anti-inflammatory drugs (NSAIDs) which can relieve pain and reduce inflammation, but are known to result in stomach irritation, heart problems, and liver and kidney damage.<sup>11</sup> Other treatments include disease-modifying antirheumatic drugs (DMARDs). These drugs can slow the progression of psoriatic arthritis and save the joints and other tissues from permanent damage. Common DMARDs include methotrexate (Trexall), leflunomide (Arava), and sulfasalazine (Azulfidine). Side effects vary but may include liver damage, bone marrow suppression and severe lung infections.<sup>12</sup>

Immunosuppressant medications are used to suppress the immune system to reduce the body's effort to attack healthy cells — a process which is out of control in psoriatic arthritis. Because a person's immune system is suppressed, these drugs can increase a person's susceptibility to infection.<sup>13</sup> Finally, use of an inhibitor of tumor necrosis factor-alpha (TNF-alpha) — an inflammatory substance produced by your body — can help reduce pain, morning stiffness, and tender or swollen joints. Potential side effects include nausea, diarrhea, hair loss and an increased risk of serious infections.<sup>14</sup> Opioid pain medications are also prescribed in some instances.<sup>15</sup>

Medical marijuana, as mentioned above, is generally regarded as having a relatively positive safety profile. Medical marijuana is well known as having the ability to relieve pain.<sup>16</sup> Another one of medical marijuana's therapeutic qualities is its anti-inflammatory

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<sup>9</sup> Wilkins MR; Working Party on Cannabis and Cannabis -based Medicines. Cannabis and Cannabis -based medicines: potential benefits and risks to health. Clin Med . 2006;6(1):16-18.

<sup>10</sup> WebMD, "Marijuana: Uses, Side Effects, Interactions, Dosing," <http://www.webmd.com/vitamins-supplements/ingredientmono-947-marijuana.aspx?activeingredientid=947&activeingredientname=marijuana>

<sup>11</sup> Mayo Clinic, "Diseases and Conditions: Psoriatic Arthritis," January 29, 2014.

<http://www.mayoclinic.org/diseases-conditions/psoriatic-arthritis/basics/treatment/con-20015006>

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> Michael Clark, M.D., M.P.H., "Benefits and Risks of Opioids in Arthritis Management," Johns Hopkins Arthritis Center, Johns Hopkins Medicine, July 31, 2012, <http://www.hopkinsarthritis.org/patient-corner/disease-management/benefits-and-risks-of-opioids-for-chronic-pain-management/>

<sup>16</sup> Kathleen Doheny, "Marijuana Relieves Chronic Pain, Research Shows," WebMD, August 2010. <http://www.webmd.com/pain-management/news/20100830/marijuana-relieves-chronic-pain-research-show>

effects on tissue.<sup>17</sup> Use of marijuana — in forms other than smoking — is not known to suppress the immune system, which is a critically important system the body relies on to prevent or attack disease. In contrast with immunosuppressant medications, there is no research indicating that medical marijuana use results in liver or kidney damage, diarrhea or hair loss. Treatment of pain by the use of medical marijuana as compared with opioid pain medication is discussed below.

### **Sickle cell disease**

This condition is a painful and chronic disorder in which the body makes crescent-shaped red blood cells, often described as “sickle-shaped.” These cells can block the flow of blood to limbs and organs, causing both pain, inflammation of tissue, and organ damage. While there are some treatments available to help patients manage this condition, there is no cure, and its effects can persist during a person’s entire life. Unfortunately, patients must often manage pain associated with the condition through the use of narcotics.<sup>18</sup>

Similarly to those suffering with psoriatic arthritis, uses for medical marijuana in the management of the conditions associated with sickle cell disease is as a pain reliever or for its anti-inflammatory properties. One medical survey of 86 young adults with sickle cell disease found that 36% had used cannabis in the previous 12 months to relieve symptoms associated with sickle cell disease. The main reasons for use were to reduce pain in 52% of those surveyed.<sup>19</sup> In addition, at least one study showed that use of marijuana is common among those with the disease, regardless of the severity of the disease, and researchers speculated its use was related to marijuana’s pain relieving and anti-inflammatory effects.<sup>20</sup>

### **Post laminectomy syndrome**

More commonly referred to as “failed back syndrome,” post laminectomy syndrome refers to several distinct disorders following spinal surgery. The condition is one of chronic pain, which can occur either because of complications during the surgery itself, or which may arise during the natural healing process that follows. Common symptoms include pain in the back or legs or sharp, pricking, or stabbing pain in the extremities.<sup>21</sup>

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<sup>17</sup> Prakash Nagarkatti, Rupal Pandey, Sadiye Amcaoglu Rieder, Venkatesh L Hegde, and Mitzi Nagarkatti, "Cannabinoids as novel anti-inflammatory drugs," US National Library of Medicine, National Institutes of Health, August, 2010. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2828614/>

<sup>18</sup> Feliu MH, Wellington C, Crawford RD, Wood M, Edwards L, Byrd G, Edwards CL, "Opioid management and dependency among adult patients with sickle cell disease," US National Library of Medicine National Institutes of Health, Sept 2011

<sup>19</sup> Howard J, Anie KA, Holdcroft A, Korn S, Davies SC, "Cannabis use in sickle cell disease: a questionnaire study," US National Library of Medicine National Institutes of Health, October 2005, <http://www.ncbi.nlm.nih.gov/pubmed/16173972>.

<sup>20</sup> J Knight-Madden, N Lewis, IR Hambleton, "The Prevalence of Marijuana Smoking in Young Adults with Sickle Cell Disease," A Longitudinal Study, 2006.

<sup>21</sup> NYU Langone Medical Center, Department of Anesthesiology, Center for the Study and Treatment of Pain, "Failed back syndrome," <http://pain-medicine.med.nyu.edu/patient-care/conditions-we-treat/failed-back-surgery-syndrome>

Because the term includes several distinct conditions, treatments vary. They can include physical therapy, nerve blocks, anti-inflammatory medicines, anti-depressants, and narcotic pain relievers.<sup>22</sup> As mentioned above, medical marijuana has proven qualities including the ability to relieve pain without the harmful side effects of narcotic medications, and it has anti-inflammatory properties, both of which can significantly improve the lives of patients suffering from failed back syndrome.

### **Medical marijuana is a safer alternative than opioid pain relievers**

Several of these conditions, including psoriatic arthritis, sickle cell disease, and post laminectomy syndrome, result in severe pain. Medical marijuana can, and often is, used as a pain reliever — particularly in lieu of narcotics. Narcotic medications can be harmful or even deadly,<sup>23</sup> and harmful side effects can develop during long term use of opioids.<sup>24</sup>

According to the Centers for Disease Control and Prevention (CDC), drug overdose death rates in the United States have more than tripled since 1990. In 2008, more than 36,000 people died from drug overdoses, and most of these deaths were caused by prescription drugs,<sup>25</sup> over three times the rate of deaths caused by illicit drugs.<sup>26</sup> Opiate pain reliever deaths among women increased five-fold in the decade from 1999 to 2010, climbing to 6,631, up from 1,287, according to an analysis by the CDC. During that same period, prescription painkiller deaths among men increased 3.6 times, to 10,020. Opiate overdoses more than quadrupled in ten-year period.<sup>27</sup>

Meanwhile, a recent study published in the Journal of the American Medical Association found that states that allow access to medical marijuana had a 24.8 percent lower average annual opioid overdose death rate compared to states without such laws.<sup>28</sup> In contrast to the alarming death toll caused by prescription painkiller overdoses, no one has ever died from an overdose of marijuana.<sup>29</sup> According to a peer-reviewed paper published in the *Harm Reduction Journal*, there is now sufficient evidence of the relative safety and efficacy for the use of medical marijuana as compared with opioid pain relievers. The paper noted

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<sup>22</sup> *Id.*

<sup>23</sup> Policy Impact: Prescription Painkiller Overdoses, Centers for Disease Control and Prevention, July 2013, <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>

<sup>24</sup> Long term use can lead to negative side effects such as psychological dependency, depression of hormone production, lethargy and listlessness and sleep apnea, among others. Tara Parker-Pope, "The Problem with Pain Pills," New York Times, June 26, 2013. <http://well.blogs.nytimes.com/2013/06/26/the-problem-with-pain-pills/>

<sup>25</sup> CDC. "Vital Signs: Overdoses of Prescription Opioid Pain Relievers — United States," 1999-2008. MMWR 2011; 60: 1-6.

<sup>26</sup> National Vital Statistics System. "Drug overdose death rates by state," 2008. The CDC found that prescription drug overdose deaths totaled 6.5 people per every 100,000, compared with 2.8 overdose deaths caused by heroin, cocaine, hallucinogens, or stimulants as contributing causes.

<sup>27</sup> NBC News. "Opiate overdose deaths 'skyrocketed' in women, CDC finds," <http://www.nbcnews.com/health/opiate-overdose-deaths-skyrocketed-women-cdc-finds-6C10509026>, July 2, 2013.

<sup>28</sup> Marcus A. Bachhuber, M.D., Lower Opioid Overdose Death Rates Associated with State Medical Marijuana Laws, JAMA Internal Medicine Releases for August 25, 2014, <http://media.jamanetwork.com/news-item/lower-opioid-overdose-death-rates-associated-with-state-medical-marijuana-laws/>

<sup>29</sup> Collen. "Prescribing Cannabis for Harm Reduction," *Harm Reduction Journal*, 2012, <http://www.harmreductionjournal.com/content/9/1/1>, citing Carter GT, Flanagan AM, Earleywine M, Abrams DI, Aggarwal SK, Grinspoon L, "Cannabis in palliative medicine: improving care and reducing opioid-related morbidity," *Am J Hosp Palliat Care*, 2011, 28: 297-303.

that "Prescribing cannabis in place of opioids for neuropathic pain may reduce the morbidity and mortality rates associated with prescription pain medications and may be an effective harm reduction strategy."<sup>30</sup>

At least one study from the University of California, San Francisco found that the medical use of marijuana with opioids may allow for treatment at lower doses of opioids with fewer side effects.<sup>31</sup>

In another recent study of medical marijuana patients in Israel, there was a significant decline among elderly patients in the need for prescribed medications, including prescriptions for pain relievers, antipsychotics, mood stabilizers, and Parkinson's treatment, which relieved them from the negative side effects from these drugs. Of the patients in the study, 72 percent were able to reduce their drug intake by an average of 1.7 medications each day.<sup>32</sup> Patients achieved a healthy weight, gaining or losing pounds as needed. Muscle spasms, stiffness, tremors, and pain reduced significantly. Almost all patients reported an increase in sleeping hours and a decrease in nightmares and PTSD-related flashbacks.

Similarly, a 2009 study found that 66% of medical marijuana patients were able to reduce pharmaceutical use through the substitution of medical marijuana. The most common reasons given for substituting were: less adverse side effects (65%), better symptom management (57%), and less withdrawal potential (34%) with medical marijuana.<sup>33</sup>

Medical marijuana is a safer alternative that not only avoids the significant risk of death through overdose, but can also be effective as a substitution for more harmful and addictive prescription drugs.

### **Federal agency restricts availability of marijuana for research**

While there have been attempts to study medical marijuana's specific palliative effect on a wide variety of medical conditions, including its effect on those suffering from sickle cell disease,<sup>34</sup> federal policy has severely limited research.<sup>35</sup> Researchers conducting trials with marijuana must receive approval through a National Institute on Drug Abuse/Public Health Service (NIDA/PHS) protocol review process.<sup>36</sup> Unfortunately, the NIDA has a

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<sup>30</sup> Collen, at 3. It is also worth noting that according to the FDA, even Dronabinol (Marinol®) can lead to fatal overdoses if taken in high enough quantities intravenously. <http://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>

<sup>31</sup> DI Abrams. "Cannabinoid–Opioid Interaction in Chronic Pain," *Clinical Pharmacology and Therapeutics*, <http://www.nature.com/clpt/journal/v90/n6/full/clpt2011188a.html>, 2011.

<sup>32</sup> Science News, "Medical Cannabis Provides Dramatic Relief for Sufferers of Chronic Ailments, Israeli Study Finds," January 24, 2013. <http://www.sciencedaily.com/releases/2013/01/130124123453.htm>

<sup>33</sup> Reiman. "Cannabis as a substitute for alcohol and other drugs," *Harm Reduction Journal*, 2008, 6:35.

<sup>34</sup> Lyra Fontaine, "Medical marijuana could treat pain caused by sickle cell disease," *Minnesota Daily*, June 2014. <http://www.mndaily.com/news/campus/2014/06/10/medical-marijuana-could-treat-pain-caused-sickle-cell-disease>

<sup>35</sup> Gardiner Harris, "Researchers Find Study of Medical Marijuana Discouraged," *New York Times*, January 2010, [http://www.nytimes.com/2010/01/19/health/policy/19marijuana.html?\\_r=0](http://www.nytimes.com/2010/01/19/health/policy/19marijuana.html?_r=0)

<sup>36</sup> "In the Matter Lyle E. Craker, Ph.D., Docket No. 05-16," Mary Ellen Bittner, ALJ, (DEA 2007) (hereafter ALJ Findings) at 49.

monopoly on the supply of marijuana that can be legally used in federally approved research, and the institute has a bias against research intended to evaluate marijuana's medical efficacy.<sup>37</sup> As a result, it is extremely difficult for researchers in the United States to obtain medical marijuana in order to study its palliative effects.

### **Conclusion**

Despite federal obstacles to research, there is ample evidence that cannabis can be a safe and effective treatment for pain, spasms, and other conditions — both from studies and from more than a million patients' real-world experience. For patients with the medical conditions under consideration by the board of physicians, it should be left to the professional judgment of physicians licensed in the state to determine when medical marijuana should be an alternative to patients under his or her care. It is worth remembering that FDA-approved medications can be prescribed off-label, for conditions other than those they have been tested for.

The Board of Physicians should allow Connecticut's physicians to weigh the benefits and risks associated with these treatments and discuss them with their patients. Where a doctor and patient agree that medical marijuana may provide relief, a patient should have the option of having access to medical marijuana. The state should not declare that patients seeking treatment for a serious disease are criminals, particularly when that person has the support of a physician.

Medical marijuana's use as a pain reliever and anti-inflammatory agent would be a significant and direct help for those suffering from severe psoriasis, and psoriatic arthritis, sickle cell disease, and post laminectomy syndrome. And its ability to treat a neurological disorder such as Tourette disorder should be extended to seriously ill patients in the state. We strongly urge the Board of Physicians to recommend that the Department of Consumer Protection add these medical conditions to this list of qualifying medical conditions recognized by the state.

Sincerely,



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<sup>37</sup> ALJ Findings at 19.