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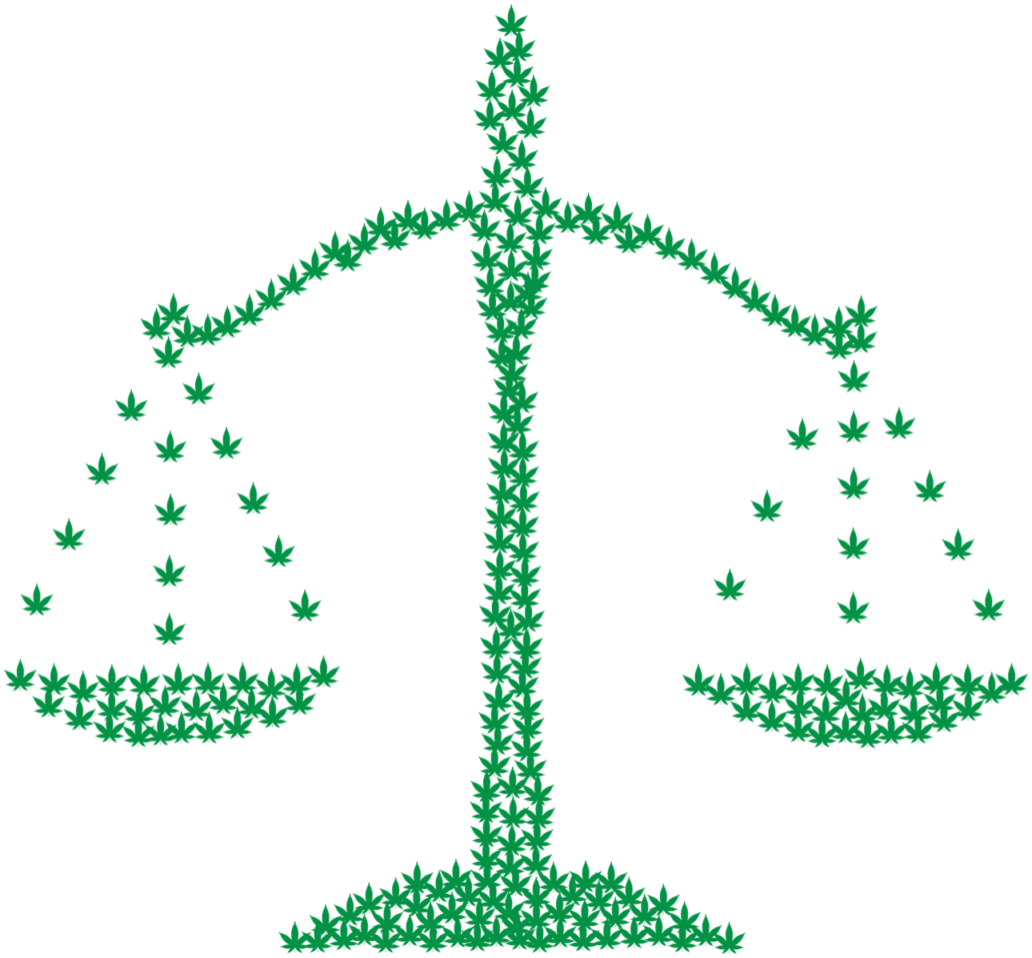

The marijuana industry is one that boasts a value of over $40 billion.[1] As public opinion continues to change in favor of legalization and new research is performed,[2] America is swiftly becoming "the land of the red, white, and green," with an ever-increasing number of states legalizing marijuana for broad use and consumption.[3] However, marijuana still remains illegal under federal law due to its treatment by the federal government under the Controlled Substances Act ("CSA" or "the Act"). Congress passed the CSA in 1970 as part of an ongoing effort to regulate controlled substances and decrease abuse of such substances in the United States.[4]

The marijuana industry continues to grow, and as the "industry is emerging from the shadows,"[5] developers are becoming more inclined to seek intellectual property protection for their creations and innovations.[6] Developers are particularly interested in patent protection for many reasons, not the least of

which is that patents are "the strongest form of [intellectual property] protection" available.[7] Additionally, developers seek patent protection because of the subject matter it can protect (including specific strains, formulations, growing methods, and therapeutic uses).[8] Perhaps most importantly, the fact that there is generally no requirement of legality for a subject matter to be patentable is appealing to marijuana growers and developers. In other words, "[t]he status of cannabis as a Schedule I controlled substance is not relevant to patentability."[9] However, this does not mean that marijuana's continued federal illegality does not give rise to unique challenges in the patent realm.

One of the most prevalent of these challenges relates to the novelty requirement for patentability, which dictates that the thing for which protection is being sought cannot have previously been disclosed to the public in any manner.[10] Formal documentation that the innovation being claimed already exists in the world, known as "prior art," is used "during review of applicants' patent applications and is often cited against applications to reject them if the idea… has already been publicly known."[11] Very little documentation exists related to marijuana strains and formulations, or the progression of innovation within the industry because many breeders and consumers of marijuana did so in secret for many years,[12] As a general matter, the importance of prior art generally is paramount because, "[w]ithout that prior art library, the patent examiners are left with no choice but to allow the patents to issue."[13] Thus, with respect to marijuana, there exists the danger that "a wave of patents" considered too broad in scope will be issued after only "a limited body of prior art" is examined, leaving the system open for potential abuse.[14]

Without prior art, an individual could essentially obtain a patent for something that already exists within the public domain.[15] More specifically, it is possible for someone to "claim a utility patent on a certain family of cannabis strains, and convince an examiner it's new because there's no recorded precedent."[16] The implication of this problem is that if overly broad patents are enforced (enforcement of a marijuana patent has not yet been done by a court, although the first marijuana-related patent infringement suit is pending[17]), innovation in the industry could be stifled because, with no reservoir of prior art to use to challenge the validity of the patent, developers could be forced to stop their work and pay damages for infringement.[18] This has a particularly concerning potential outcome in the context of medical marijuana because "those who try to create useful cannabis medicine" might become "curtailed by undue patents," specifically "utility patents, which cover entire genres of cannabis, [and could] prevent important medicines from reaching sick people."[19]

The medical marijuana industry has begun to take on the challenge of addressing this issue in much the same way the software industry in its infancy responded to difficulties in locating prior art.[20] One way the industry is responding is through the ongoing maintenance of the Open Cannabis Project ("OCP"), an organization that works to compile DNA sequences of marijuana strains into a public database.[21] Their mission "is to create evidence of prior art, which helps to ensure that patents are not issued on plants that already exist."[22] OCP's database is very useful because it serves as a "repository" of prior art, which can be referenced by the USPTO when making decisions about the alleged patentability of marijuana strains or uses.[23] The database is thus essential to prevent "existing cannabis strains from coming under the control of one commercial entity or another."[24]

While there is much more work to be done in addressing the tensions between marijuana's federal illegality and patent law, the work OCP is doing provides a nice start in ensuring that developers are protected from other entities, particularly large corporations who want "to join the rush for patentable marijuana strains."[25] Until

the day comes when an appropriate database of prior art exists for this industry, both the USPTO and federal courts should use discretion in issuing and enforcing patents covering marijuana and marijuana-related goods and technologies.

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[1] *See* Amanda Chicago Lewis, *The Great Pot Monopoly Mystery*, GQ (Aug. 23, 2017), https://www.gq.com/story/the-great-pot-monopoly-mystery.

[2] *See* David F. DuTremble, *Next Dance With Mary Jane? An Argument for the Patentability of Specific Genetic Strains of Marijuana Under Federal Patent Law*, 10 Charleston L. Rev. 445, 471 (2016).

[3] As of November 2018, ten U.S. states and Washington, D.C., have legalized recreational marijuana use; thirty-three states and Washington, D.C., have legalized marijuana for medical use. *See* Jeremy Berke & Skye Gould, *Michigan is the 10th State to Legalize Recreational Marijuana. This Map Shows Every U.S. State Where Pot is Legal.*, Bus. Insider (Nov. 7, 2018, 10:35 AM), https://www.businessinsider.com/legal-marijuana-states-2018-1.

[4] *See generally* 21 U.S.C. § 812 (2016); *see also* Manuel Cabal Carmona, *Dude, Where's My Patent?: Illegality, Morality, and the Patentability of Marijuana*, 51 Val. U. L. Rev. 651, 655 (2017).

[5] *See* Holly L. Johnston et al., *The Cannabis Patent War: In the Midst of Chaos, There is Opportunity*, The Pipeline Cannabis Law Advisor (Sep. 21, 2017), https://www.cannabislawadvisor.com/2017/09/21/cannabis-patent-war-midst-chaos-opportunity/.

[6] *See* Carmona, *supra* note 4, at 651-52.

[7] *See* Sam Kamin & Viva R. Moffat, *Trademark Laundering, Useless Patents, and Other IP Challenges for the Marijuana Industry*, 73 Wash. & Lee L. Rev. 217, 264 (2016).

[8] *See* Gretchen L. Temeles et al., *IP Protection and the Cannabis Industry: Strategies and Trends*, Legal Intelligencer, Apr. 3, 2018, at 7.

[9] *Id.* (explaining that "Congress has determined that only two kinds of inventions are categorically not patentable: those encompassing human organisms, and those having as their sole purpose the use in atomic weapons").

[10] *See* 35 U.S.C. § 102(a)(1)-(2) (2012); *see also General Information Concerning Patents*, U.S. Patent and Trademark Off. (Oct. 2015), https://www.uspto.gov/patents-getting-started/general-information-concerning-patents.

[11] *See* Holly L. Johnston et al., *The Cannabis Patent War: In the Midst of Chaos, There is Opportunity*, The Pipeline Cannabis Law Advisor (Sep. 21, 2017), https://www.cannabislawadvisor.com/2017/09/21/cannabis-patent-war-midst-chaos-opportunity/.

[12] *See* Madison Margolin, *The Dangers of Patenting Cannabis*, MERRY JANE (Mar. 7, 2018), https://merryjane.com/news/the-dangers-of-patenting-cannabis-march-2018 ("With cannabis in particular, it's difficult to investigate the prior art because for many decades, so much of cannabis cultivation had been done in the shadows with few official records keeping track of strain variety or proprietary ingenuity."); *see also* Johnston et al., *supra* note 11 ("Because the Cannabis industry is emerging from the shadows of a formerly illegal market, little to no formal documentation of the progression of Cannabis plant strains and Cannabis-related innovation exists."); *see also* Emily Pyclik, *Obstacles to Obtaining and Enforcing Intellectual Property Rights in the Marijuana Industry*, 9 Am. U. Intell. Prop. Brief 26, 44 (2018) ("Another…issue in marijuana litigation is finding prior art because people have been growing and using marijuana in secret for so many years.").

[13] *See* Johnston et al, *supra* note 11; *see also* Brett Schuman, *Emerging Patent Issues in the Cannabis Industry*, Law360 (Feb. 20, 2018), https://www.law360.com/articles/1013575/emerging-patent-issues-in-the-cannabis-industry ("Without a solid body of prior art…a patent examiner may have difficulty locating prior art bearing on the question of whether a particular plant profile is novel, and in correlating claimed chemical composition ranges with published cannabis plant sequences."); *see also* Margolin, *supra* note 12 ("The problem with cannabis is there's no meaningful patent literature or academic literature for the examiner to look at….the examiner can't find anything to tell if it's been in the public domain.").

[14] *See* Schuman, *supra* note 13.

[15] *See* Greg Walters, *What a Looming Patent War Could Mean for the Future of the Marijuana Industry*, VICE News (Apr. 20, 2016), https://news.vice.com/en_us/article/ywjedw/a-patent-for-cannabis-plants-is-already-a-reality-and-more-are-expected-to-follow.

[16] *See* Margolin, *supra* note 12; *see also* Pyclik, *supra* note 12 ("With cannabis strains, there is often no proof that a strain is not new. And, once the patent issues, proving that it was already in use becomes very difficult.").

[17] *See* Cheryl Miller, *Why Patent Lawyers Are Watching This Colorado Cannabis Case*, The Recorder (Aug, 8, 2018, 6:48 PM), https://www.law.com/therecorder/2018/08/08/why-patent-lawyers-are-watching-this-colorado-cannabis-case/.

[18] *See* Margolin, *supra* note 15 ("The real problem with utility patents is if people get away with building fences that are too big, they'll be blocking a whole lot of innovation or commercial activity they shouldn't be able to block.").

[19] *See* Margolin, *supra* note 15.

[20] One source explains:

When software patents became patentable, a similar issue existed with finding software prior art because many times the prior art was not published, rather just used in private computers. In response to this issue, Microsoft, IBM, and Apple sponsored the Software Patent Institute. Projects like this made more software prior art available to patent examiners in an effort to protect the quality and legitimacy of issued software patents. Essentially, this led to a database that ensured that patents were not issued for technology already in use.

See Pyclik, *supra* note 12, at 44.

[21] *See* Walters, *supra* note 15.

[22] Open Cannabis Project, https://opencannabisproject.org (last visited Nov. 20, 2018).

[23] *Id.* ("The OCP's aim is to have a comprehensive set of genetic data for all cannabis varieties that are either naturally occurring or which have been previously available to the public. Either one of these conditions renders such varieties unpatentable."); Walters, *supra* note 15 (explaining that OCP's database "can be used to properly classify strains and prove, on a genetic basis, that a given strain was available to the public before someone tries to take out a patent on it.").

[24] *See Open Cannabis Project: The Fight to Get Marijuana Patents Right*, Canna Law Blog (Feb. 23, 2018), https://www.cannalawblog.com/open-cannabis-project-and-the/. OCP is just one example of a way the industry can work to establish prior art; the ultimate goal of creating a complete record of all prior art is "an effort [that] will require cooperation among like-minded industry leaders moving towards a common goal of prohibiting commercial exploitation of well-known ideas. The prior art research will need to be balanced with concerted efforts to also foster protection of new innovation."; *see also* Johnston et al., *supra* note 11.

[25] *See* Natali De Corso, *Obtaining Marijuana Patents*, 2018 B.C. Intell. Prop. & Tech. F. 1, 9 (Jan. 16, 2018).