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Cannabis IP: How Federal Inconsistencies Have Stifled a Budding Industry

CELENA DYAL*©

INTRODUCTION

The cannabis¹ industry is quickly taking off in the United States. However, federal laws and regulations have not kept pace and as a result there are significant legal uncertainties as to the development of business plans. As a matter of federal law, marijuana is illegal, but state law is becoming more accepting of it. Currently, 33 states and the District of Columbia have passed laws legalizing marijuana in some capacity.² Marijuana for medicinal use has been approved by 33 states and the District of Columbia.³ Additionally, 11 states and the District of Columbia have also adopted laws allowing for medicinal and recreational use of marijuana.⁴ Only 17 states have legalized neither medicinal nor recreational use of marijuana.⁵ However, the growing legalization trend suggests that these states are likely to follow suit and be more tolerant of marijuana, whether by decriminalizing the drug or allowing for consumption.⁶ As more states have legalized or decriminalized marijuana, there has

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* J.D. Candidate, 2021, University of Maryland Francis King Carey School of Law. The author would like to thank the editors and staff of the Journal of Business & Technology Law for their feedback and support throughout the writing process. The author would also like to thank Professor Nathan Robertson for all his guidance and insightful feedback. Finally, the author would like to thank her parents, Betty and Amar Dyal for their continued support.

1. “Cannabis” is sometimes incorrectly conflated with the term “marijuana,” however the distinction is important to note. Cannabis refers to the genus of plants, and marijuana and hemp are different classifications of plants within the cannabis family. Harold B. Hilborn, *2018 Farm Bill Legalizes Hemp, but Obstacles to Sale of CBD Products Remain*, NAT’L L. REV. (Mar. 5, 2019), <https://www.natlawreview.com/article/2018-farm-bill-legalizes-hemp-obstacles-to-sale-cbd-products-remain>; see *infra* text accompanying notes 28-37.

2. Jeremy Berke, Skye Gould, *Legal marijuana just went on sale in Illinois. Here are all the states where cannabis is legal.*, BUS. INSIDER (Jan. 1, 2020, 8:41 AM), <https://www.businessinsider.com/legal-marijuana-states-2018-1>.

3. *Id.*

4. *Id.*

5. *Id.*

6. *Id.*

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been a surge of companies entering the cannabis market, especially with the legalization of hemp under federal law.⁷

For any company, protecting intellectual property must be a priority. There are four types of intellectual property: (1) patents, which protect new and useful inventions;⁸ (2) copyrights, which protect original works of authorship;⁹ (3) trademarks, which protect words, phrases, or logos that identify a source or brand;¹⁰ and (4) trade secrets, which protects proprietary information.¹¹ For cannabis intellectual property, the availability of legal protection depends on whether state or federal protection is being sought.¹² Federal protections are often considered to be more valuable than state protection. Federal protection applies to all 50 states, whereas state protection is limited to that state.¹³ However, not all Federal intellectual property protection is available to companies in the cannabis industry. Specifically, companies may obtain Federal patent and copyright protection but not trademark protection.¹⁴ This highlights the need for new and progressive federal intellectual property protections in the cannabis industry.

Federal intellectual property protections stem from different parts of the Constitution, which helps explain the inconsistencies for cannabis related intellectual property protection. Patent and copyright protections are rooted in Article I, Section 8, Clause 8 of the United States Constitution, which grants Congress the enumerated power to “promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and

7. Lewis L. Koski, *America's Cannabis Industry: Balancing Strong Regulation with Business' Desire for Accountability*, *Forbes* (Sep. 3, 2019, 10:13 AM), <https://www.forbes.com/sites/lewiskoski/2019/09/03/americas-cannabis-industry-balancing-strong-regulation-with-businesses-desire-for-accountability/#694bcce03ed2>; Tom Murse, *Decriminalization Versus Legalization of Marijuana*, *THOUGHTCO* (Jan. 16, 2020), <https://www.thoughtco.com/decriminalization-versus-legalization-of-marijuana-3368393>. (explaining that there is a difference between legalization and decriminalization. When a state legalizes marijuana or the consumption of cannabis products, it is lifting all legal prohibitions against it. Decriminalization means that people who are caught possessing, selling, or using the drug will face civil fines instead of criminal charges. Thus, decriminalization can be viewed as a loosening of penalties in the face of an infraction, but legalization removes these infractions entirely. Unlike decriminalization, when a state legalizes marijuana, the production and sale of such products are regulated by the State. Legalization creates legitimacy and allows regulation and taxation, while decriminalization still prohibits as a civil matter and does not allow for taxation. The deficit of regulations hinders the state from taxing cannabis products, which could be used to implement and enforce safety regulations).

8. *General information concerning patents*, USPTO (Oct. 2015), <https://www.uspto.gov/patents-getting-started/general-information-concerning-patents>.

9. *Copyright Basics*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/circs/circ01.pdf>.

10. *Trademark Basics*, USPTO, <https://www.uspto.gov/trademarks-getting-started/trademark-basics#>.

11. *Trade Secret Policy*, USPTO, <https://www.uspto.gov/ip-policy/trade-secret-policy>.

12. Carly Klein, *The Complicated Relationship Between IP Law & Cannabis*, *IP WATCHDOG* (Nov. 10, 2018), <https://www.ipwatchdog.com/2018/11/10/complicated-relationship-ip-law-cannabis/id=102941/>.

13. *Id.*

14. *Id.*

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discoveries.”¹⁵ Cannabis related writings and discoveries are evidently within scope. However, trademark rights derive from the Commerce Clause, which grants Congress the power to regulate commerce.¹⁶ Under the Lanham Act, a requirement to register a trademark is that “it must be used in commerce on or in connection with all the goods and services listed in the trademark application.”¹⁷ Because marijuana-related commerce is illegal as a matter of federal law, those goods and services are evidently not within the scope of federal trademark law. As the cannabis industry rapidly develops in the United States, new and useful inventions will undoubtedly be created and exchanged in commerce and will require broad and inclusive protection to further the economic growth of the industry.¹⁸ Thus, it is imperative that the federal government resolve the inconsistencies in federal law.

These inconsistencies further arise from the fact that marijuana has been a Schedule I drug in the United States since the enactment of the Controlled Substances Act (“CSA”) in 1970.¹⁹ Under the CSA, Schedule I drugs are defined as having “no current accepted medicinal value in the United States” and the production of and trade of Schedule I drugs is illegal.²⁰ However, studies have continuously shown that marijuana has positive medicinal effects for a variety of illnesses and diseases, such as seizure disorders, anxiety, eating disorders, nausea, fibromyalgia, and cancer.²¹ Such studies have been the motivating factor explaining why many states have adopted and accepted marijuana for its medicinal uses.²² However, the federal government has not followed suit, and the continuing federal prohibition on cannabis has had significant impacts on obtaining federal intellectual property protection for cannabis related products.²³ Currently, companies in the cannabis industry are eligible to receive federal intellectual property protection for copyrightable and

15. U.S. CONST. art. I § 8, cl. 8.

16. U.S. CONST. art. I § 8, cl. 3; 15 U.S.C. § 1051(a) (2002); *Christian Faith Fellowship Church v. Adidas AG*, 841 F.3d 986 (Fed. Cir. 2016) (stating that trademarks used in interstate commerce fall within Congress’ regulable activity, under the Commerce Clause).

17. TMEP (Oct. 2012) § 901; *see also* 37 C.F.R. §§ 2.2(k)(1), 2.34(a)(1)(i).

18. *See* Koski, *supra* note 7, at 1.

19. 21 U.S.C. §§ 843(a)(1), 812 (2018); Fish & Richardson, *Federal Drug Law Presents Few Obstacles for Cannabis Patents*, FISH & RICHARDSON (July 29, 2019), https://www.fr.com/fish-patent/federal-drug-law-presents-few-obstacles-for-cannabis-patents/?utm_source=Mondaq&utm_medium=syndication&utm_campaign=LinkedIn-integration.

20. 21 U.S.C. § 812 (2018).

21. Peter Grinspoon, *Medical Marijuana*, HARV. HEALTH BLOG (Jan. 15, 2018, 10:30 AM, last updated Apr. 10, 2020, 12:00 AM), <https://www.health.harvard.edu/blog/medical-marijuana-2018011513085>.

22. Rosalie L. Pacula, Rosanna Smart, *Medical Marijuana and Marijuana Legalization*, ANN. REV. CLINICAL PSYCHOL. (May 15, 2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6358421/#_ffn_sectitle.

23. Matthew S. Dicke, Sana Hakim, Kevin T. McCormick, *In The Weeds: Key Intellectual Property Takeaways for the Cannabis Industry*, NAT’L L. REV. (Nov. 4, 2019), <https://www.natlawreview.com/article/weeds-key-intellectual-property-takeaways-cannabis-industry>.

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patentable subject matter.²⁴ However, cannabis-related federal trademarks are unavailable.²⁵ The current trend of marijuana legislation in the United States suggests that it is not a matter of whether marijuana will be legalized, but rather a matter of how and when.²⁶ Thus, there is a pressing need for uniformity in how the federal government treats the intellectual property of cannabis products.

Federal law is already adapting to the cannabis industry, evident by the legalization of hemp.²⁷ The legalization of hemp highlights the importance of differentiating cannabis, marijuana, and hemp. Cannabis is a genus of flowering plants that are part of the Cannabaceae family.²⁸ Within the cannabis genus there are three primary species: (1) cannabis sativa; (2) cannabis indica; and (3) cannabis ruderalis.²⁹ While hemp and marijuana are often referred to as “species” or “strains,” neither are appropriate classifications.³⁰ Rather, the term “hemp” is used to classify varieties of cannabis containing 0.3% or less THC, which is how it is defined in the Agricultural Act of 2018 that legalized hemp.³¹ Hemp is extremely versatile and can be used to manufacture textiles, paper, food, skin care products, and even building materials.³² Marijuana, on the other hand, is a term used to classify varieties of Cannabis that contain more than 0.3% THC and is psychoactive.³³ Lastly, CBD is another product that has emerged on the market and must also be differentiated. CBD is an active compound that can be derived from either hemp or marijuana.³⁴ Given that hemp is legal under federal law and marijuana is not, impacts the legal characterization of hemp.³⁵ Thus, CBD derived from hemp is legal, whereas CBD derived from marijuana is not.³⁶

24. *Id.*

25. *Id.*

26. *Id.*

27. Agricultural Improvement Act, Pub. L. 115-334, 132 Stat. 4490 (2018); Andrew Wagaman, *Congress Has Legalized Hemp. What the Future Might Hold*, NBC (Dec. 22, 2018, 4:53 PM), <https://www.nbcphiladelphia.com/news/local/congress-has-legalized-hemp-what-the-future-might-hold/206187/>.

28. Jessica Assaf, *The Difference Between, Cannabis, Hemp, and Marijuana Explained*, PRIMA, <https://www.prima.co/magazine/what-s-what-hemp-cannabis-and-marijuana/>.

29. *Id.*

30. Aaron Cadena, *Hemp vs Marijuana: The Difference Explained (2019 Update)*, MEDIUM (Sep. 10, 2018), <https://medium.com/cbd-origin/hemp-vs-marijuana-the-difference-explained-a837c51aa8f7>.

31. *Id.*; 7 U.S.C. 1639o(1) (defining hemp as “the plant Cannabis sativa L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis”).

32. *Id.*

33. *Id.*

34. *Id.*

35. *Id.*

36. *Id.*

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Overall, it is enough to understand that cannabis is the broader classification and that hemp and marijuana fall within this broader classification, with the primary distinction between hemp and marijuana being that hemp is not psychoactive, whereas marijuana is.³⁷

For the purposes of this paper, the term “cannabis” will refer to all plants within the genus and “cannabis industry” will refer to both the recreational, medicinal, and hemp industries.

The need for uniformity in federal law is further evident by examining the exponential growth of the cannabis industry. According to a report by Arcview Market and BDS Analytics, the legal global cannabis industry is expected to exceed the value of \$40 billion by 2024.³⁸ According to Grand View Research, Inc., the global legal marijuana market will be worth \$73.6 billion by 2027.³⁹ While Business Wire, a Berkshire-Hathaway company, projects that the global legal cannabis market will have an incremental growth of \$33.48 billion between 2019 and 2023.⁴⁰ Thus, whichever way you slice it, the legal global cannabis industry is not only expected to be worth a lot of money, but is also expected to grow exponentially in the coming years.

Two countries that have contributed to the rapidly developing global legal cannabis market are Germany and Canada.⁴¹ Germany legalized medical marijuana in 2017, but has not yet legalized recreational use.⁴² However, Germany has still seen impressive economic success from the legal cannabis industry and the market for medicinal cannabis in Germany is expected to be worth €7.7 billion (\$8.6 billion) by 2028.⁴³

In Canada, medicinal cannabis was legalized in 2001 and recreational cannabis in 2018, becoming the second country in the world to legalize recreational use after

37. Aaron Cadena, *Hemp vs Marijuana: The Difference Explained (2019 Update)*, MEDIUM (Sep. 10, 2018), <https://medium.com/cbd-origin/hemp-vs-marijuana-the-difference-explained-a837c51aa8f7>.

38. *New Report: Global Legal Cannabis Markets to Grow 36% in 2019 Despite 2018 Challenges; To Break \$40 Billion by 2024*, BDSA (Jun. 20, 2019), <https://bdsa.com/new-report-global-legal-cannabis-markets-to-grow-36-in-2019-despite-2018-challenges-to-break-40-billion-by-2024/> (citing Arcview Market and BDS Analytics).

39. *Legal Marijuana Market Size Worth \$73.6 Billion by 2027*, GRAND VIEW RES. (Feb. 2020), <https://www.grandviewresearch.com/press-release/global-legal-marijuana-market>.

40. *Legal Cannabis Market 2019-2023*, BUS. WIRE (Apr. 1, 2020, 12:00 PM), <https://www.businesswire.com/news/home/20200401005449/en/Legal-Cannabis-Market-2019-2023-Legalization-Cannabis-Worldwide>.

41. Sara Brittany Somerset, *The Three Most Overlooked Marijuana Markets*, FORBES (Aug. 26, 2018, 12:45 PM), <https://www.forbes.com/sites/sarabrittany Somerset/2018/08/26/the-top-three-most-overlooked-marijuana-markets/#4342aab255c2>.

42. Nicolas Martin, *Will Germany become the world's largest market for medicinal cannabis?*, DW (Mar. 30, 2019), <https://www.dw.com/en/will-germany-become-the-worlds-largest-market-for-medicinal-cannabis/a-48112905>.

43. *Id.*

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Uruguay.⁴⁴ Canada was one of the first industrialized nations to legal cannabis for both medicinal and recreational use.⁴⁵ As a result, it has had the advantage of being able to take companies public, raise money, and expand overseas.⁴⁶ For example, the Canadian company Canopy Growth has bought cannabis firms and wellness boutiques in Germany, Spain, and the United Kingdom.⁴⁷ Another Canadian company, Tilray, has purchased a €20 million (\$20 million USD) Portuguese research and cultivation campus.⁴⁸ A third Canadian company, Aurora, also purchased a Portuguese marijuana producer, in addition to acquiring the ability to produce and distribute marijuana in Germany.⁴⁹ Thus, Canadian companies have had a clear advantage in the global cannabis market because of Canada's across the board legalization of cannabis.⁵⁰

When examined in tandem with international cannabis markets, it is clear that the cannabis companies in the United States (U.S.) are at a competitive disadvantage because of the legal constraints on the federal level.⁵¹ Federal prohibition of marijuana, under the CSA, effectively bars U.S. cannabis companies from participating in financial markets, developing innovative new products, acquiring global investment funding, and growing from small businesses to international business operations.⁵² Legal marijuana growers in the U.S. are unable to ship their products to other countries or even other states in the U.S.⁵³ Thus, the lack of uniformity has even had a detrimental effect on the domestic cannabis market.⁵⁴ Additionally, if the U.S. were to legalize cannabis on the federal level, allowing for

44. CODE CIVIL [REGULATION AND CONTROL OF CANNABIS] (Uru.); Darran Simon, Nicole Chavez, *Canada just legalized recreational pot. Here's what you need to know*, CNN (Oct. 17, 2018, 4:20 PM), <https://www.cnn.com/2018/10/17/health/canada-legalizes-recreational-marijuana/index.html>.

45. Bill C-45 (Cannabis Act) C.R.C., c 16 (Can.); Darran Simon, Nicole Chavez, *Canada just legalized recreational pot. Here's what you need to know*, CNN (Oct. 17, 2018, 4:20 PM), <https://www.cnn.com/2018/10/17/health/canada-legalizes-recreational-marijuana/index.html>.

46. David Meyer, *As Europe's Cannabis Industry Opens Up, Established Canadian Companies Are Pouncing*, FORTUNE (Jul. 19, 2019, 8:25 AM), <https://fortune.com/2019/07/19/europe-cannabis-canada/>.

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.*

51. *How the U.S. Is Falling Behind in the Regulated Cannabis Market*, NAT'L CANNABIS INDUSTRY ASS'N (Oct. 2018), https://thecannabisindustry.org/wp-content/uploads/2018/10/NCIA-US-Falling-Behind-Oct2018_v2.pdf.

52. *Id.*

53. 21 U.S.C. § 953 (2015); Markian Hawryluk, *America's marijuana growers are the best in the world, but federal laws are keeping them out of global markets*, WASH. POST (Dec. 27, 2019, 7:00 AM), <https://www.washingtonpost.com/business/2019/12/27/americas-marijuana-growers-are-best-world-federal-laws-are-keeping-them-out-global-markets/>.

54. *Id.*

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the sale, regulation, and taxation of marijuana, it would likely see its GNP increase by the billions, as Canada did.⁵⁵

I. PATENTS

A. Background

A patent gives the owner the right to exclude others from making, using, offering for sale, or selling the patented invention in the U.S. or importing the invention into the U.S.⁵⁶ To obtain a U.S. patent, an inventor must: (1) file a patent application with the United States Patent and Trademark Office (USPTO); (2) make an oath that he/she is the true inventor; and (3) pay the required fees.⁵⁷

Every patent application must satisfy certain requirements. First, the claimed invention must be patent-eligible subject matter.⁵⁸ Second, it must be novel.⁵⁹ Third, it must have utility, meaning that it must be useful.⁶⁰ Fourth, it must be non-obvious. Fifth, the application must meet the disclosure requirements of § 112 (of Title 35 of the United States Code), which requires an application to disclose: (a) enablement; (b) best mode; (c) written description; and (d) claim definiteness.⁶¹

There are four statutory categories of patentable inventions: (1) process (a method or series of steps); (2) machine (an apparatus, usually with moving parts); (3) manufacture (items produced from raw or preexisting materials, usually without moving parts); and (4) composition of matter (including but not limited to, chemical compositions or other mixtures of substances).⁶² There are also three things that are inherently not patent eligible subject matter: (1) laws of nature; (2) abstract ideas; and (3) natural phenomena.⁶³

There are three types of patents: utility, design, and plant. Utility patents protect new or improved useful inventions.⁶⁴ Design patents protect the ornamental design

55. *Cannabis Canada: Pot Industry adds 8.26B to Canada's GDP*, BNN BLOOMBERG (Oct. 1, 2019), <https://www.bnnbloomberg.ca/cannabis-canada-pot-industry-adds-8-26b-to-canada-s-gdp-1.1324939>.

56. *General information concerning patents*, USPTO (Oct. 2015), <https://www.uspto.gov/patents-getting-started/general-information-concerning-patents>.

57. *Id.*

58. 35 U.S.C. § 101 (2012).

59. 35 U.S.C. § 102 (2012).

60. 35 U.S.C. § 101 (2012).

61. 35 U.S.C. § 112 (2012).

62. 35 U.S.C. § 101 (2012) (stating that “whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor. . .”).

63. *Id.*

64. 35 U.S.C. § 102 (2012).

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of an article of manufacture.⁶⁵ Lastly, plant patents protect novel plants that can be asexually reproduced.⁶⁶

The illegality of cannabis on the federal level is not a bar to obtaining a cannabis-related patent.⁶⁷ The power granted to Congress by the Constitution has no requirement that the promotion of science and the arts be only for legal subject matter.⁶⁸ While cannabis inventions are not preempted from receiving protection, they must still meet the other requirements.⁶⁹

B. Current State of Cannabis Patents

Interestingly, cannabis patents have been granted for all three types of patents: utility patents, design patents, and plant patents. Although marijuana is not yet legal on the federal level there is no legal impediment to receiving a cannabis related patent. However, if the patented invention were to be put into practice without falling within the exceptions granted under the Farm Bill, then the invention would be illegal. Thus, patents may be granted for inventions of an illegal product, but if put into use, such use may be illegal. In fact, the USPTO has been granting cannabis patents since 1942.⁷⁰ Thus, Congress' view on the legality of cannabis has not had much of an effect on the USPTO's patent granting activities. Perhaps even more surprising, cannabis patents have been granted to government agencies.⁷¹

1. Utility Patents

In 2003, the United States Department of Health and Human Services was granted a patent for "Cannabinoids as antioxidants and neuroprotectants," which covers the "potential use of non-psychoactive cannabinoids to protect the brain from damage or degeneration caused by certain diseases, such as Alzheimer's, Parkinson's, cirrhosis."⁷² This patent is not for marijuana as a whole, it only covers parts of the

65. 35 U.S.C. § 171 (2012) (stating that "whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title").

66. 35 U.S.C. § 161 (2012) (stating that whoever invents or discovers and asexually reproduces any distinct plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a tuber propagated plant or a plant found in an uncultivated state, may obtain a patent therefor, subject to the conditions and requirements of this title").

67. Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/>.

68. U.S. CONST. art. I § 8, cl. 8.

69. *Id.*

70. Julie Weed, *US Patent Office Issuing Cannabis Patents to a Growing Market*, FORBES (Jul. 24, 2017, 8:42 AM), <https://www.forbes.com/sites/julieweed/2017/07/24/us-patent-office-issuing-cannabis-patents-to-a-growing-market/#40e4b23768d4>; U.S. Patent No. US 6,630,507 B1 (filed Mar. 21, 1998).

71. *Id.*

72. U.S. Patent No. US 6,630,507 B1 (filed Mar. 21, 1998).

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plant, including cannabidiol (CBD), which is known for not having the psycho-active effects of marijuana.⁷³ Although this government patent is not for a psycho-active component, it might surprise some readers that the government has a vested interest in cannabis.⁷⁴

Of course the United States government is not the only owner of a cannabis patent; many companies are filing patent applications for cannabis products such as face creams, chocolates, soft drinks, and oils.⁷⁵ For example, in 2016 a patent was granted for a “Single serve beverage pod containing cannabis.”⁷⁶ The patent covers a pod, much like a Keurig coffee pod, to prepare a cannabis infused drink.⁷⁷ This invention is also protected in Australia, Canada, Europe, and China, demonstrating what a global industry cannabis has become.⁷⁸

Additionally, large pharmaceutical companies seem to be rushing to obtain protection on different methods of using and obtaining active properties from marijuana plants.⁷⁹ In the 1990s and early 2000s, global pharmaceutical companies such as Sanofi, Merck, and Pfizer began patenting inventions relative to the body’s impact from active compounds in marijuana.⁸⁰

GW Pharmaceuticals PLC has 175 published patent applications for cannabis products and 59 patents have been issued, the most for any pharmaceutical company yet.⁸¹ One patent GW holds is for “processes for preparing a cannabinoid-rich extract form cannabis plant material,” which covers the method for preparing extracts from a cannabis plant.⁸² Additionally, Lunatech LLC has 123 published cannabis related patent applications, and 30 patents have been issued.

Unlike GW, Lunatech seems to be building a different type of cannabis patent portfolio. Nearly all of Lunatech’s cannabis patents are related to what is known as “vaping,” a consumption method, where the substance is inhaled with the use of an

73. *Id.*

74. The fact that the government agencies hold cannabis related patents, specifically relative to the medicinal effects of marijuana, is wholly contrary to marijuana’s classification as a Schedule I drug under the CSA. In fact, the mere existence of this patent should disqualify marijuana from being on the CSA because classification as a Schedule I drug means that according to the government, there is no medicinal use.

75. Malathi Nayak, *Cannabis Companies Gamble on Patents to Lure Possible Suitors*, BNA (Aug. 1, 2019, 4:46 AM), <https://news.bloomberglaw.com/ip-law/cannabis-companies-gamble-on-patents-to-lure-possible-suitors>.

76. U.S. Patent No. 9,480,647 B2 (filed Nov. 1, 2016).

77. *Id.*

78. *Id.*

79. Matthew Weber, *Highly Patentable*, REUTERS GRAPHICS (Oct. 4, 2019), <https://graphics.reuters.com/USA-MARIJUANA-PATENT/010081FS2MW/index.html>.

80. *Id.*

81. *Id.*

82. U.S. Patent No. 10,195,159 (filed Mar. 31, 2015).

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e-cigarette or similar device.⁸³ This is interesting because vaping has become a trend not only in the cannabis industry, but also in the tobacco industry.⁸⁴ Furthermore, vaping is more prevalent in states where recreational marijuana is legal, showing that this a new and booming niche market.⁸⁵ This highlights a possible distinction between the way companies are building their patent portfolios.

The third largest competitor in terms of cannabis related patents is Janssen Pharmaceutical NV, which has far fewer filings than either GW or Lunatech. Janssen has filed 38 applications, with only 15 having been granted.⁸⁶

2. Plant Patents

Plant patents are available only for asexually reproduced plant varieties. Since cannabis plants can be reproduced both sexually and asexually, such plants may be eligible for patent protection.⁸⁷ Although cannabis cultivar development has generally been via traditional sexual-reproduction breeding, some companies have nevertheless chosen to pursue plant patents for asexually reproduced varieties, opening the door for patent protection.⁸⁸ For example, the Biotech Institute has been pursuing plant patents for different cannabis plant strains.⁸⁹ As of January 11, 2020, Biotech has two pending plant patents, one for “Grape Lollipop” and another for “OG Citron”.⁹⁰ Both are described as a “new and distinct cultivar of cannabis plant.” No marijuana plant patents have been granted yet, so these patent applications could create an important precedent in terms of whether the USPTO will treat cannabis plant patents the same way it treats utility patents, ultimately allowing them.

However, the USPTO issued its first hemp plant patent in 2019.⁹¹ The patent is held by Charlotte’s Web Holdings, Inc and is for a “new and distinct hemp cultivar

83. *Patents Assigned to Lunatech, LLC*, JUSTIA PATENTS, <https://patents.justia.com/assignee/lunatech-llc>.

84. Matt Richtel, *Marijuana and Vaping: Shadowy Past, Dangerous Present* THE NEW YORK TIMES (Oct. 22, 2019), <https://www.nytimes.com/2019/10/21/health/marijuana-and-vaping-shadowy-past-dangerous-present.html>.

85. *Id.*

86. *See* Nayak, *supra* note 75, at 10.

87. Alison Baldwin, Brittany Butler, & Nicole Grimm, *Protecting Cannabis – Are Plant Patents Cool Now?*, JD SUPRA (Dec. 6, 2017), <https://www.jdsupra.com/legalnews/protecting-cannabis-are-plant-patents-34919/>; *How do Cannabis Plants Pollinate to Produce Seeds?*, DINAFEM SEEDS (December 19, 2016), <https://www.dinafem.org/en/blog/cannabis-plants-pollinate-seeds/>.

88. Cannabis Patents: The 101, HARRIS BRICKEN (Sept. 17, 2017), <https://harrisbricken.com/cannalawblog/cannabis-patents-the-101/>.

89. Nicole Grimm, Brett Scott, & George Lyons, III, *Biotech Institute’s Growing Patent Portfolio*, PATENT DOCS (Nov. 16, 2017), <https://www.patentdocs.org/2017/11/biotech-institutes-growing-patent-portfolio-us-patent-no-9095554-and-the-path-forward.html>.

90. U.S. Patent No. USPP31707P3 (filed Aug. 12, 2017); U.S. Patent No. US2019/0254213P1 (filed Aug. 12, 2017).

91. U.S. Patent No. PP30,639 P2 (filed May 10, 2018).

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designated as ‘CW2A,’ which can produce up to 6.24% CBD and 0.27% THC.’⁹² The amount of THC is relevant because the level of THC must be below the 0.3% threshold that separates hemp, which is legal, from marijuana, which is illegal under federal law due to the CSA.⁹³ Interestingly, when this patent was filed in May 2018, the Farm Bill had not yet been passed.⁹⁴ Thus, at the time of filing it was possible to acquire federal intellectual property protection for the plant, but it would not have been legal to grow.⁹⁵ However, with the passage of the Farm Bill in December 2018, hemp plants such as the CW2A may now be grown legally under federal law.⁹⁶ The allowance of a plant patent for CW2A certainly bodes well for the future of the cannabis industry, especially as hemp production takes off as a result of the passage of the Farm Bill.⁹⁷ Thus, cannabis plant patents, specifically for hemp plants, are likely to become more valuable.

The scope of utility patents may overlap with that of plant patents.⁹⁸ Although plant patents cover only asexually reproduced plant varieties, utility patents can provide protection for methods of breeding, methods of producing genetically modified plants, chemical products by plants, and individual plants, such as hybrids produced through genetic modification or traditional breeding.⁹⁹ While the protections granted to owners of utility and plant patents are the same, the main difference between these types of patents are the requirements.¹⁰⁰ Applications for plant patents are not required to meet the written description requirement set forth in 35 U.S.C. § 112, whereas utility patents must.¹⁰¹ Additionally, while a utility patent may contain many and broad claims, plant patents are limited to a single claim.¹⁰² However, obtaining a utility patent for a cannabis plant carries some additional

92. *Id.*

93. Agricultural Improvement Act, Pub. L. 115-334, 132 Stat. 4490 (2018); Jihee Ahn, *The USPTO Has Granted its First Hemp Plant Patent*, HARRIS BRICKEN (Sep. 27, 2019), <https://harrisbricken.com/cannalawblog/the-uspto-has-granted-its-first-hemp-plant-patent/>.

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.*

98. Marriam Lin, *Growth Through Intellectual Property – Plant Protection Through Utility Patents, Certificates, and Plant Patents*, JD SUPRA (Oct. 12, 2018), <https://www.jdsupra.com/legalnews/growth-through-intellectual-property-14166/>.

99. Daniel J. Knauss, Erich E. Veitenheimer, & Marcelo Pomeranz, *Protecting Plant Inventions*, A.B.A. (Aug. 05, 2019), https://www.americanbar.org/groups/intellectual_property_law/publications/landslide/2018-19/july-august/protecting-plant-inventions/.

100. *Id.*

101. 35 U.S.C. § 162 (2011) (stating that “no plant patent shall be declared invalid for noncompliance with section 112 if the description is as complete as possible”).

102. *Id.*

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challenges.¹⁰³ The enablement requirement for utility patents require the applicant to disclose a process that can be repeated by a person of ordinary skill in the art.¹⁰⁴ However, the challenge with plants is that it can be difficult to write a procedure enabling someone to “make” a plant.¹⁰⁵ The USPTO does provide an alternative method for enablement, which allows the applicant to deposit biological materials to aid with fulfilling the enablement requirement.¹⁰⁶ However, since cannabis remains a schedule I drug under the CSA and illegal under federal law, it is not possible to deposit cannabis as a biological material at a United States depository because under federal law it is illegal to ship marijuana in the mail.¹⁰⁷ To circumvent this issue, one applicant for a utility patent for a cannabis plant,¹⁰⁸ The Biotech Institute, deposited seeds at a depository in Scotland, which the USPTO is obligated to recognize.¹⁰⁹ This tactic proved to be a success, this deposit in Scotland allowed the applicant to overcome the rejection issued on the basis of not satisfying the enablement requirement.¹¹⁰

Overall, plant patents are not all that interesting when it comes to protecting novel cannabis plants. While plant patents are able to protect cannabis plants, this only applies if the plant has been asexually reproduced and most cannabis plants are sexually reproduced.¹¹¹ Additionally, utility patents are able to provide a broader scope of protection than plant patents as they cover both sexually and asexually reproduced cannabis plants, in addition to products derived from the plant.¹¹²

3. Design Patents

Like utility patents, cannabis related design patents have also been issued by the USPTO.¹¹³ Such patents have been granted for the designs of several products including storage containers, garments, and other such novelty items, most of which

103. Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/>.

104. 35 U.S.C. § 112(a) (2011).

105. *Id.*; Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/>.

106. 37 C.F.R. 1.801 (2015).

107. Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/>; 21 U.S.C. § 801.

108. *Id.*; U.S. Patent No. US9095554B2 (filed Mar. 15, 2013).

109. Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/>.

110. *Id.*

111. *Id.*

112. *Id.*

113. *See* Dicke, *supra* note 23, at 4.

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feature the image of marijuana leaf.¹¹⁴ The written descriptions for cannabis design patents may note that the product can also be used for tobacco.¹¹⁵ The addition of tobacco here may indicate that the owner tried to broaden the claims in an effort to make the product seem more legitimate or legal. Regardless, design patents have the potential to cover a wide range of ancillary products such as the unique shape of vaporizers, pipes, tinctures, and bongs.¹¹⁶

The fact that companies are seeking to acquire patent protection for cannabis products, for both recreational and pharmaceutical use exemplifies the value of this industry and suggests the need to stay competitive in the global market. Patent prosecution is expensive, regardless of the type of invention.¹¹⁷ The USPTO does provide tiered fees based on the applicant's entity status, which helps lower the costs for some inventors.¹¹⁸ The USPTO recognizes three different types of entities: (1) micro entities,¹¹⁹ which are entitled to a 75% discount on most patent fees; (2) small entities,¹²⁰ which are entitled to a 50% discount on most fees; and (3) large entities,¹²¹ which does not receive any discount.¹²² However, costs accrue quickly and are not limited solely to the fees that must be paid to the USPTO.¹²³ Applicants must often pay attorney fees and patent search fees in addition to filing fees.¹²⁴ The total cost of prosecuting a patent can range from \$750 to \$40,000, depending on whether a patent attorney is used, how complex the invention is, and whether a patent search is

114. U.S. Patent No. USD869237S1 (filed Nov. 13, 2017) (claiming the ornamental design of a "waffle maker with cannabis leaf shape"); U.S. Patent No. USD825137S1 (filed Aug. 18, 2014) (claiming a "garment with cannabis leaves"); U.S. Patent No. USD840809S1 (filed Nov. 11, 2016) (claiming a "pull tab simulating a cannabis leaf cutout").

115. U.S. Patent No. USD823537S1 (filed Jul. 22, 2017) (claiming the ornamental design of a "container for cannabis and tobacco").

116. Trevor K. Copeland, *Design Patents – Fundamental Additions to Cannabis Intellectual Property Portfolios*, NAT'L L. REV. (Feb. 14, 2020), <https://www.natlawreview.com/article/design-patents-fundamental-additions-to-cannabis-intellectual-property-portfolios>.

117. Gene Quinn, *The Cost of Obtaining a Patent in the US*, IP WATCHDOG (Apr. 4, 2015), <https://www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485/>.

118. *Id.*

119. 35 U.S.C. § 123 (2013) (explaining that micro entity status is based on either a gross income basis or recognition as an institution of higher learning).

120. 37 C.F.R. § 1.27 (2015) (explaining that an applicant can establish small entity status by qualifying as either: (1) a person, which is defined as an inventor or another individual that holds the patent rights; (2) a small business, which is defined as a business of 500 people or less; or (3) a nonprofit organization).

121. *Entity Status at the U.S. Patent Office*, NEUSTEL, <https://www.neustel.com/entity-status-u-s-patent-office/> (stating that large entities are simply all applicants that do not qualify as either a micro entity or small entity).

122. *Entity Status at the U.S. Patent Office*, NEUSTEL, <https://www.neustel.com/entity-status-u-s-patent-office/>.

123. *Id.*

124. Gene Quinn, *The Cost of Obtaining a Patent in the US*, IP WATCHDOG (Apr. 4, 2015), <https://www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485/>.

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conducted.¹²⁵ However, patents filed without the aid of a patent attorney and that cut costs by eliminating steps such as a patent search are unlikely to be able to navigate through prior art and are far more likely to be rejected.¹²⁶ The high costs associated with obtaining patent protection is crucial in advocating for a consistent federal intellectual property system for cannabis inventions. If companies in this emerging global industry are willing to invest thousands of dollars in patent protection, then the value of the industry has been established. Thus, there is both a high need and demand for companies to obtain cannabis-related patents.

II. COPYRIGHT

A. Background

Copyright protection in the United States is based on Article I, Section 8, of the US Constitution, which empowers Congress to promote the progress of science and useful arts by providing authors and inventors with certain exclusive rights in their writings and discoveries for a limited time.¹²⁷ The current law providing for copyright protection is the Copyright Act of 1976, which preempts state law.¹²⁸ The US Copyright Office regulates and administers copyrights under the authority of the Copyright Act.¹²⁹

Under 17 U.S.C. § 102(a), for a work to fall within the scope of copyright protections, it must be an “original work of authorship fixed in a tangible medium of expression, now known or later developed. . .” Thus, there are three statutory

125. *Id.*

126. *Id.*

127. U.S. CONST. art. I § 8, cl. 8.

128. *Copyright Basics*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/circs/circ01.pdf>.

129. *Id.*

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requirements for a work to qualify for copyright protection, it must be: (1) a work of authorship;¹³⁰ (2) original;¹³¹ and (3) fixed in a tangible medium of expression.¹³²

B. Copyright Protections for Cannabis-Related Works of Authorship

Cannabis companies are allowed to protect their original works of authorship under copyright law in the same way as any other company.¹³³ Even though the subject matter may contain references or information about illegal substances, such as cannabis, this is not a bar to obtaining copyright protection.¹³⁴

Thus, cannabis companies can receive copyright protection on things such as a book on cannabis production methods, information listed on a company website, or brochure. For example, a book titled “Marijuana growing made easy: a step-by-step guide to growing marijuana” is registered with the United States Copyright Office.¹³⁵ Growing marijuana plants is certainly not legal on the federal level.¹³⁶ However, the Copyright Office, a federal agency, may issue copyright protection to a book on the subject matter. Additionally, copyright registration has been obtained for a motion

130. Under, 17 U.S.C. § 102(a), works of authorship include the following categories: (1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.

131. The second requirement for obtaining copyright protection is originality. Originality does not mean that a work must be novel or unique. A work is original if it: (1) possesses a modicum of creativity; and (2) is an independent creation. As to the first requirement, the standard of creativity is “minimally creative,” which is a low standard. For example, although facts are not copyrightable, a compilation of facts may be copyrightable because it has the potential to be original to the author. However, while the threshold for originality is low, a work must have a minimal amount of creative expression for copyright protection. Copyright does not protect things such as: single words or short phrases; book titles; headlines; slogans; or typefaces. These things may in certain cases qualify for trademark protection. *Feist Publications, Inc. v. Rura Telephone Service Co., Inc.*, 499 U.S. 340 (1991).

132. Under 17 U.S.C. § 106, a work is fixed in a tangible medium of expression when its embodiment in a copy or phonorecord more than a transitory duration. The work must be fixed by the author or by his/her discretion. If it is not fixed, there is no protection. Additionally, the fixation must be sufficiently stable or permanent, which is what is meant by “more than a transitory duration.” Tangible mediums includes things such as: paper and ink; canvas and paint; sculpture media; photographic film; computer hard drive or read-only memory; and video and audio tapes. A work may be considered fixed whether it is in a form that may be perceived directly or only in one that requires a machine or device. For example, a literary work such as a book or magazine article may be fixed in: printed paper format, viewable directly by the reader; or a digital e-book file, viewable only with an e-book reader or computer-like device.

133. Nathalie Bougenies, *Protecting Your Cannabis Copyrights (Yes, You Have Them)*, HARRIS BRICKEN (June 21, 2018), <https://harrisbricken.com/cannalawblog/protecting-your-cannabis-copyrights-yes-you-have-them/>.

134. *Id.*

135. Marijuana grower’s insider’s guide by Mel Frank, COPYRIGHT CATALOG, https://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?v1=276&ti=276,276&Search%5FArg=marijuana&Search%5FCode=TALL&CNT=25&PID=zg21_0oBF4-KrPQvjbIALd4RLLc&SEQ=20200315200346&SID=5.

136. 21 U.S.C. § 801 (1972).

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picture called “Cannabis Consumption 101.” While this work is registered to a company in Denver, which has legalized cannabis use statewide, it is still registered with a federal agency under federal law, which criminalizes cannabis use.¹³⁷ What is especially useful about cannabis companies being allowed to obtain copyright protection is that it provides the chance to protect some things that might have fallen under trademark protection.¹³⁸ For example, typically the best way to protect a brand name or logo is to register it as a trademark. However, copyright protection may be available for logos that constitute original works of authorship.¹³⁹ Unlike the requirement for trademark protection, copyright does not require the logo to be a source identifier.¹⁴⁰ For a logo to qualify for copyright protection it simply needs the requisite amount of creativity and originality.¹⁴¹ The catch is that most logos consist of some combination of an image and words, such as the Burger King symbol, which depicts a burger with the name “Burger King” sandwiched within. While trademark law covers both the words and image in the logo, copyright law can only extend so far as to protect the graphic elements and only if these graphic elements meet the requisite amount of creativity.¹⁴² Copyright law explicitly does not protect words, names, titles, slogans, or short phrases.¹⁴³ Thus, the words that typically appear in a logo, usually the name of the brand or company, such as “Burger King” or

137. Cannabis I, COPYRIGHT CATALOG, <https://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?v1=25&ti=1,25&Search%5FArg=cannabis&Search%5FCode=TALL&CNT=25&PID=IloHhApIQIY9H7wuuuq76HKNYma&SEQ=20200315200255&SID=4>.

138. Nathalie Bougenies, *Can't Trademark that Cannabis Logo? Try Copyright*, CANNA LAW BLOG (Jul. 13, 2018), <https://www.cannalawblog.com/copyright-law-affords-cannabis-businesses-an-alternative-way-to-protect-their-logos/>. (explaining that unlike patent and trademark protection, copyright protection attaches at the point of fixation. Thus, for a piece of work to fall within the scope of copyright protection it just needs to meet the Copyright Act's requirements and is not wholly subject to registration with the United States Copyright Office. However, registration is required to bring a claim of copyright misappropriation).

139. *Id.*

140. Melville Nimmer, NIMMER ON COPYRIGHT § 913.1 (Rev. Ed. 2020).

141. J. Thomas McCarthy, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION, § 6:18., (5th ed. 2020); *see also* John Muller & Co. v. New York Arrows Soccer Team, Inc., 802 F.2d 989, 231 (8th Cir. 1986) (stating that a logo design was not copyrightable because it did not have the requisite amount of creativity); *Bouchat v. Baltimore Ravens Ltd. Partnership*, 619 F.3d 301 (4th Cir. 2010) (logo was analyzed under fair use and copyright law).

142. *Id.*; *see also* Compendium of US Copyright Office Practices, Third Ed. § 913 (2014) (citing 37 C.F.R. § 202.10(b)) (stating that “a visual work that is used as a trademark, logo, or label may be registered if it satisfies the requisite qualifications for copyright”); *see also* *Coach, Inc. v. Peters*, 386 F. Supp. 2d 495 (S.D.N.Y. 2005) (holding that arrangements of the letter “C” was insufficient to establish the modicum of creativity required for copyright protection).

143. 37 C.F.R. § 202.1 (2014).

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“Starbucks” are not copyrightable.¹⁴⁴ However, the graphic elements remain protectable as long as the requisite amount of creativity has been met.¹⁴⁵

Although only the graphic elements of a logo are protectable under copyright, copyrighting a logo still has its advantages. Unlike trademark protection, copyright allows the owner of an infringed mark to seek statutory damages.¹⁴⁶ However, a drawback is that trademark protection has the potential to be indefinite, as long as the mark continues to be a source identifier, whereas copyright protection is more finite.¹⁴⁷ Regardless, for cannabis companies, copyright protection is the best available intellectual property protection for logos as trademark protection is not available. So, although copyright protection may not be as robust as trademark protections, it is better than nothing.

In conclusion, cannabis companies receive copyright protection for any original works of authorship, just like any other company. There is no legal restriction based on the illegality of the subject matter. This is especially important since federal trademark protection is currently unavailable to cannabis-related goods and services.¹⁴⁸ Copyright protection gives cannabis companies more protection on the federal level, allowing cannabis companies to expand their intellectual property portfolios beyond just patents.

III. TRADE SECRETS

The Uniform Trade Secrets Act (USTA) states that “trade secret means information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (1) derives independent economic value, actual, or potential from not being generally known or ascertainable by others who can obtain economic value by its use; and (2) is subject of efforts to maintain secrecy.”¹⁴⁹ Currently, most states have adopted the USTA.¹⁵⁰

For federal causes of action there is the Defend Trade Secrets Act of 2016 (DTSA).¹⁵¹ The DTSA states that the term “trade secret” means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether

144. Viva R. Moffat, *Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection*, 19 BERKELEY TECH. L. J. 1473, 1505-06 (2004).

145. *Id.*

146. 17 U.S.C. § 504(c) (2010).

147. Viva R. Moffat, *Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection*, 19 BERKELEY TECH. L. J. 1473, 1506 (2004).

148. See supra notes 16-25 and accompanying text.

149. *Trade Secret*, LEGAL INFO. INST., https://www.law.cornell.edu/wex/trade_secret.

150. *Id.*

151. *Trade Secret Policy*, USPTO, <https://www.uspto.gov/ip-policy/trade-secret-policy>.

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tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if: (1) the owner thereof has taken reasonable measure to keep such information secret; and (2) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information (it provides a competitive advantage).¹⁵²

As long as a trade secret remains a secret, it qualifies for protection, which is why some view trade secret protection as more valuable than patent protection.¹⁵³ Unlike patent protection, trade secret protection has the chance to last indefinitely and has no registration requirements.¹⁵⁴

As cannabis companies gain traction in the United States, they will inevitably create trade secrets crucial to the success and development of their businesses.¹⁵⁵ Since the USPTO continues to deny uniform intellectual property protection to companies in the cannabis industry, trade secret protection is especially valuable for protecting company assets.¹⁵⁶ There is no registration requirement and no need for government approval, but rather cannabis companies have to keep the unique methods of their trade to themselves, or rather a secret.¹⁵⁷ Currently, there has not been any litigation when it comes to cannabis related trade secrets. However, as the industry continues to grow, both nationally and globally, companies may soon begin the fight to protect their coveted methods, strains, and other such trade secrets.

Since DTSA provides a federal cause of action it requires a connection to interstate commerce.¹⁵⁸ Unlike patents and copyrights, there is no independent constitutional basis granting Congress the power to regulate trade secrets.¹⁵⁹ Thus, like trademarks, trade secrets are regulated under the commerce clause and a relationship must be shown between the trade secret and interstate commerce for an action under the DTSA to prevail.¹⁶⁰ However, this again raises the issue of interstate

152. 18 U.S.C. § 1839(3) (2016).

153. *Id.*

154. *Id.*

155. Kevin McCoy, *Cannabis Companies – Don't let your Valuable Trade Secrets Go Up in Smoke*, JD SUPRA (Oct. 22, 2019), <https://www.jdsupra.com/legalnews/cannabis-companies-don-t-let-your-84056/>.

156. *Id.*

157. *Id.*

158. 18 U.S.C. § 1836(b)(1) (2016); Conor Tucker, *The DTSA's Federalism Problem: Federal Court Jurisdiction over Trade Secrets*, 28 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1 (2017).

159. Conor Tucker, *The DTSA's Federalism Problem: Federal Court Jurisdiction over Trade Secrets*, 28 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1 (2017).

160. Quinn Emanuel Urquhart & Sullivan, LLP, *December 2018: Emerging Issues Under the Federal Defend Trade Secrets Act*, JD SUPRA (Dec. 27, 2018), <https://www.jdsupra.com/legalnews/december-2018-emerging-issues-under-the-86740/>; see also Jarred A. Klorfein, *District Court Assesses Interstate Commerce Nexus Under Defend Trade Secrets Act*, ABA (Apr. 08, 2019),

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commerce relative to cannabis, similarly to trademarks. Since cannabis is illegal under federal law, as it is a Schedule I drug under the CSA, by pursuing relief for trade secret misappropriation, under the DTSA, the petitioner may be admitting to a violation of the CSA.¹⁶¹ Although no precedent has been set for trade secret misappropriation of cannabis under federal law, it is possible that courts may refuse to enforce trade secret rights for cannabis until it is no longer classified as a Schedule I drug.

IV. TRADEMARKS

A. Background

A trademark is a word, name, symbol or device, or other designation, or a combination of such designations, that is distinctive of a person's goods or services and that is used in a manner that identifies those goods or services and distinguishes them from the goods or services of others.¹⁶² A service mark is a trademark that is used in connection with services.¹⁶³

Trademark law is governed by the Lanham Act, codified at 15 U.S.C. § 1051. It states that a "trademark includes any work, name, symbol, or device, or any combination thereof: (1) used by a person, or (2) which a person has a bona fide intention to use in commerce and applies to register on the principal register established by this chapter, to identify and distinguish his or her goods from those manufactures or sold by others and to indicate a source of the goods, even if that source is unknown."¹⁶⁴ Thus, under the Lanham Act, a trademark must be: (1) used in commerce; (2) registered with the USPTO to gain federal protection; and (3) must be distinctive.¹⁶⁵ The Lanham Act also states that the purpose of trademarks are to serve as source identifier and allow people to protect their marks, whether the mark is already in use or is intended to be used in a market.¹⁶⁶ Thus, trademarks are used to distinguish products from goods manufactured or sold by others and to indicate their source, which can also indicate quality.¹⁶⁷ Additionally, trademark protection can extend to slogans as long as it immediately conjures up an association with the

<https://www.americanbar.org/groups/litigation/committees/business-torts-unfair-competition/practice/2019/dlmc-v-flores/>.

161. Rebecca Edelson & Emilio Cazares, *Intellectual Property in the Cannabis Industry – Protecting Innovations and Products, Part I (Trade Secrets)*, JD SUPRA (Dec. 26, 2019), <https://www.jdsupra.com/legalnews/intellectual-property-in-the-cannabis-42203/>.

162. 15 U.S.C. § 1127 (2006).

163. Restatement (Third) of Unfair Competition §9 AM. LAW INST. 1995.

164. 15 U.S.C. § 1127 (2006).

165. *Id.*

166. *Id.*

167. *Id.*

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trademark owner and the affiliated product.¹⁶⁸ For example, the slogan “just do it” immediately conjures up an association with Nike and sports or sports products, which has allowed Nike to obtain trademark protection for its slogan.¹⁶⁹

B. Current State

Currently, federal protection is not available for cannabis-related trademarks.¹⁷⁰ Although the USPTO, which also regulates patents, allows for all types of cannabis patents, cannabis goods and services are still prohibited from receiving U.S. trademark registration.¹⁷¹ The USPTO will not issue registration for marks covering goods or services that violate federal law, even if such goods or services are legal at the state level, such as cannabis.¹⁷² Thus, because cannabis has been deemed illegal by the federal government, categorized as a Schedule I drug under the CSA, cannabis related goods or services are barred from federal trademark registration.¹⁷³ Overall, the USPTO has failed to be consistent in the way it treats cannabis businesses seeking intellectual property protection. How can it be that the same agency that has been granting cannabis patents since 1942, even granting some to the United States government, refuses to register marks for cannabis related businesses?

The answer comes down to a trademark specific requirement.¹⁷⁴ To obtain federal registration for a mark, the mark must be used in commerce and that commerce must be lawful under federal law.¹⁷⁵ Trademark law prohibits the registration of products

168. TMEP § 1213.05(b)(i) (stating that a trademark may be eligible for registration if it is “used in a trademark sense and functions as a trademark or service mark on the Principal or Supplemental Register, meaning it must either be inherently distinctive or will be shown to acquire distinctiveness”).

169. JUST DO IT, Registration No. 88,876,918.

170. Virginia W. Marino & Emily Kappers, *USPTO Issues Examination Guide on Trademark Applications for Cannabis and Cannabis-Related Goods and Services*, NAT’L L. REV. (Jun. 11, 2019), <https://www.natlawreview.com/article/uspto-issues-examination-guide-trademark-applications-cannabis-and-cannabis-related>.

171. *Id.*

172. 37 C.F.R. § 2.69 (stating that when the sale or transportation of any product for which registration of a trademark is sought is regulated under an Act of Congress, the USPTO may make appropriate inquiry as to compliance for the sole purpose of determining lawfulness of the commerce recited in the application); *Gray v. Daffy Dan’s Bargaintown*, 823 F.2d 522, 526 (Fed. Cir. 1987) (stating that use of a mark in commerce must be lawful use to be the basis for federal registration of the mark); *In re Brown* USPQ2d 1350, 1351 (TTAB 2016) (stating that even if a service is lawful within a state, that is irrelevant to the question of federal registration when that service is unlawful under federal law).

173. *Id.*

174. TMEP § 907.

175. 15 U.S.C. § 1051(a) (stating that the owner of mark used in commerce may request registration as a trademark); 15 U.S.C. § 1051 (b) (stating that a person who has a “bona fide intention” to use a mark in commerce may request registration as a trademark); *CreAgri, Inc. v. USANA Health Scis., Inc.*, 474 F.3d 626 (9th Cir. 2007) (interpreting the Lanham Act to mean that “use in commerce only creates trademark rights when the use is lawful”).

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that cannot lawfully be sold across state lines in the United States.¹⁷⁶ While many individual states have legalized the use of cannabis, whether for recreational or medicinal purposes, this is not enough to satisfy the use in commerce requirement, since such use is still illegal under federal law.¹⁷⁷ In fact, the CSA explicitly makes it unlawful to sell, offer for sale, or use any facility of interstate commerce to transport drug paraphernalia.¹⁷⁸ Thus, while the CSA does not interfere with the USPTO's ability to grant cannabis related patents, since lawful use in commerce is not a patent requirement, it is the sticking point for why cannabis-related marks cannot be registered.¹⁷⁹

Interestingly, the ban on cannabis trademarks, due to its inability to be used in interstate commerce, is not in the statute.¹⁸⁰ Rather, it is an administrative and judicial interpretation of the statute.¹⁸¹ Thus, it is possible that even if Congress never de-schedules marijuana, the USPTO and courts could acknowledge and grapple with the conflict laws to acknowledge that legal state activity, that happens to be illegal under federal law, is in fact commerce for the purposes of the Lanham Act.¹⁸²

This leaves cannabis companies few options when it comes to protecting their brand. The most commonly utilized alternative is state trademark registration.¹⁸³ The clear drawback here is that the mark will only be protected in that state, and thus not subject to the widespread coverage offered by federal protection.¹⁸⁴ However, it is an effective means of excluding local competitors from using the mark and overall is better than nothing.¹⁸⁵ State registration is available in all states that allow the recreational use of marijuana.¹⁸⁶ Only some states that have legalized solely medicinal use allow for cannabis-related marks to be registered.¹⁸⁷

However, the passage of the Agricultural Improvement Act of 2018, also known as the 2018 Farm Bill, created an opening for cannabis-related marks.¹⁸⁸ Specifically,

176. *Id.*

177. *See supra* notes 19-22 and accompanying text.

178. 21 U.S.C. § 863 (2000).

179. Josh Gerben, *How to Protect Your Marijuana Brands and Trademarks*, GERBEN L., <https://www.gerbenlaw.com/blog/how-to-protect-your-marijuana-related-brands-and-trademarks/>.

180. *CreAgri, Inc. v. USANA Health Scis., Inc.*, 474 F.3d 626 (9th Cir. 2007) (interpreting the Lanham Act to mean that "use in commerce only creates trademark rights when the use is lawful")

181. *Id.*

182. Rachel Rudensky, Ira Sacks, *Lanham Act Preemption of State Law Where Cannabis Trademarks Are At Issue*, JD SUPRA (Mar. 16, 2020) (iterating that the Court is unwilling to extend the benefits of trademark protection, as set forth in the Lanham Act, when the seller's actions violated federal law).

183. James Monagle, *Tips for Protecting Cannabis Trademarks*, IP WATCHDOG (Feb. 28, 2019), <https://www.ipwatchdog.com/2019/02/28/tips-protecting-cannabis-trademarks/id=106829/>.

184. *Id.*

185. *Id.*

186. *Id.*

187. *Id.*

188. *See Marino, supra* note 170, at 24.

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hemp-related federal trademark registrations are now allowed as a matter of law.¹⁸⁹ The Farm Bill legalized the production and marketing of hemp, which is defined as “the plant *Cannabis sativa* L. and any part of that plant, including seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids. . . with a THC concentration of not more than 0.3 percent on a dry weight basis.”¹⁹⁰ Thus, hemp, which is a cannabis cultivar lacking the psychoactive components found in recreational or medicinal marijuana, was removed as a controlled substance, under the CSA, because the Farm Bill expressly amended the CSA to exclude hemp from the definition of “marihuana”.¹⁹¹ This does not mean that hemp is simply legal now across the board, hemp products will still be restricted and overseen by federal agencies such as the U.S. Food and Drug Administration (FDA).¹⁹²

In response, the USPTO has issued an examination guide clarifying the procedure for examining applications cannabis related marks in light of the 2018 Farm Bill.¹⁹³ The guide does not change any trademark requirements, but rather explains that hemp-related marks are no longer banned and sets forth the procedures for obtaining such marks.¹⁹⁴

The passage of the 2018 Farm Bill has been a monumental step towards resolving the USPTO’s inconsistencies in how it treats cannabis related patents and trademarks. While allowing trademarks for hemp products is an affirmative step toward legalization, it still leaves uncertainties for other cannabis goods and services. For example, CBD, a non-psychoactive derivative THC, is still unlawful even if derived from hemp and thus is ineligible for trademark registration.¹⁹⁵ Thus, the only solution to fully repair the USPTO’s inconsistency is to have marijuana de-scheduled from the CSA, so that it may be lawfully used in commerce and thus be eligible for federal trademark protections.

189. *Id.*

190. Agricultural Improvement Act, Pub. L. 115-334, 132 Stat. 4490 (2018) (carving out the definition of hemp from the definition of cannabis, as under the CSA the terms were used synonymously even though Cannabis refers to the family of plants, whereas hemp is a specific species within the cannabis family).

191. *Id.* (expressly amending the Controlled Substances Act to exclude “hemp” from the definition of “marihuana”); Robert Terzoli, *USPTO Allows Hemp-Related Trademarks On or After December 20, 2018*, SEYFARTH (Jun. 17, 2019), <https://www.seyfarth.com/news-insights/uspto-allows-hemp-related-trademarks-on-or-after-december-20-2018.html>; Harold Hilborn, *2018 Farm Bill Legalizes Hemp, but Obstacles to Sale of CBD Products Remain*, NAT’L L. REV. (Mar. 5, 2019), <https://www.natlawreview.com/article/2018-farm-bill-legalizes-hemp-obstacles-to-sale-cbd-products-remain>.

192. *Id.*

193. Examination Guide 1-19: Examination of Marks for Cannabis and Cannabis-Related Goods and Services Enactment of the 2018 Farm Bill, USPTO (May 2, 2019), <https://www.uspto.gov/sites/default/files/documents/Exam%20Guide%201-19.pdf>.

194. *Id.*

195. See Terzoli, *supra* note 191, at 27.

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C. Pending Legislation

Although federal trademark protection is currently unavailable for cannabis related marks, this may change if the Marijuana Opportunity Reinvestment and Expungement Act of 2019 is passed (known as the “MORE Act”).¹⁹⁶ The MORE Act was introduced by Senator Kamala Harris and if passed would federally de-schedule cannabis, expunge the records of those with prior marijuana convictions and impose a 5% tax on sales, which would be reinvested in communities most impacted by the war on drugs.¹⁹⁷ By removing marijuana from the CSA, this bill would effectively allow cannabis companies to finally receive federal trademark protection for their goods and services. On November 20, 2019, the House Judiciary Committee passed the bill with a 228-164 vote.¹⁹⁸ However, even with this strong and historic start, the MORE Act has significant hurdles ahead.¹⁹⁹ While the MORE Act has passed the house, which is currently controlled by Democrats, it is unlikely to pass or even be considered by the Republican controlled senate.²⁰⁰

Even if the MORE Act passes the House, which is currently controlled by Democrats, it is unlikely to pass the Republican controlled Senate.²⁰¹

V. PLANT VARIETY PROTECTION ACT (PVPA)*A. Background*

The Plant Variety Protection Act (PVPA) provides intellectual property protection to breeders of new, distinct, uniform, and stable asexually produced or tuber propagated plant varieties (other than fungi or bacteria).²⁰² The PVPA is administered by the Plant Variety Protection Office (PVPO) within the Department of Agriculture.²⁰³ Although the PVPA is not administered by the USPTO, it offers

196. Robert M. Kline, *Congressional Committee Takes Historic Step Toward Decriminalizing Marijuana*, NAT'L L. REV. (Nov. 25, 2019), <https://www.natlawreview.com/article/congressional-committee-takes-historic-step-toward-decriminalizing-marijuana>.

197. H.R. 3884, 116th Cong. (2019).

198. *House Judiciary Passes MORE Act to Decriminalize Marijuana at Federal Level*, HOUSE JUDICIARY COMM. (Nov. 20, 2019), <https://judiciary.house.gov/news/documentsingle.aspx?DocumentID=2157>.

199. Robert M. Kline, *Congressional Committee Takes Historic Step Toward Decriminalizing Marijuana*, NAT'L L. REV. (Nov. 25, 2019), <https://www.natlawreview.com/article/congressional-committee-takes-historic-step-toward-decriminalizing-marijuana>.

200. H.R. 3884, 116th Cong. (2019); Alexis Barnes, *House Approves Decriminalizing Cannabis with MORE Act*, JD SUPRA (Dec. 11, 2020), <https://www.jdsupra.com/legalnews/house-approves-decriminalizing-cannabis-75755/>.

201. *Id.*

202. 7 U.S.C. § 2402(a) (2018).

203. 7 U.S.C. § 2321 (1980) (stating that the Department of Agriculture has established the Plant Variety Protection Office, which shall be responsible for enforcing the provisions of the PVPA).

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patent-like protection to novel plant varieties.²⁰⁴ To qualify for protection under the PVPA, in addition to a plant variety being able to be sexually reproduced, tuber propagated, or asexually reproduced, the plant variety must satisfy four requirements, it must be: (1) new;²⁰⁵ (2) distinct;²⁰⁶ (3) uniform;²⁰⁷ and (4) stable.²⁰⁸ The applicant must also provide a seed deposit, which is stored and become available to the public after the term of PVPA protection expires.²⁰⁹ If the plant variety meets these requirements, the PVPO will issue a certificate to the breeder, granting the right to exclude others from “selling the variety, or offering it for sale, or reproducing it, or importing it, or exporting it, or using it in producing a hybrid or different variety therefrom.”²¹⁰ This certificate is recognized worldwide and allows breeders to obtain protection in other countries faster.²¹¹ In most cases the term of this protection is 20 years from the date of issuance.²¹²

The PVPA provides a strong alternative to patent protection, with fewer detailed requirements.²¹³ Even though PVPA protection lasts for a period of 20 years, like patent protection, PVPA protection is generally longer because it begins on the date of issuance not on the date of filing.²¹⁴ The trade-off is that the protections are not as extensive as those granted by a patent.²¹⁵ However, PVPA certificates can be used in

204. *Id.*

205. 7 U.S.C. § 2402(a)(1) (2018) (stating that a plant variety is new if it has not been sold or otherwise disposed of to other persons, by or with the consent of the breeder in the United States for more than a year prior to the filing date or in any area outside of the United States for more than 4 years).

206. 7 U.S.C. § 2402(a)(2) (2018) (stating that a plant variety is distinct when it is clearly distinguishable from any other existing plant variety, whether such variety is publicly known or common knowledge at the time of filing).

207. 7 U.S.C. § 2402(a)(3) (2018) (defining uniform as when a variation is “describable, predictable, and commercially acceptable”).

208. 7 U.S.C. § 2402 (a)(4) (2018) (stating that stable means that when a variety is reproduced its essential and distinctive characteristics will remain unchanged with a reasonable degree of reliability).

209. 7 U.S.C. § 2422(4) (1994).

210. 7 U.S.C. § 2483(a) (1996).

211. *Plant Variety Protection*, U.S. DEPT. AGRICULTURE, <https://www.ams.usda.gov/services/plant-variety-protection>.

212. 7 U.S.C. § 2483(b) (1996).

213. Marriam Lin, *Growth Through Intellectual Property – Plant Protection Through Utility Patents, Certificates, and Plant Patents*, JD SUPRA (Oct. 12, 2018), <https://www.jdsupra.com/legalnews/growth-through-intellectual-property-14166/>.

214. 7 U.S.C. § 2483(b) (1996); 35 U.S.C. § 154 (2013); 35 U.S.C. § 161 (2018).

215. Benjamin A. Berkowitz, *Plant Variety Protection Act Now Covers Asexually Reproduced Plants*, FOLEY (May 21, 2019), <https://www.foley.com/en/insights/publications/2019/05/pvpa-covers-asexually-reproduced-plants> (stating that PVPA protections allows others to use the protected variety for breeding and to generate new varieties, whereas patent protection).

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tandem with both utility and plant patents to create a robust scope of protection.²¹⁶ For example, combining utility patent protections, plant patent protections, and PVPA protections may give the owner or breeder robust, comprehensive, and versatile protection for plant inventions.²¹⁷ A utility patent could protect the methods of breeding a plant and a valuable gene in that plant.²¹⁸ A plant patent could be used to protect a specific variety of plants produced using the patented method.²¹⁹ A PVPA certificate could then be used to protect later-developed hybrids, which contain the patent gene, or specific tuber propagated plant created using the patented method, which would not be covered by a plant patent.²²⁰ Alternatively, a breeder may choose to forego patent protection, due to the high costs, and pursue only a PVPA certificate, which is less expensive.²²¹

B. Relevance to Cannabis

Currently, PVPA protection is effectively unavailable to breeders and inventors in the cannabis industry because cannabis (and marijuana plants) remain federally illegal under the CSA.²²² A requirement to obtaining a PVPA certificate is a seed sample, which should include any parent plants needed to produce a hybrid.²²³ These deposited seeds are then made available to the public when the PVPA protection expires, 20 years after the date of issuance.²²⁴ However, for cannabis breeders and cultivators, depositing a seed would be admission of and proof of illegal cannabis cultivation.²²⁵ If a cannabis breeder were to submit a sample, then the breeder may face penalties under federal law.²²⁶ Since cannabis and marijuana plants are illegal, breeders are unlikely to hand over the illegal plant variety to the PVPO, a federal

216. Daniel J. Knaussus, Erich E. Veitenheimer, Marcelo Pomeranz, *Protecting Plant Inventions*, ABA (Aug. 2019), <https://www.cooley.com/-/media/cooley/pdf/reprints/2019/2019-08-13-protecting-plant-inventions.ashx?la=en&hash=1D1409BC5F1BFE9CA63C89F19D09B1A9>.

217. *Id.*

218. *Id.*

219. *Id.*

220. *Id.*

221. *Plant Patent: Everything You Need to Know*, UPCOUNSEL, <https://www.upcounsel.com/plant-patent> (stating that the costs for obtaining a PVPA certificate are around \$1000 and \$2000 per plant, whereas expected costs for a plant patent range from \$7000 to \$8000 per patent, depending on the applicant's entity size).

222. Alison Baldwin, Brittany Butler, & Nicole Grimm, *Protecting Cannabis – Are Plant Patents Cool Now?*, JD SUPRA (Dec. 6, 2017), <https://www.jdsupra.com/legalnews/protecting-cannabis-are-plant-patents-34919/>.

223. 7 U.S.C. § 2483 (b); *see also PVPA Frequently Asked Questions*, U.S. DEPT. AGRICULTURE, <https://www.ams.usda.gov/services/plant-variety-protection/pvpo-frequently-asked-questions> (stating that a seed sample must be deposited within 3 months of the filing date and must consist of 3,000 untreated seeds).

224. *Id.*

225. Alison Baldwin, Brittany Butler & Nicole Grimm, *Protecting Cannabis – Are Plant Patents Cool Now?*, JD SUPRA (Dec. 6, 2017), <https://www.jdsupra.com/legalnews/protecting-cannabis-are-plant-patents-34919/>.

226. *Id.*

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agency.²²⁷ Additionally, under federal law, cannabis cannot be made publicly available while still a schedule I drug under the CSA.²²⁸ Thus, PVPA protection is effectively unavailable to cannabis breeders and inventors.²²⁹ However, with the passage of the 2018 Farm Bill, not all hope is lost for inventors and breeders in the cannabis industry.

The 2018 Farm Bill removed hemp²³⁰ from the definition of marijuana under the CSA.²³¹ It allows for the broad cultivation of hemp, the transfer of hemp-derived products across state lines, and does not impose restrictions on the sale, transport, or possession of hemp products.²³² Thus, while cannabis companies are unable to acquire PVPA protection for marijuana plant varieties, they may now acquire protection for hemp varieties.²³³

VI. CONCLUSION

Based on the exponential growth of the cannabis industry in other countries, it is clear that the American cannabis companies have fallen behind in the global cannabis market.²³⁴ If federal prohibition of marijuana continues, with cannabis remaining a Schedule I drug under the CSA, the U.S. could be forgoing revenues from billions of dollars' worth of exports.²³⁵ The U.S. already has the foundation to create a robust and competitive cannabis industry through current federal intellectual property protections. However, this foundation is deeply flawed as it lacks uniformity in what protections are available for cannabis related intellectual property.²³⁶

227. Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/>.

228. Alison Baldwin, Brittany Butler, & Nicole Grimm, *Protecting Cannabis – Are Plant Patents Cool Now?*, JD SUPRA (Dec. 6, 2017), <https://www.jdsupra.com/legalnews/protecting-cannabis-are-plant-patents-34919/>.

229. *Id.*

230. Cannabis with less than 0.3% THC, also referred to as “Cannabis sativa L.”

231. Agricultural Improvement Act, Pub. L. 115-334, § 12619, 132 Stat. 4490 (2018); Amy Abernethy, *Hemp Production and the 2018 Farm Bill*, FDA (Jul. 25, 2019), <https://www.fda.gov/news-events/congressional-testimony/hemp-production-and-2018-farm-bill-07252019>.

232. John Hudak, *The Farm Bill, hemp legalization and the status of CBD: An explainer*, BROOKINGS (Dec. 14, 2018), <https://www.brookings.edu/blog/fixgov/2018/12/14/the-farm-bill-hemp-and-cbd-explainer/>.

233. Susie Peterson, *USDA's Plant Variety Protection Office Opens its Doors for Hemp Applications*, DAILY MARIJUANA OBSERVER (Apr. 26, 2019), <https://mjobserver.com/law/intellectual-property/usdas-plant-variety-protection-office-opens-its-doors-for-hemp-applications-pvpa-patents/>.

234. *How the U.S. Is Falling Behind in the Regulated Cannabis Market*, NAT'L CANNABIS INDUSTRY ASS'N (Oct. 2018), https://thecannabisindustry.org/wp-content/uploads/2018/10/NCIA-US-Falling-Behind-Oct2018_v2.pdf.

235. *Id.*

236. See *supra* text accompanying note 18..

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Currently, cannabis companies may acquire patent protection in the form of utility patents, plant patents, and design patents.²³⁷ While the process for obtaining utility and design patents remain unchanged, despite the invention being for an invention related to a federally illegal substance, patents for plants become more complex when a biological material sample needs to be provided.²³⁸ Copyright protection also remains available for original cannabis related works, with there being no additional requirements or significant obstacles.²³⁹ However, federal trademark protection is effectively unavailable for cannabis goods or services.²⁴⁰ For a good or service to be eligible for trademark protection it must be able to be lawfully used in interstate commerce.²⁴¹ However, since cannabis remains a Schedule I drug under the CSA and thus illegal under federal law, it cannot lawfully be used in interstate commerce. Thus, cannabis goods and services are rendered ineligible for federal trademark protection.²⁴² This is a blaring inconsistency given that patent and copyright protection are both available on the federal level. Although the issues seem to be a constitutional issue, since Congress' power to regulate trademarks stems from the commerce clause,²⁴³ the bar on trademarks could be resolved by de-scheduling or removing cannabis as a Schedule I drug.²⁴⁴ While this might seem like a radical action, it would better align federal law with the trend of progressive state laws legalizing cannabis. It would also allow the U.S. to enter the competitive international cannabis markets.²⁴⁵ Additionally, unifying federal law, especially federal intellectual property laws, on cannabis would clarify whether cannabis trade secrets are protectable under federal law and whether actions for trade secret misappropriation may be heard by federal courts.²⁴⁶

It is time for the U.S. to decide how it will recognize and regulate cannabis. Current piecemeal regulations allowing hemp under federal law, but not marijuana,

237. See *supra* Part I.B.

238. See *supra* Part I.B.ii.

239. See *supra* Part II.

240. See *supra* Part III.

241. 15 U.S.C. § 1051(a) (stating that the owner of mark used in commerce may request registration as a trademark); 15 U.S.C. § 1051 (b) (stating that a person who has a "bona fide intention" to use a mark in commerce may request registration as a trademark); *CreAgri, Inc. v. USANA Health Scis., Inc.*, 474 F.3d 626 (9th Cir. 2007) (interpreting the Lanham Act to mean that "use in commerce only creates trademark rights when the use is lawful").

242. See *supra* IV.B.

243. See *supra* note 16 and accompanying text.

244. See *supra* IV.B.

245. Emily Martin, *State efforts to grow pot industries clash with federal law*, POLITICO (Jun. 6, 2019), <https://www.politico.com/story/2019/06/06/state-efforts-to-grow-pot-industries-clash-with-federal-law-1356579>; Nick Kovacevich, *Cannabis Goes Global While the U.S. Falls Behind*, FORBES (Nov. 16, 2018), <https://www.forbes.com/sites/nickkovacevich/2018/11/16/cannabis-goes-global-while-the-u-s-falls-behind/#3b32e6871783>.

246. See *supra* III.

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has not only created inconsistencies in federal intellectual property protections but has also sidelined American cannabis companies in a booming international cannabis market. For the U.S. to remain competitive in international markets and build a stronger domestic market, it is time for federal laws to take after the many progressive states that have legalized, taxed, and benefitted from legal cannabis markets.