Sosiohumaniora - Jurnal Ilmu-ilmu Sosial dan Humaniora
ISSN 1411 - 0903 : eISSN: 2443-2660
Vol. 27, No. 2, Juli 2025: 791 - 803

# LEGAL HARMONIZATION OF MEDICAL CANNABIS REGULATION IN THE FULFILLMENT OF THE RIGHT TO HEALTH IN INDONESIA

**Rafan Darodjat[1], Darryl Evan Brouwer[1] and Deviana Yuanitasari[2]**
[1] Faculty of Law, Universitas Airlangga, Surabaya, 60286
[2] Faculty of Law, Universitas Padjadjaran, Sumedang, 45360
E-mail: rafan@unpad.ac.id; darryl.evan.brouwer-2025@fh.unair.ac.id; deviana.yuanitasari@unpad.ac.id

## ABSTRACT
Indonesia's prohibition of cannabis originates from its adherence to international narcotics conventions, which historically denied recognition of cannabis's medical value. However, the reclassification of cannabis by the Commission on Narcotic Drugs (CND) in 2020 marked a significant shift in the global legal paradigm by acknowledging its therapeutic potential. This study examines the problem of legal inconsistency between Indonesia's strict prohibition policy and the development of international standards regarding medical cannabis. This research employs a conceptual legal approach to analyze developments in international narcotics policy and their relevance to Indonesia's narcotics law. The findings demonstrate that Indonesia's current legal framework, particularly Law Number 35 of 2009 and Minister of Health Regulation Number 30 of 2023, creates legal disharmony with international developments and restricts the fulfillment of the right to health. From a humanistic perspective, this condition also affects patients who require alternative medical treatment, thereby raising concerns regarding equitable access to healthcare services. This study concludes that Indonesia should adjust its legal framework by permitting the limited use of cannabis for medical purposes under strict regulation. Such reform is consistent with the mandate of Constitutional Court Decision Number 106/PUU-XVIII/2020, which emphasizes the importance of opening legal space for research on medical cannabis.

**Keywords:** drug policy; narcotics conventions; medical narcotics law; cannabis; right to health

# HARMONISASI HUKUM PENGATURAN GANJA MEDIS DALAM PEMENUHAN HAK ATAS KESEHATAN DI INDONESIA

## ABSTRAK
Larangan ganja di Indonesia, dimulai dari kepatuhan terhadap konvensi narkotika internasional, yang menolak pengakuan atas nilai medisnya. Namun, reklasifikasi ganja oleh *Commission on Narcotic Drugs* (CND) pada tahun 2020 menandai pergeseran signifikan dalam paradigma hukum global dengan mengakui potensi terapeutiknya. Penelitian ini mengkaji permasalahan ketidakkonsistenan hukum antara kebijakan pelarangan ketat di Indonesia dengan perkembangan standar internasional mengenai ganja medis. Penelitian ini menggunakan pendekatan hukum konseptual untuk memeriksa perkembangan kebijakan narkotika internasional dan relevansinya bagi hukum narkotika di Indonesia. Temuan penelitian menunjukkan bahwa kerangka hukum Indonesia saat ini, khususnya pada Undang-Undang Nomor 35 Tahun 2009 dan Peraturan Menteri Kesehatan Nomor 30 Tahun 2023, menciptakan disharmoni hukum dengan perkembangan internasional dan membatasi pemenuhan hak atas kesehatan. Dari segi humaniora, kondisi ini juga berdampak pada pasien yang membutuhkan pengobatan alternatif, sehingga menimbulkan kekhawatiran mengenai akses layanan kesehatan yang berkeadilan. Hasil penelitian ini menemukan bahwa Indonesia harus menyesuaikan peraturan dengan mengizinkan penggunaan ganja untuk keperluan medis secara terbatas di bawah regulasi yang ketat. Perubahan tersebut sejalan dengan amanat Putusan Mahkamah Konstitusi No. 106/PUU-XVIII/2020 untuk membuka ruang penelitian bagi ganja medis.

**Kata kunci:** kebijakan narkotika; konvensi narkotika; hukum narkotika medis; ganja; hak atas kesehatan

## INTRODUCTION

Research on cannabis regulation in Indonesia has so far tended to focus on the national legal framework, particularly Law Number 35 of 2009 on Narcotics (hereinafter referred to as the Narcotics Law) and its implementing regulations. Scientifically, cannabis contains various active compounds such as tetrahydrocannabinol (hereinafter referred to as THC) and cannabidiol (hereinafter referred to as CBD), both of which have been proven to possess therapeutic properties. In many countries, these compounds are utilized within the medical industry to treat or alleviate the symptoms of several conditions, including epilepsy, chronic pain, sleep disorders, and the side effects of chemotherapy. Cannabis-based products have been developed in the form of standardized medicines such as oils, capsules, sprays, and other pharmaceutical preparations, all under strict supervision by health authorities. This medical utilization demonstrates that cannabis is not solely associated with the risk

DOI: https://doi.org/10.24198/sosiohumaniora.v27i2.66532

Submitted: 01 September 2025, Accepted: 06 May 2026, Publish: 16 June 2026

of abuse but also holds significant economic and health value if properly regulated. This fact serves as one of the bases for many countries to reconsider the policy of total prohibition of cannabis, while simultaneously encouraging further research concerning its safety, effectiveness, and regulatory mechanisms.

Existing studies generally discuss aspects such as classification, criminal sanctions, and prohibition of use, but have yet to substantially link these issues to the dynamics of international law that influence domestic policy. In fact, Indonesia's foreign policy, which adheres to the principle of "free and active," places international conventions as an important reference in the formation of narcotics regulation. In the context of cannabis, the national prohibition derives from the ratification of the Single Convention on Narcotic Drugs 1961 along with the 1972 Protocol, through Law Number 8 of 1976, which became the legal foundation for classifying cannabis as a Schedule I narcotic without medical exceptions. With the shift in global policy such as the 2020 decision of the Commission on Narcotic Drugs (CND) to move cannabis from Schedule IV to Schedule I the prospect of reforming cannabis regulation in Indonesia has become increasingly relevant to examine (Pangaribuan & Kelly, 2019).

A number of scholars have examined the regulation of medical cannabis in Indonesia, including comparative legal studies with Thailand and several European countries (Triyatna et al., 2024). However, existing studies have primarily focused on normative comparisons without integratively examining the impacts of the 2020 CND decision on Indonesia's "free and active" foreign policy. This regulatory gap creates a specific and urgent problem in Indonesia today: a severe legal impasse where the state's total prohibition policy directly conflicts with the constitutional right to health and the growing domestic medical necessity. Currently, Indonesia faces a paradox where patients requiring life-saving cannabis-based treatments, such as those with cerebral palsy or drug-resistant epilepsy, remain under the constant threat of criminalization due to the rigid classification of cannabis as a Schedule I narcotic. Furthermore, this legal rigidity has led to a stagnation of domestic scientific innovation, as bureaucratic barriers and the fear of prosecution prevent Indonesian researchers from exploring the pharmaceutical potential of indigenous cannabis strains. Without a reform that adopts the CND's reclassification, Indonesia not only faces a disharmony with international standards but also continues to fail in providing legal protection for its citizens' health rights and pharmaceutical sovereignty, Institute for Criminal Justice Reform (ICJR, 2021).

Scientifically, cannabis contains various active compounds such as THC and CBD, which have been proven to possess therapeutic properties (Hidding et al., 2024). In many countries, these compounds are utilized in the medical industry to treat or alleviate the symptoms of several conditions, including epilepsy, chronic pain, sleep disorders, and the side effects of chemotherapy (Freeman et al., 2019). Cannabis-based products have been developed in the form of standardized medicines such as oils, capsules, sprays, and other pharmaceutical preparations, all under strict supervision by health authorities. This medical utilization demonstrates that cannabis is not merely associated with the risk of abuse but also holds significant economic and health value if properly regulated. This fact has become one of the main considerations for many countries to reconsider the policy of total prohibition on cannabis, while at the same time encouraging further research concerning its safety, effectiveness, and regulatory mechanisms.

In addition to its use in research and limited therapies, cannabis has also been processed into various pharmaceutical products manufactured under strict pharmaceutical industry standards. For instance, Epidiolex, which contains CBD, has been approved by the U.S. Food and Drug Administration (FDA) (Abu-Sawwa et al., 2020) for the treatment of rare forms of epilepsy; Sativex, an oromucosal spray, is used to alleviate muscle spasms in patients with multiple sclerosis; and cannabis based topical ointments have been formulated to reduce localized pain or inflammation. These products are mass-produced in certified facilities and undergo multiple layers of laboratory testing to ensure safety, dosage consistency, and purity of their active compounds. The availability of diverse dosage forms including capsules, ointments, sprays, and oral solutions enables the medical utilization of cannabis in a controlled and safe manner, while minimizing the risk of misuse.

In this legal study, the term "cannabis" does not refer to commonly consumed recreational forms such as smoking or hashish, but rather to medical formulations containing active compounds derived from the cannabis plant, such as topical ointments or creams. The principal pharmaceutical components are cannabinoids (hereinafter abbreviated as CBs) (Umpreecha et al., 2023). In the medical field, CBD has obtained the highest degree of legitimacy through clinical trials and regulatory approval; THC, at moderate levels, is recognized for its psychoactive properties as an analgesic; while

cannabinol (CBN) remains relatively marginal due to limited research. This approach underscores that medical cannabis is understood as a pharmaceutical product for example, an analgesic or anti-inflammatory ointment specifically processed to be safe, practical to use, and to provide only localized therapeutic effects. Accordingly, the focus of this research lies on the legal aspects of regulating topical CB-based products, rather than on the misuse of cannabis through smoking or other recreational forms (Jardim & Delgado-Charro, 2025).

Indonesia is endowed with abundant natural resources, one of which is the cannabis plant (Cannabis sativa L.), which has historically thrived in the Aceh region. The existence of cannabis in Indonesia cannot be separated from the international legal regime, particularly the Single Convention on Narcotic Drugs of 1961 (Walsh & Jelsma, 2019), administered by the CND. This convention classified cannabis under Schedule I, namely substances with a high potential for abuse but with certain recognized medical value. A significant development occurred in 2020, when the CND adopted the World Health Organization's (WHO) recommendation to remove cannabis from Schedule IV, which had previously grouped it with the most dangerous substances considered to have no medical benefits (Mayor, 2020). As a result, the international community now acknowledges the potential medical uses of cannabis, albeit under strict regulatory control.

Under the Narcotics Law, however, cannabis remains classified as a Schedule I narcotic, a category of substances deemed to have no medical value and therefore prohibited in all forms of use. This legal paradigm has, in practice, positioned Indonesia's policy to focus primarily on repressive measures and the imposition of criminal sanctions for cannabis circulation (Yohan et al., 2022), without opening space for scientific research and medical utilization. In contrast, international studies have demonstrated that the active compounds in cannabis particularly CBD have significant therapeutic benefits for the treatment of specific conditions, such as epilepsy, cancer, neurological disorders, and chronic pain.

The national legal regime on narcotics is further elaborated through Minister of Health Regulation Number 30 of 2023 on the Amendment of Narcotics Classification (hereinafter referred to as the Narcotics Ministerial Regulation), which reiterates the placement of cannabis in Schedule I, along with its derivatives and resin. The placement of cannabis in Schedule I indicates that the state continues to regard it as having no medical utility, even though the international regime following the 2020 CND decision has begun to recognize the plant's medical benefits. This results in a disharmony between national law and the development of international law, whereby Indonesia continues to uphold a paradigm of total prohibition, while the global community has moved toward controlled medical utilization (Kamil & Sulistyanta, 2026).

Considering the potential of CBD contained in cannabis, Indonesia should begin to adopt a more progressive legal approach in line with international regulatory developments. The use of cannabis for purposes of research medicine (Kristiawan & Trihastuti, 2025) and the development of the non-psychoactive hemp industry could provide economic value while also safeguarding national sovereignty over the management of natural resources. Aceh, with its geographical conditions and long history of cannabis cultivation, holds the potential to serve as a natural laboratory that can be developed legally and under strict control through appropriate legal instruments. Therefore, narcotics policy reform in Indonesia has become a necessity, so that cannabis management is not solely oriented toward prohibition, but also toward scientific utilization and the broader public interest. To address this necessity, this research formulates two primary research questions: (1) How does the 2020 CND decision redefine the international legal status of medical cannabis and its subsequent implications for Indonesia's legal position? (2) How can the reconstruction of Indonesia's national narcotics legal framework be formulated to achieve harmonization with international standards while fulfilling the constitutional right to health?

## METHOD

The research method employed in this study is normative legal research, which examines legal principles, norms, and doctrines through the analysis of relevant legal materials (Marzuki, 2017). This study addresses the issue of legal inconsistency between Indonesia's prohibition of cannabis and developments in international drug policy, particularly following the 2020 reclassification of cannabis by the Commission on Narcotic Drugs (CND).

This research adopts a conceptual and statutory approach. The conceptual approach is used to analyze legal doctrines related to drug control, public health, and the right to health, while the statutory approach examines relevant legal instruments at both international and national levels. Primary legal materials include the 1961 Single Convention on

Narcotic Drugs, the 2020 CND decision, Law Number 35 of 2009 on Narcotics, and Minister of Health Regulation Number 30 of 2023. Secondary legal materials consist of academic literature, journal articles, and expert opinions relevant to medical cannabis regulation.

The analysis is conducted qualitatively by interpreting legal norms and principles to identify inconsistencies between international developments and Indonesia's legal framework, particularly in relation to the recognition of medical cannabis. In addition, this study incorporates a comparative legal approach (Fedtke, 2016) by examining regulatory frameworks in the United States, Germany, and Thailand. These jurisdictions are selected to represent different regulatory models and policy orientations. Through this comparison, the study aims to identify relevant legal practices that may inform the development of a more responsive legal framework in Indonesia, particularly in addressing public health needs and the right to health.

## RESULTS AND DISCUSSION

### *WHO's Scientific Assessment as the Epistemic Basis of Justice*

CND is a functional commission under the United Nations Economic and Social Council (ECOSOC) responsible for formulating international policies on narcotics and psychotropic substances. The CND has the authority to review, amend, or establish the scheduling of substances under the three principal UN drug control conventions: the 1961 Single Convention on Narcotic Drugs, the 1971 Convention on Psychotropic Substances, and the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. Its decisions are binding on States Parties to these conventions, thereby shaping the legal obligations of national jurisdictions. In this sense, the CND functions as a global forum that mediates between scientific evidence, WHO recommendations, and the political interests of Member States in determining the direction of international drug control policies (Lohman & Barrett, 2020).

In December 2020, the CND adopted a historic resolution by removing cannabis and cannabis resin from Schedule IV the category reserved for substances with high risk and no recognized medical use and reclassifying them into Schedule I, which acknowledges their therapeutic potential while maintaining strict regulatory oversight due to risks of misuse (Mills, 2016). This decision was reached through a Member State vote following the World Health Organization's scientific review, which served as the evidentiary basis for reclassification. For States Parties to the 1961 Convention, including Indonesia, the decision carries both legal and policy implications, as it shifts the international perception of cannabis from a prohibited narcotic with no medical value toward a controlled substance with recognized therapeutic utility under stringent regulation (Legal et al., 2023).

The reclassification of cannabis by the CND in 2020 has opened broader discussions on the extent to which national policies remain aligned with developments in international law. While the decision does not directly oblige States Parties to legalize medical cannabis, the global recognition of its therapeutic potential (Fischer et al., 2022) raises pressing questions about the urgency of revisiting Indonesia's policy of total prohibition. Within the framework of national legal politics, cannabis reform is not merely a matter of health and science but also involves compliance with international obligations, the protection of society against abuse, and the potential for economic benefits through a standardized pharmaceutical industry.

Comparative insights from other jurisdictions provide valuable benchmarks. Current data indicate that 36 countries (representing about 19% of UN Member States) have established regulatory models for medical cannabis. An additional 4 countries (around 2%) permit access through exceptional legal provisions, while 16 countries (about 8%) are in the process of developing or implementing regulatory frameworks (de Souza, 2022) More recent findings suggest that 57 countries worldwide have adopted medical cannabis schemes, of which 49 allow cannabis exclusively for medical purposes, while eight extend its use to both medical and recreational purposes (Martinelli, 2024). These comparative experiences highlight the diversity of regulatory approaches and underscore the importance of a critical assessment of Indonesia's current stance. A reform trajectory grounded in international evidence and comparative law would enable Indonesia to balance public health protection, international legal commitments, and the exploration of the socio-economic potential of cannabis within a controlled and accountable legal framework.

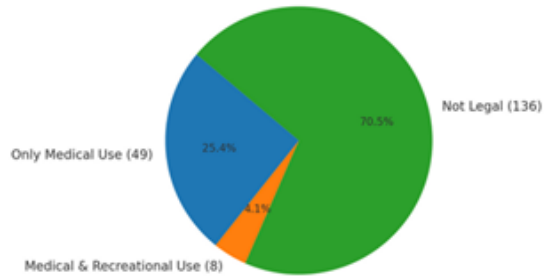
Table 1 demonstrates that Indonesia adopts a more restrictive legal approach compared to other jurisdictions, particularly in prohibiting any form of medical cannabis access. This contrast reflects a significant gap between national regulation and global developments in public health-oriented drug policy.

**Tabel 1: Medical Cannabis Regulation: A Comparative Overview**

| Country | Legal Status | Legal Basis | Access |
|---|---|---|---|
| Indonesia | Prohibited | Law No. 35/2009 | Not allowed |
| United States | Medical use permitted | Controlled Substances Act; State laws | Prescription-based |
| Germany | Medical use permitted | BtMG; Cannabis Act (2017) | Prescription-based |
| Thailand | Medical use permitted | Narcotics Act (2019) | Medical supervision |

Source: WHO (2019–2023); CND Resolution 63/17 (2020); EMCDDA; FDA (2024); BfArM; Thailand Ministry of Public Health.

**Figure 1. Cannabis Use Among 193 Sovereign UN-Recognized States**




Source: Authors' compilation based on countries that have legalized cannabis and its uses (Gruzieva et al., 2024)

The Constitutional Court Decision No. 106/PUU-XVIII/2020, delivered on 30 June 2022, reaffirmed that cannabis remains classified as a Schedule I narcotic under Law No. 35 of 2009 on Narcotics. However, the Court emphasized the constitutional obligation of the government to provide space for research on Schedule I narcotics, including cannabis, for purposes of medical treatment and/or therapy (Nabil, 2023). This ruling signifies a paradigm shift in legal policy, moving away from a purely prohibitive and punitive approach toward a limited recognition of the importance of scientific research oriented to public health services.

As a follow-up, the government issued Minister of Health Regulation No. 16 of 2022 concerning the Implementation of Research and Development on Narcotics for the Purpose of Health Services and/or Science (hereinafter referred to as MoH Regulation 16/2022). This regulation stipulates that research on narcotics, including cannabis, may only be conducted by authorized entities, namely state research institutions such as BRIN, universities, teaching hospitals, accredited health laboratories, or designated pharmaceutical industries. The implementation of such research requires prior authorization from the Minister of Health through a strict administrative mechanism and is subject to the supervision of the Directorate General of Pharmaceuticals and Medical Devices of the Ministry of Health, with coordination involving the Food and Drug Supervisory Agency (BPOM) and law enforcement authorities (Kartika et al., 2025).

Analytical examination reveals that MoH Regulation 16/2022 explicitly restricts the objectives of narcotics research to three principal domains: (1) health services, for instance, research on cannabis-based medicines for the treatment of epilepsy, cancer, or chronic pain; (2) the advancement of scientific knowledge, particularly in the fields of pharmacology and biotechnology; and (3) the development of pharmaceutical technology, including the production of narcotics-based medicines under state-controlled frameworks. Accordingly, Constitutional Court Decision No. 106/PUU-XVIII/2020 together with MoH Regulation 16/2022 provide a clear normative foundation that medical cannabis research in Indonesia is not only permissible but also possesses strong legal legitimacy (Hidayatullah et al., 2025), provided it is conducted in a limited, scientific, and strictly supervised manner by the government.

People today increasingly perceive cannabis as harmless, supported by its recognized medical uses (such as reducing nausea in cancer patients) and its social normalization, while tobacco and alcohol remain widely regarded as harmful due to effective public health campaigns (Young-Wolff et al., 2024).

The research mandate as affirmed in Constitutional Court Decision No. 106/PUU-XVIII/2020 should not be narrowly interpreted as limited solely to research conducted by domestic institutions in Indonesia. The global reality demonstrates that research on medical cannabis has long been undertaken in various countries, even producing pharmaceutical products lawfully used in medical practice, such as cannabidiol (CBD) based medicines for the treatment of epilepsy, chronic pain, and neurological disorders. Therefore, the fulfilment of this constitutional mandate should also encompass the utilization of international research findings that have been clinically tested and approved by global drug regulatory authorities.

Restricting research exclusively to domestic institutions risks hindering public access to advancements in science and improved health services. Indonesia should not be confined to replicating research from the initial stages but ought to adopt and integrate internationally recognized studies. Comparative experiences offer valuable insights, such as Germany's legalization of medical cannabis in 2017, which was grounded in international research findings (Grotenhermen, 2018), while still regulating production and distribution mechanisms domestically.

These comparative practices clearly illustrate that states are not always required to build research from scratch but may accelerate policy implementation by recognizing and legalizing cannabis-based medicines that have already been scientifically validated. Through such a model, Indonesia could maintain strict legal control over Schedule I narcotics while simultaneously ensuring timely access to cannabis-based therapies for patients in need. Thus, the policy orientation would no longer be confined to a prohibitionist paradigm but would also reflect public health interests, patients' rights to treatment, and the broader development of global scientific knowledge.

Based on the author's observations, pharmaceutical products utilizing compounds derived from cannabis albeit subject to varying regulatory approval across countries have all undergone clinical trials and been granted limited market authorization.

**Table 2. Cannabis-Based Pharmaceutical Products Approved in Selected Jurisdictions**

| Trade Name (Year of Approval / Reference) | Active Ingredient(s) | Medical Indications | Country of Approval / Regulatory Body |
|---|---|---|---|
| **Epidiolex (FDA 2018; EMA 2019)** | Cannabidiol (CBD) | Refractory epilepsy (Lennox–Gastaut syndrome, Dravet syndrome), seizures associated with tuberous sclerosis complex | United States (FDA), European Union (EMA) |
| **Sativex (Nabiximols)** | THC + CBD (balanced cannabis extract) | Spasticity in Multiple Sclerosis (MS); adjunctive treatment for neuropathic pain | Canada (Health Canada), United Kingdom (MHRA), Spain, Germany, Italy, and selected EU member states |
| **Marinol (Dronabinol)** | Synthetic Δ9-Tetrahydrocannabinol (THC) | Chemotherapy-induced nausea and vomiting; anorexia associated with HIV/AIDS | United States (FDA), Canada, and selected international jurisdictions |
| **Cesamet (Nabilone)** | Synthetic cannabinoid (THC analog) | Severe chemotherapy-induced nausea and vomiting when conventional therapies fail | United States (FDA), Canada, United Kingdom |
| **Canemes (Nabilone)** | Synthetic cannabinoid (THC analog) | Chemotherapy-induced nausea and vomiting | Germany and selected European Union member states |
| **Bedrocan (Standardized medical cannabis flos products)** | Standardized THC/CBD ratios (strain-specific cannabis flos) | Chronic pain, multiple sclerosis-related symptoms, physician-supervised therapeutic use | Netherlands (Office of Medicinal Cannabis), limited medical cannabis programs in selected jurisdictions |

Source: Compiled by authors from the U.S. Food and Drug Administration (FDA) Orange Book, European Medicines Agency (EMA) Medicines Database, and the German Federal Institute for Drugs and Medical Devices (BfArM) Regulatory Reports (2024).

At the same time as non-prescription products have proliferated, the prescription-only CBD medication Epidiolex™ has received marketing approval by regulatory agencies worldwide including the Food and Drug Administration (FDA) and European Medicines Agency (EMA). Epidiolex™ is an oil containing 100 mg/mL CBD and is approved for the treatment of various rare forms of paediatric epilepsy following successful Phase 3 trials. Many countries also have the THC/CBD containing buccal spray nabiximols (Sativex™) available on prescription for the treatment of spasticity in Multiple Sclerosis (MS). This is a 1:1 ratio formulation of CBD and THC (McGregor et al., 2020). The recognition of Epidiolex™ and Sativex™ by major regulators demonstrates that CBD and THC have been

clinically tested and legally marketed, so that states seeking to reform cannabis regulation do not need to start research from the ground up, but can rely on existing scientific evidence, with further studies focusing primarily on the side effects and pharmacovigilance of such pharmaceutical preparations."

The global validation and standardization of these cannabis-based pharmaceuticals necessitate a legal response from jurisdictions that still uphold total prohibition. Consequently, Indonesia, as part of the global community, cannot disregard the development of international law, particularly in the field of narcotics regulation, which continues to evolve dynamically. One of the most crucial issues concerns the legalization of medical cannabis in various countries, which has already resulted in the production of legitimate pharmaceutical products that are widely available internationally. Indonesia's legal stance, which remains highly repressive by classifying cannabis strictly as a Schedule I narcotic without any room for medical use, creates new vulnerabilities both for foreign nationals entering Indonesia and for Indonesian citizens returning from abroad carrying cannabis-based medicines that are legal in their country of origin. This situation reflects a rigid statutory interpretation of Law No. 35 of 2009, which continues to classify cannabis as having no medical value. However, such an interpretation may be reconsidered through a more purposive approach, particularly in light of international developments and the Constitutional Court's mandate to allow research for medical purposes (Risano & Ningtias, 2023).

In the era of globalization, with increasingly accessible cross-border public transportation, the risk of transnational criminalization becomes a tangible problem that must be anticipated. A national legal system that closes itself off too rigidly risks undermining the principles of legal certainty and substantive justice, particularly when patients with valid prescriptions in other countries suddenly find themselves in violation of Indonesian law. From a sociohumanistic perspective, this condition raises concerns not only about legal certainty but also about patients' dignity and their right to access necessary medical treatment. For this reason, Indonesia is required to take a more active stance toward developments in international law by opening pathways for legal harmonization through limited recognition of scientifically tested and globally regulated medical cannabis-based medicines. Such a step aligns with the fundamental principles of international law that promote reciprocity and regulatory harmonization, while also supporting the protection of human rights, particularly the right to health (Bonny-Noach & Ne'eman-Haviv, 2025).

By adjusting its national laws to meet international standards, Indonesia not only safeguards its reputation as a modern and responsive rule of law state but also avoids potential transnational legal conflicts arising from regulatory disparities. This underscores the role of law as a tool of social engineering that must remain adaptive to global change, ensuring that legal protection is no longer repressive, but progressive and humanistic.

### *The Responsiveness of Criminal Law to the Development of Science*

Bruggink, in his book *Reflections on Law* (translated by Arief Shidarta), defines law as a conceptual structure of legal norms and decisions, a substantial part of which has been positivized (Bruggink & Sidharta, 1999). Law can be understood not merely as a positivized conceptual structure of legal norms, but also as a system of behavioral prescriptions that contains ethical values concerning morality (Marzuki, 2022). A common thread can be drawn from these two definitions: law is not limited to positive rules but also encompasses values involving ethical assessments of right and wrong, justice and injustice, and so forth. Such a definition of law can be constructed from a philosophical perspective.

However, law as a conceptual system cannot be detached from sociological factors. The conceptual system of legal norms essentially resides in human reason and conscience, but the positivization of these norms into concrete rules is carried out by formal state institutions or accepted as living law within a community. This process takes place in social reality through human agency, which qualifies law also as a social phenomenon. The logical consequence is that sociological factors influence both the formation and application of law. As Vago and Barkan explain, sociological factors affect the lawmaking process across legislative, administrative, and judicial domains (Vago & Barkan, 2018).

The formation and amendment of law are influenced by social processes. In the legislative domain, lawmakers, each armed with different analyses of particular issues, "compete" to ensure that the issues they raise are incorporated into statutory law (Liu, 2015)**.** Criminal law is no exception. In principle, criminal law regulates acts that are prohibited and sanctioned by legislation. More holistically, criminal law is understood as a set of legal rules governing acts that are commanded or prohibited and threatened with punishment, specifying when

and under what circumstances those who commit such acts may be punished, as well as how the imposed punishment is executed by the state (Hiariej, 2024). According to this definition, one of the essential elements of criminal law is the concept of a criminal act (*tindak pidana*), namely conduct that is subject to criminal sanctions.

The institution of criminal law essentially carries several functions. These include preventing individuals from committing crimes, punishing offenders with proportionate sanctions, incapacitating offenders to limit their capacity to act within society, and rehabilitating their character (Chiao, 2016). To fulfil these penal functions effectively, criminal law must be responsive to social change. Social change includes, among other things, shifts in societal views on particular matters. Such shifts may be driven by advances in scientific knowledge. Within a legalistic and formal tradition that characterizes criminal law, this responsiveness must be accommodated through legislative reform. If a criminal offense is no longer deemed compatible with societal needs as concluded based on scientific findings, then legislators must adapt the law accordingly.

The ultimate aim of law, in essence, is the realization of justice. From Aristotle's Natural Law perspective, justice is divided into two dimensions: distributive justice, which entails giving each individual their due, and corrective justice, which restores balance when violations or harms occur (Nasution, 2017). Within the framework of health law, justice must be understood as the guarantee of equal access to healthcare services and the protection of patients' rights to obtain the best available treatment. In line with scientific developments, medical research has demonstrated that certain compounds in cannabis, particularly the pharmaceutical formulations of cannabidiol (CBD) and tetrahydrocannabinol (THC), can be used without producing harmful psychoactive effects. Therefore, if the law continues to categorically prohibit the use of such substances despite their proven safety and therapeutic benefits, it fails to realize substantive justice (Yamin, 2024). In this context, maintaining an absolute prohibition may also weaken the doctrinal justification of criminalization, particularly when assessed against the principles of proportionality and necessity in criminal law.

Referring to *Natural Law* theory, the state is expected to balance legal certainty with the values of justice and utility. The limited legalization of non-psychoactive, CBD-based pharmaceutical products can serve as a concrete manifestation of just law (Darodjat & Yuanitasari, 2024). This approach not only preserves state control over Schedule I narcotics but also ensures patients' rights to obtain proper treatment. Law thus functions not merely as an instrument of social control but also as a means of social engineering that is responsive to scientific developments and societal needs.

If a criminal provision is no longer deemed compatible, its regulation loses justification when assessed from the perspective of the functions of criminal law. There is no purpose in preventing society from engaging in conduct that need not be prohibited. There is no purpose in punishing an individual for conduct that is not blameworthy. There is no purpose in restricting the liberty of someone who has not committed harmful acts. Likewise, there is no purpose in attempting to rehabilitate the character of someone who has not engaged in wrongful behavior.

For if a criminal provision is no longer considered compatible, such regulation loses its justification when viewed from the perspective of the functions of criminal law (Pearce, 2022). Clearly, there is no purpose in preventing society from engaging in conduct that need not be prohibited. There is no purpose in punishing an individual for an act that is not blameworthy. There is no purpose in restricting the liberty of someone who has not engaged in harmful behavior. Likewise, there is no purpose in attempting to rehabilitate the character of someone who has not committed a wrongful act.

The decriminalization of cannabis research facilitates the advancement of scientific inquiry without the threat of penal sanctions, a move consistent with the mandate of Article 12 paragraph (2) of the Narcotics Law, which explicitly permits the utilization of Schedule I Narcotics for the purpose of scientific and technological development. Subsequently, the state may proceed with the reclassification of cannabis derivatives that have been clinically proven to possess therapeutic value. Juridically, this authority is accommodated under Article 6 paragraph (3) of the Narcotics Law, which empowers the Minister of Health to reassess and amend narcotics classifications based on medical considerations and scientific progress. This legal trajectory is further reinforced by the Constitutional Court Decision No. 106/PUU-XVIII/2020, which compels the government to conduct comprehensive research regarding the utilization of Schedule I Narcotics for healthcare services. By synthesizing these legal instruments, Indonesia can reconstruct a responsive regulatory framework that balances strict control with the constitutional right to health.

### *Direction of Cannabis Legal Reform in Indonesia*

Indonesia's narcotics law remains repressive. Pursuant to Appendix I of the Narcotics Law, cannabis (*Cannabis sativa*, including resin, hashish, extracts, and derivatives) is classified as a Schedule I Narcotic. This categorization strictly limits the use of cannabis for medical purposes, as its derivative compounds such as cannabidiol (CBD), which have proven health benefits, are still placed under Schedule I with severe legal consequences. Even pharmaceutical products containing CBD are at risk of criminal sanctions, as stipulated in Article 112 paragraph (1) of the Narcotics Law: "Any person who, without rights or unlawfully, possesses, stores, controls, or provides Schedule I Narcotics other than plants shall be punished with imprisonment for a minimum of 4 (four) years and a maximum of 12 (twelve) years."

The regulation of narcotics is principally aimed at preventing abuse. However, the classification of narcotics under statutory law is rigid, thereby necessitating delegated regulations. Currently, such provisions are outlined in the Minister of Health Regulation on the List of Narcotics. In Appendix I, Schedule I Narcotics points 8, 9, and 10 explicitly prohibit: (8) cannabis plants, all species of the cannabis genus and all parts of the plant, including seeds, fruits, straw, and processed products such as cannabis resin and hashish; (9) tetrahydrocannabinol (THC) and all its isomers and stereochemical forms; and (10) delta-9 tetrahydrocannabinol (Δ9-THC) and all its stereochemical forms.

Since criminal sanctions exceeding six months of imprisonment must be regulated by statute under the principle of legality, the classification of cannabis as a Schedule I substance in the Narcotics Law in conjunction with ministerial restrictive lists renders any act of possession or medical use strictly punishable. Consequently, even in urgent medical contexts, cannabis cannot be utilized, as the current legal framework only permits limited use for scientific research with stringent authorizations that are rarely granted in practice (Arimuladi et al., 2021). This systemic exclusion of medical cannabis, despite the mandate of the Constitutional Court Decision No. 106/PUU-XVIII/2020, underscores the urgent need for a reclassification mechanism that distinguishes between raw plant abuse and standardized pharmaceutical application (Prassetyo, 2022).

Although the Narcotics Law has opened the possibility of utilizing cannabis within the context of scientific and technological development, its implementation remains extremely limited. Even after the Constitutional Court Decision No. 106/PUU-XVIII/2020 (Prassetyo, 2022), which affirmed that the state is obliged to provide access for medical research on cannabis, progress has been minimal. Likewise, the enactment of Minister of Health Regulation No. 16 of 2022 concerning the Procedures for the Production and/or Use of Narcotics for the Purpose of Scientific and Technological Development has yet to be effectively implemented. As a result, research on the medical benefits of cannabis which should serve as the scientific foundation for narcotics policy reform in Indonesia continues to face significant barriers, while many other countries have advanced in conducting research and legal, regulated medical utilization of cannabis.

In narcotics law reform, it is crucial to emphasize that protecting the nation's youth should not rely solely on repressive measures, but also on proportionally allowing the application of scientific research findings. Cannabidiol (CBD), one of the active compounds in cannabis, has been extensively studied and is generally described as a non-intoxicating cannabinoid, unlike THC, which produces the typical psychoactive effects of cannabis (Huestis et al., 2019). In fact, in several international jurisdictions, CBD has already been legalized for medical purposes.

Therefore, the classification of CBD as a Schedule I Narcotic under the Narcotics Law in conjunction with the Minister of Health Regulation is no longer relevant. If the ultimate aim of the law is to protect society, particularly the younger generation, then regulation should instead distinguish between substances with harmful psychoactive properties and those with proven medical benefits. CBD should be removed from Schedule I and placed under a more moderate regulatory regime, so that research and medical utilization can proceed without excessive legal impediments (Cásedas et al., 2024).

In contrast to CBD, tetrahydrocannabinol (THC) and cannabinol (CBN) require a more cautious legal approach. THC has been proven to possess psychoactive effects (Heal et al., 2024), though research also shows therapeutic benefits, making it more appropriate to be placed in a moderate category, such as Schedule II, under strict medical supervision. CBN, on the other hand, has been subject to limited research and shows indications of psychoactivity, which justifies its continued placement under stricter control pending further scientific findings. Differentiating the legal classification of each active compound on the basis of scientific evidence will create pathways for the advancement of knowledge and the responsible medical utiliza-

tion of cannabis, thereby enhancing public health outcomes in Indonesia.

**Table 3. Legal Classification of Cannabis-Based Substances Grounded on Scientific Evidence**

| Active Substance / Product | Proposed Legal Classification | Remarks | Legal Basis |
|---|---|---|---|
| **CBD (Cannabidiol)** | Reclassified outside Schedule I for limited medical use under strict regulation | Non-psychoactive and medically recognized, CBD demonstrates therapeutic value that justifies a differentiated legal status from general cannabis prohibition. | -Law No. 35 of 2009 on Narcotics (currently Schedule I).<br>-Ministry of Health Regulation No. 30 of 2023.<br>-Adjustment may be pursued through regulatory reform in line with international developments and constitutional mandates for research. |
| **THC (Δ9-Tetrahydrocannabinol)** | Schedule II / Controlled Medical Use Category | Although psychoactive, THC possesses legitimate therapeutic applications and may be regulated under stricter medical supervision rather than absolute prohibition. | -Law No. 35 of 2009 on Narcotics.<br>-Ministry of Health Regulation No. 30 of 2023.<br>-Reclassification requires legislative or ministerial revision based on controlled medical utilization. |
| **CBN (Cannabinol)** | Pending Further Scientific and Regulatory Review | Due to limited legal and scientific certainty, CBN should remain subject to further assessment before formal reclassification. | -Not specifically regulated under current Indonesian narcotics law.<br>-Future classification should depend on regulatory review and scientific development. |
| **Cannabis Plant, Hashish, Resin, and High-THC Derivatives** | Remain in Schedule I | Raw cannabis substances continue to present significant abuse risks and therefore remain appropriately subject to strict prohibition, except for limited research purposes. | -Law No. 35 of 2009 on Narcotics (Annex I).<br>-Ministry of Health Regulation No. 30 of 2023.<br>-Constitutional Court Decision No. 106/PUU-XVIII/2020 supports research access without removing general prohibition. |

Source: Compiled by authors based on CND Resolution 2020/77, WHO Expert Committee on Drug Dependence (ECDD) 2019 Recommendations, and the Indonesian Narcotics.

The government, through the Ministry of Health, should re-evaluate the classification of CBD and THC within the Narcotics framework, as their placement in Schedule I is no longer relevant. Numerous medical studies have demonstrated that CBD has no psychoactive effects and provides therapeutic benefits (Iffland & Grotenhermen, 2017), while THC, despite its psychoactive properties, also possesses therapeutic potential that may be utilized under limited medical contexts. This consideration is consistent with the 2020 decision of the Commission on Narcotic Drugs (CND), which removed cannabis and cannabis resin from the most dangerous category under the 1961 Single

Convention on Narcotic Drugs. As a state that bases its narcotics regulations on international conventions, Indonesia should remain consistent by incorporating global scientific developments and evidence into its policy framework. Reclassifying CBD outside Schedule I and placing THC in a moderate category under strict supervision would better reflect principles of justice and legal certainty, while at the same time opening avenues for medical use without neglecting public protection. Overall, the findings show that medical cannabis regulation is not solely a legal issue but also involves public health considerations and social values, requiring a more balanced and responsive legal approach in Indonesia.

## CONCLUSION

The 2020 reclassification of cannabis by the Commission on Narcotic Drugs (CND) marked a significant shift in the global legal paradigm, requiring Indonesia to reassess its rigid prohibition framework. This study demonstrates that Indonesia's current narcotics regime, which continues to deny any medical value of cannabis, creates legal disharmony with international developments and potentially hinders the realization of the right to health.

From a socio-humanistic perspective, the persistence of total prohibition not only reflects legal inconsistency but also raises ethical concerns regarding patients' access to essential medical treatment. Law, as an instrument of social engineering, should not merely function as a tool of repression, but should also be able to accommodate scientific progress and human rights considerations, particularly in ensuring equitable access to healthcare services.

Normatively, this study emphasizes the importance of legal harmonization through a differentiated regulatory approach, namely by distinguishing the risky recreational use of cannabis from its controlled medical application. The mandate of the Constitutional Court of the Republic of Indonesia in Decision Number 106/PUU-XVIII/2020 underscores the importance of evidence-based policy that is more responsive to scientific developments, including research on cannabis for public health purposes. This principle reinforces the view that legal certainty must be aligned with broader public health needs.

The medical cannabis referred to in this study is not recreational cannabis in the form of free use, such as leaves, non-medical dried flowers, or hashish, but rather cannabinoid-based medical products used in a limited, measured manner and under clinical supervision. Examples include cannabidiol/CBD-based Epidiolex/Epidyolex, which obtained FDA approval in 2018 and European Union marketing authorization in 2019; Sativex/Nabiximols in the form of an oromucosal spray; and synthetic cannabinoid-based medicines such as Marinol/Dronabinol and Cesamet or Canemes/Nabilone. Products such as Bedrocan also demonstrate that the use of cannabis flos in a medical context must be understood as a standardized pharmaceutical material, not as free recreational consumption.

Therefore, legal harmonization in Indonesia should be directed toward the establishment of a strict and controlled medical cannabis regime, including the reclassification of certain cannabis derivatives, the development of rigorous research protocols, prescription- and medical-indication-based distribution control, and the implementation of internationally recognized clinical standards. Future research should focus on how Indonesia can adjust its legal framework to accommodate medical cannabis as a pharmaceutical product and clinical therapy, while maintaining adequate legal control and safeguarding public health.

## REFERENCES

Abu-Sawwa, R., Scutt, B. & Park, Y. (2020). Emerging use of epidiolex (Cannabidiol) in epilepsy. *Journal of Pediatric Pharmacology and Therapeutics*, *25*(6), 485–499. https://doi.org/10.5863/1551-6776-25.6.485

Arimuladi, S. U., Utama, Y. J. & Asmara, T. (2021). Protection of human rights for narcotics users: A critique of the use of criminal sanctions in efforts to eradicate the spread of narcotics in Indonesia. *Journal of Drug and Alcohol Research*, *10*(7), 1–8. https://www.ashdin.com/articles/protection-of-human-rights-for-narcotics-users-a-critique-of-the-use-of-criminal-sanctions-in-efforts-to-eradicate-the-spread-of-n-82604.html

Bonny-Noach, H. & Ne'eman-Haviv, V. (2025). Addressing the legal and health challenges of licensed medical cannabis users who want to travel abroad. *Israel Journal of Health Policy Research*, *14*(1), 61. https://doi.org/10.1186/s13584-025-00723-2

Bruggink, J. . & Sidharta, A. (1999). *Refleksi Tentang Hukum*. Citra Aditya Bakthi.

Cásedas, G., Yarza-Sancho, M. de & López, V. (2024). Cannabidiol (CBD): A Systematic Review of Clinical and Preclinical Evidence

in the Treatment of Pain. *Pharmaceuticals*, *17*(11), 1438. https://doi.org/10.3390/ph17111438

Chiao, V. (2016). What is the Criminal Law for? *Law and Philosophy*, *35*(2), 137–163. https://doi.org/10.1007/s10982-015-9247-8

Darodjat, R. & Yuanitasari, D. (2024). *Suatu Pengenalan: Hukum Ekonomi*. Darbooks Media.

de Souza, M. R. (2022). Medical cannabis regulation: an overview of models around the world with emphasis on the Brazilian scenario. *Journal of Cannabis Research*, *4*(1), 4. https://doi.org/10.1186/s42238-022-00142-z

Fedtke, J. (2016). The method and culture of comparative law: essays in honour of Marc Van Hoecke. *Comparative Legal History*, *4*(2), 255–259. https://doi.org/10.1080/2049677X.2016.1245039

Fischer, B., Lindner, S. R. & Hall, W. (2022). Cannabis use and public health: time for a comprehensive harm-to-others framework. *The Lancet Public Health*, *7*(10), e808–e809. https://doi.org/10.1016/S2468-2667(22)00205-5

Freeman, T. P., Hindocha, C., Green, S. F. & Bloomfield, M. A. P. (2019). Medicinal use of cannabis based products and cannabinoids. *BMJ*, l1141. https://doi.org/10.1136/bmj.l1141

Grotenhermen, F. (2018). The German medical cannabis law of 2017. *Drugs and Alcohol Today*, *18*(2), 117–122. https://doi.org/10.1108/DAT-03-2018-0012

Gruzieva, T. S., Korchevnyy, A. I., Palii, M. V, Diachenko, K. O. & Korolenko, V. V. (2024). Traceability and control as levers to prevent leakage from legal circulation when legalizing medical cannabis. *Wiadomosci Lekarskie (Warsaw, Poland : 1960)*, *77*(4), 635–639. https://doi.org/10.36740/WLek202404103

Heal, D. J., Gosden, J. & Smith, S. L. (2024). A critical assessment of the abuse, dependence and associated safety risks of naturally occurring and synthetic cannabinoids. *Frontiers in Psychiatry*, *15*(June), 1–24. https://doi.org/10.3389/fpsyt.2024.1322434

Hiariej, E. O. S. (2024). *Prinsip Prinsip Hukum Pidana Edisi Penyesuaian KUHP Nasional*. Raja Grafindo Persada.

Hidayatullah, F., Khalid, H. & Djanggih, H. (2025). Kriminalisasi Pohon Ganja di Indonesia. *Legal Dialogica*, *1*(1), 1–10. https://doi.org/https://jurnal.fh.umi.ac.id/index.php/legal/article/view/1680

Hidding, U., Mainka, T. & Buhmann, C. (2024). Therapeutic use of medical Cannabis in neurological diseases: a clinical update. *Journal of Neural Transmission*, *131*(2), 117–126. https://doi.org/10.1007/s00702-023-02719-1

Huestis, M. A., Solimini, R., Pichini, S., Pacifici, R., Carlier, J. & Busardò, F. P. (2019). Cannabidiol Adverse Effects and Toxicity. In *Current Neuropharmacology* (Vol. 17, Issue 10, pp. 974–989). https://doi.org/http://dx.doi.org/10.2174/1570159X17666190603171901

ICJR. (2021). *Pengaruh Keputusan Commission on Narcotic Drugs terhadap Reformasi Tata Hukum Ganja Medis di Indonesia*. Koalisi Adovkasi Untuk Narkotika.

Iffland, K. & Grotenhermen, F. (2017). *An Update on Safety and Side Effects of Cannabidiol : A Review of Clinical Data and Relevant Animal Studies*. *2*, 139–154. https://doi.org/10.1089/can.2016.0034

Jardim, C. & Delgado-Charro, M. B. (2025). The Regulatory Environment Surrounding Cannabis Medicines in the EU, the USA, and Australia. *Pharmaceutics*, *17*(5), 635. https://doi.org/10.3390/pharmaceutics17050635

Kamil, M. & Sulistyanta, S. (2026). Pengaturan Ganja Medis dalam Hukum Pidana: Perbandingan Internasional dan Implikasinya bagi Indonesia. *Indonesian Journal of Social Sciences and Humanities*, *6*(1), 41–46. https://journal.publication-center.com/index.php/ijssh/article/view/2026

Kartika, A., Wahyuni, W. & Marsella. (2025). Analisis Yuridis Terhadap Status Cannabidiol (CBD) dalam Undang-Undang Nomor 35 Tahun 2009 Untuk Pemanfaatan Kesehatan. *Jurnal ISO: Jurnal Ilmu Sosial, Politik Dan Humaniora*, *5*(2), 15. https://doi.org/10.53697/iso.v5i2.2834

Kristiawan, G. & Trihastuti, N. (2025). *Analisis Yuridis Mengenai Penggunaan Ganja Demi Terpenuhinya Rasa Keadilan Masyarakat Indonesia di Bidang Kesehatan*. *7*(3), 1091–1201. https://doi.org/https://doi.org/10.31933/unesrev.v7i3.2387

Legal, I. L., Khan, D. & Landwehr, O. (2023). *Challenges for the Regulation of Cannabis under European Law I . Background*. *18*(1), 89–99.

Liu, S. (2015). Law's Social Forms: A Powerless Approach to the Sociology of Law. *Law &*

*Social Inquiry*, *40*(01), 1–28. https://doi.org/10.1111/lsi.12105

Lohman, D. & Barrett, D. (2020). Scheduling Medicines as Controlled Substances: Addressing Normative and Democratic Gaps Through Human Rights-Based Analysis. *BMC International Health and Human Rights*, *20*(1), 10. https://doi.org/10.1186/s12914-020-00231-1

Martinelli, A. (2024). *57 countries have legalized the medical use of marijuana*. TheMarijuanaHerald.Com. https://themarijuanaherald.com/2024/06/57-countries-have-legalized-medical-marijuana/

Marzuki, P. M. (2017). *Penelitian Hukum*. Prenada Media.

Marzuki, P. M. (2022). *Teori Hukum*. Kencana.

Mayor, S. (2020). *NEWS WHO proposes rescheduling cannabis to allow medical applications*. *574*(February 2019), 2019. https://doi.org/10.1136/bmj.l574

McGregor, I. S., Cairns, E. A., Abelev, S., Cohen, R., Henderson, M., Couch, D., Arnold, J. C. & Gauld, N. (2020). Access to cannabidiol without a prescription: A cross-country comparison and analysis. *International Journal of Drug Policy*, *85*. https://doi.org/10.1016/j.drugpo.2020.102935

Mills, J. H. (2016). The IHO as actor: The case of cannabis and the single convention on narcotic drugs 1961. *Hygiea Internationalis*, *13*(1), 95–115. https://doi.org/10.3384/hygiea.1403-8668.1613195

Nabil, M. (2023). Kajian Yuridis Terhadap Narkotika Golongan I untuk Kebutuhan Medis dan Pelayanan Kesehatan di Tinjau dari Putusan Mahkamah Konsitusi Nomor 106/PUU-XVIII/2020. *Lex Administratum*, *12*(5), 1–9. https://ejournal.unsrat.ac.id/v3/index.php/administratum/article/view/50772

Nasution, B. J. (2017). Kajian Filosofis tentang Hukum dan Keadilan dari Pemikiran Klasik Sampai Pemikiran Modern. *Al-Ihkam: Jurnal Hukum & Pranata Sosial*, *11*(2), 247. https://doi.org/10.19105/al-ihkam.v11i2.936

Pangaribuan, A. M. A. & Kelly, M. (2019). *Causes and Consequences of The War on Marijuana in Indonesia*. *9*(2). https://doi.org/10.15742/ilrev.v9n2.502

Pearce, A. R. (2022). Evaluating Wrongness Constraints on Criminalisation. *Criminal Law and Philosophy*, *16*(1), 57–76. https://doi.org/10.1007/s11572-020-09550-9

Prassetyo, E. D. (2022). Legalisasi Ganja Medis (Analisis Putusan MK Nomor 106/PUU-XVIII/2020). *Jurnal Analisis Hukum*, *5*(2), 147–162. https://doi.org/10.38043/jah.v5i2.3735

Risano, A. & Ningtias, A. D. (2023). *Criminal Policy Reform of Cannabis use for Medical Purposes in Indonesia Based on the Consideration of the Single Convention on Narcotics 1961*. 828–833.

Triyatna, A. A. G., Dewi, P. E. T. & Dewi, C. I. D. L. (2024). Juridical Analysis of the Regulations on the Use of Cannabis for Medical Purposes in Indonesia (A Comparative Study with Thailand). *Jurnal Hukum Prasada*, *11*(1), 31–36. https://doi.org/10.22225/jhp.11.1.2024.31-36

Umpreecha, C., Bhalang, K., Charnvanich, D. & Luckanagul, J. (2023). Efficacy and safety of topical 0.1% cannabidiol for managing recurrent aphthous ulcers: a randomized controlled trial. In *BMC Complementary Medicine and Therapies* (Vol. 23, Issue 1). https://doi.org/10.1186/s12906-023-03886-0

Walsh, J. & Jelsma, M. (2019). Regulating Drugs: Resolving Conflicts with the UN Drug Control Treaty System. *Journal of Illicit Economies and Development*, *1*(3), 266–271. https://doi.org/10.31389/jied.23

Yamin, A. E. (2024). The Right to Health Under International Law and Its Relevance to the United States. *American Journal of Public Health*, *95*(7), 1156–1161. https://doi.org/10.2105/ AJPH.2004.055111

Yohan, G. A., Sugiartha, I. N. G. & Sudibya, D. G. (2022). Tindak Pidana terhadap Pelaku Penanaman Pohon Ganja Secara Ilegal Berdasarkan Putusan Pengadilan Negeri Sanggau Nomor 111/Pid. Sus/2017/Pn. Sag. *Jurnal Interpretasi Hukum*, *3*(2), 309–314. https://doi.org/10.22225/juinhum.3.2.5072.309-314

Young-Wolff, K. C., Does, M. B., Mian, M. N., Sterling, S. A., Satre, D. D., Campbell, C. I., Silver, L. D., Alexeeff, S. E., Cunningham, S. F., Asyyed, A. & Altschuler, A. (2024). Clinician perspectives on adolescent cannabis-related beliefs and behaviors following recreational cannabis legalization. *Addictive Behaviors*, *156*(limit 3500), 108046. https://doi.org/10.1016/j.addbeh.2024.108046