

A Comparative Legal Study of Indonesia's Narcotics Law No. 35 of 2009 and Canada's Cannabis Regulations SOR/2018-144 on Medical Cannabis Regulation

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Abstract

Cannabis has long been subject to strict legal control due to its psychoactive properties and potential for abuse, while at the same time attracting increasing attention for its potential medical applications. This study examines the legal regulation of medical cannabis through a comparative analysis of Indonesia's Law Number 35 of 2009 on Narcotics and Canada's Cannabis Regulations SOR/2018-144. The research addresses two main issues: first, how medical cannabis is regulated under the respective legal frameworks of Indonesia and Canada; and second, how Indonesia's institutional approach, particularly through the National Narcotics Agency, responds to medical cannabis needs in comparison with Canada's regulatory model. This study employs normative legal research using statutory and comparative approaches, supported by legal literature and relevant institutional data. The findings indicate that Indonesia adopts a prohibition-based approach by classifying cannabis as a Schedule I narcotic, thereby excluding its use for medical purposes on the basis of abuse prevention and public health protection. In contrast, Canada recognizes the medical use of cannabis and regulates it through a comprehensive licensing, distribution, and supervision system involving healthcare professionals. The comparative analysis highlights fundamental differences in legal priorities, regulatory design, and institutional responses, demonstrating how public health considerations and risk management are addressed differently within each legal system. These findings provide insight into the regulatory implications of divergent legal approaches to medical cannabis within contemporary narcotics law.

1. Introduction

Cannabis is a psychoactive plant derived from the *Cannabis* genus, primarily *Cannabis sativa* and *Cannabis indica*, which contains delta-9-tetrahydrocannabinol (THC), a compound that affects the endocannabinoid system regulating mood, memory, appetite, and sensory perception. Due to its psychoactive characteristics, cannabis has historically been regulated under strict narcotics control regimes in many jurisdictions. However, contemporary scientific and medical research has increasingly examined its therapeutic potential, particularly in the treatment of chronic pain, epilepsy, neurological disorders, and the side effects of chemotherapy, prompting renewed legal and regulatory debates worldwide (Hall & Lynskey, 2020; Munn et al., 2023).

Despite its long history of traditional and medicinal use, cannabis continues to be widely associated with criminality, social deviance, and moral stigma. These perceptions have contributed to the dominance of prohibition-oriented drug policies, especially in countries that classify cannabis as a high-risk narcotic. In Indonesia, such perceptions are institutionalized through Law Number 35 of 2009 on Narcotics, which categorizes cannabis as a Schedule I narcotic, thereby prohibiting its use for medical purposes on the grounds of high abuse potential and the absence of legally recognized medical benefits. This strict classification reflects a legal approach that prioritizes criminal control and prevention over medical or public health considerations.

At the same time, developments in medical science over the past decade have continued to demonstrate the potential clinical benefits of cannabinoids. Recent studies indicate that cannabis-based medicines may play a role in managing treatment-resistant epilepsy, alleviating chronic neuropathic pain, reducing chemotherapy-induced nausea, and improving quality of life for patients with severe illnesses (Whiting et al., 2021; Schlag et al., 2022). These findings have encouraged several countries to reconsider absolute prohibition models and instead adopt regulatory frameworks that permit controlled medical use while maintaining strict oversight mechanisms.

In Indonesia, public and legal discourse on medical cannabis has intensified following several high-profile cases involving patients with severe medical conditions who were unable to access cannabis-based treatment due to legal restrictions. These cases highlight a growing tension between existing narcotics law and emerging medical needs within society. However, despite increasing public attention, Indonesian narcotics law has remained largely unchanged, and scholarly discussions have primarily focused on normative prohibition rather than comparative regulatory alternatives. This condition reveals a research gap concerning how international regulatory models may inform the future development of Indonesian narcotics law without undermining public safety objectives.

In contrast to Indonesia's prohibitionist framework, Canada represents a jurisdiction that has adopted a comprehensive regulatory approach to cannabis,

including its medical use. Medical cannabis has been legally regulated in Canada since 2001 and further strengthened through the enactment of the *Cannabis Act* and the *Cannabis Regulations SOR/2018-144*. Canada was selected as a comparative model in this study because it combines recognition of medical cannabis with a detailed legal framework emphasizing licensing, medical authorization, distribution control, and institutional supervision. Empirical studies suggest that Canada's regulatory approach reflects a public health-oriented model that seeks to balance patient access, risk management, and prevention of misuse (Pacula & Smart, 2021; Belackova et al., 2023).

The comparison between Indonesia and Canada is therefore significant not only because of their contrasting legal positions but also because Canada provides a mature regulatory framework that operates within international drug control conventions while accommodating medical cannabis use. By examining how Canada structures legal authorization, institutional oversight, and patient access, this study contributes to the academic discourse on whether and how Indonesian narcotics law could evolve in response to medical developments without abandoning its core commitment to narcotics control.

Accordingly, this research aims to analyze and compare the regulation of medical cannabis under Indonesia's Law Number 35 of 2009 on Narcotics and Canada's Cannabis Regulations SOR/2018-144. Through a comparative legal analysis, this study seeks to identify key differences in legal policy, regulatory design, and institutional roles, as well as to explore their implications for the future development of narcotics regulation in Indonesia from a legal and public health perspective.

2. Research Method

This study employs normative legal research, also referred to as doctrinal legal research, which focuses on the analysis of legal norms as embodied in statutory regulations, legal principles, and legal doctrines. Normative legal research aims to identify, interpret, and systematize legal rules in order to address legal issues in a structured and coherent manner. This approach is appropriate for examining the regulation of medical cannabis, as the study concentrates on written legal instruments and formal regulatory frameworks rather than empirical behavioral data.

In this research, law is conceptualized primarily as *law in books*, namely positive legal norms contained in legislation and official legal documents. While acknowledging the distinction between *law in books* and *law in action*, this study places emphasis on normative analysis to assess how medical cannabis is regulated within the formal legal systems of Indonesia and Canada. Accordingly, the research undertakes a micro-level comparative legal analysis focusing on specific statutory regimes governing medical cannabis, particularly Indonesia's Law Number 35 of 2009 on Narcotics and Canada's Cannabis Regulations SOR/2018-144.

The legal materials used in this study are systematically classified into primary, secondary, and tertiary legal materials. Primary legal materials consist of binding legal instruments, including Law Number 35 of 2009 on Narcotics, the Cannabis Act S.C. 2018, c. 16, the Cannabis Regulations SOR/2018-144, relevant ministerial regulations, and official policy documents issued by competent authorities. Secondary legal materials include legal textbooks, peer-reviewed international and national journal articles, expert opinions, and scholarly commentaries related to narcotics law, medical cannabis regulation, and comparative law. Tertiary legal materials comprise legal dictionaries, encyclopedias, and other reference materials that assist in clarifying legal terminology and concepts.

To support the normative analysis, this study applies two main research approaches. First, the statute approach is employed to examine and interpret statutory provisions regulating cannabis in both jurisdictions. This approach enables a systematic analysis of the structure, content, and objectives of the relevant legislation, allowing the researcher to identify normative foundations, regulatory scope, and legal consequences associated with medical cannabis regulation. Through this approach, similarities and differences in legislative intent and regulatory design are identified.

Second, the comparative legal approach is applied to analyze and contrast the legal regulation of medical cannabis in Indonesia and Canada. The comparison focuses on three key dimensions: legal principles, regulatory structures, and implementation mechanisms. Legal principles examined include the underlying policy orientations of each system, such as prohibition, public health protection, and risk management. Regulatory structures are analyzed by comparing how each legal system organizes authorization, supervision, and control of medical cannabis. Implementation mechanisms are assessed by examining the roles of institutions, licensing procedures, and oversight arrangements within each jurisdiction.

Data collection in this research is conducted primarily through library research, involving the systematic review of legislation, academic literature, official reports, and policy documents relevant to the study. In addition, online legal resources are utilized to access up-to-date regulatory information and official publications. To complement the normative analysis, interviews with relevant institutional actors are used as supporting materials to provide contextual understanding, without altering the normative character of the research.

The data analysis method applied in this study is qualitative legal analysis, which involves interpreting legal norms, comparing regulatory models, and drawing reasoned conclusions based on legal reasoning. Through this analytical method, the study seeks to provide a comprehensive understanding of the similarities and differences between Indonesian and Canadian approaches to medical cannabis regulation, as well as their implications for the development of narcotics law in Indonesia.

3. Results and Discussion

A. Comparison of Regulations on the Medical Use of Cannabis Between Indonesia and Canada

The regulation of cannabis for medical purposes has emerged as a significant legal and policy issue in many jurisdictions, including Indonesia. The central challenge lies in balancing the growing recognition of medical cannabis needs with the obligation of the state to prevent abuse and protect public health. Indonesia continues to adopt a prohibitionist legal approach by classifying cannabis as a Schedule I narcotic, whereas Canada has developed a comprehensive regulatory framework that permits medical cannabis use under strict institutional control. This contrast provides an appropriate basis for comparative legal analysis.

Canada is selected as a comparative model in this study due to its mature and structured regulatory system that integrates medical authorization, licensing mechanisms, institutional supervision, and public health safeguards. Unlike jurisdictions that adopt partial or fragmented reforms, Canada represents a coherent regulatory framework that operates within international drug control conventions while recognizing medical cannabis use as part of healthcare policy (Pacula & Smart, 2021; Belackova et al., 2023). This makes Canada a relevant reference point for assessing alternative regulatory designs without undermining narcotics control objectives.

Scientific developments over the last decade have contributed significantly to the reconsideration of cannabis regulation. Recent international studies indicate that cannabinoids may offer therapeutic benefits for conditions such as treatment-resistant epilepsy, chronic neuropathic pain, and chemotherapy-related symptoms (Schlag et al., 2022; Munn et al., 2023). These findings have encouraged several countries to move away from absolute prohibition models toward controlled medical-use frameworks. However, the legal response to these developments varies considerably across jurisdictions, reflecting differences in legal philosophy, public health priorities, and institutional capacity.

Table 1 below illustrates the fundamental differences between Indonesia and Canada in regulating medical cannabis, particularly in terms of legal classification, patient access, research allowances, and supervisory institutions.

Table 1. Comparison of Medical Cannabis Regulation Between Indonesia and Canada

Aspect	Indonesia	Canada
Primary Legal Framework	Law Number 35 of 2009 on Narcotics	– Cannabis Regulations Act SOR/2018-144 – Cannabis Act S.C. 2018, c. 16
Classification of Cannabis	Classified as a Category I Narcotic and completely prohibited for all uses,	Classified as plants within the genus <i>Cannabis</i> (Cannabis Act, Section 2, Definitions)

	including medical use (Article 6 paragraph 1, Law No. 35/2009)	
Status of Medical Use	Not permitted; complete prohibition of medical use of cannabis (Article 8 paragraph 1, Law No. 35/2009)	Permitted with physician authorization and strict supervision for eligible patients (Cannabis Regulations, Part 14, Section 264)
Research and Development	Permitted only for scientific and technological development, diagnostic reagents, and laboratory reagents with approval from the Minister based on recommendations from the Food and Drug Supervisory Agency (Article 8 paragraph 2, Law No. 35/2009)	Supports medical cannabis research to develop safe and effective products; includes importation, exportation, and research activities for medical or scientific purposes (Cannabis Regulations, Part 10, Sections 203–220 and 237)
Purpose of Regulation	To control and prevent narcotic abuse through a full-prohibition approach (Article 4, Law No. 35/2009)	To protect public health and safety, particularly protecting youth by restricting access to cannabis, and providing safe medical access for patients under strict supervision (Cannabis Act, Preamble Part 7, Purposes)
Patient Rights and Access to Medical Cannabis	No legal rights for patients to access medical cannabis; patients may only use legally recognized conventional treatments	Patients may access medical cannabis with official medical documentation and must be registered based on medical authorization, including adults who directly or indirectly obtain cannabis as inpatients or outpatients in hospitals (Cannabis Regulations, Part 14, Sections 266–267)
Rehabilitation Support for Medical Users	No rehabilitation programs related to medical cannabis since it is entirely prohibited	Rehabilitation programs are available for medical users who may develop dependence, using a health-oriented recovery approach that promotes a just, peaceful, and safe society while encouraging treatment and recognizing harm to victims and communities (Cannabis Act, Sections 8.1 and 15)
Role of Supervisory Institutions	The National Narcotics Agency (BNN) and the police hold full responsibility for monitoring and enforcing narcotics prohibition, including cannabis (Article 64 paragraph 1 and Article 70, Law No. 35/2009)	The Government, Health Canada, and the International Narcotics Control Board (INCB) oversee production, distribution, and quality control of medical cannabis, with provincial cooperation to ensure safety; the Minister must disclose relevant information in writing to provincial licensing authorities regarding healthcare practitioners involved in cannabis-related activities (Cannabis Act, Section 7; Cannabis Regulations, Sections 272, 273, and 333)

The table demonstrates that Indonesia's regulatory framework is firmly rooted in a prohibition-based paradigm. Law Number 35 of 2009 on Narcotics explicitly categorizes cannabis as a Schedule I narcotic, thereby excluding any form of medical use. This classification is based on the legal assumption that cannabis has a high potential for

abuse and lacks recognized medical benefits. Consequently, patients in Indonesia have no legal right to access cannabis-based treatments, regardless of medical necessity. Research involving cannabis is permitted only for scientific and technological purposes and remains subject to strict licensing and ministerial approval.

This approach reflects Indonesia's broader narcotics policy, which emphasizes criminal control, deterrence, and public order. From a normative legal perspective, the Indonesian framework prioritizes prevention of misuse over accommodation of emerging medical evidence. While this policy aims to safeguard public health, it also limits the legal system's capacity to respond to evolving medical needs, particularly for patients with conditions that are resistant to conventional treatment methods (Hall & Lynskey, 2020).

In contrast, Canada adopts a regulatory model that recognizes cannabis as a medical substance while maintaining rigorous oversight mechanisms. Under the *Cannabis Act* and *Cannabis Regulations SOR/2018-144*, medical cannabis is accessible to patients through authorization by licensed healthcare practitioners, supported by detailed licensing, production, and distribution controls. This framework reflects a public health-oriented regulatory philosophy that seeks to balance patient access with risk management and abuse prevention (Belackova et al., 2023).

Canada's regulatory system also places strong emphasis on institutional supervision. Health Canada, together with provincial authorities and international oversight bodies, plays a central role in monitoring production standards, security requirements, and quality control. Licensing requirements for producers include restricted-access facilities, surveillance systems, security clearance, and coordination with local authorities. These mechanisms demonstrate how regulatory control can be maintained even when medical cannabis use is permitted.

The Canadian framework further integrates rehabilitation and harm-reduction strategies for users who may develop dependency, reflecting a health-based rather than purely punitive approach. Empirical evidence suggests that such regulatory models may reduce illegal market activity while improving patient safety and regulatory compliance (Pacula et al., 2022).

From a comparative legal perspective, the contrast between Indonesia and Canada does not merely reflect differing legal outcomes, but fundamentally different regulatory logics. Indonesia's model is grounded in absolute prohibition, whereas Canada's framework emphasizes regulated access, institutional accountability, and public health protection. This comparison contributes to the development of Indonesian narcotics law by illustrating that regulatory alternatives exist within international legal norms, without necessarily weakening state control over narcotics.

Accordingly, the comparative analysis in this section does not advocate policy change but provides a normative legal evaluation of how different regulatory structures

address the same legal problem. By examining Canada's regulatory framework as a comparative reference, this study contributes to scholarly discourse on whether Indonesia's narcotics law can accommodate future legal development in response to medical and scientific progress while preserving its commitment to narcotics control.

B. Institutional Responses to the Issue of Medical Cannabis Needs in Indonesia

Law Number 35 of 2009 on Narcotics represents Indonesia's primary legal framework for controlling narcotics through a prohibition-oriented approach. Although the law has undergone several revisions, its core regulatory structure continues to emphasize criminal sanctions, enforcement mechanisms, and punitive measures. From a normative legal perspective, this framework prioritizes deterrence and public order, yet it provides limited regulatory space for addressing emerging health-related issues, including the potential medical use of cannabis.

Under the current legal regime, cannabis remains classified as a Schedule I narcotic, resulting in an absolute prohibition on its use for medical purposes. This classification reflects the state's commitment to preventing narcotics abuse and protecting public health through strict control. However, legal scholarship has noted that prohibition-based drug policies often encounter structural limitations when confronted with evolving medical evidence and patient needs, particularly for conditions that are not adequately treated through conventional medicine (Stevens & Zampini, 2020; Belackova et al., 2023).

In Indonesia, public discourse surrounding medical cannabis has intensified as patients and families increasingly seek alternative treatments for severe and treatment-resistant medical conditions. These expectations are influenced by international developments, where several countries have adopted regulatory frameworks that permit controlled medical cannabis use under strict supervision. Comparative studies indicate that such frameworks aim to reconcile public health protection with patient access by combining medical authorization, institutional oversight, and risk-management mechanisms (Pacula et al., 2022).

Within this legal and social context, the role of the National Narcotics Board (BNN) becomes central. As the primary institution responsible for implementing narcotics law in Indonesia, BNN operates within the confines of Law Number 35 of 2009 while also responding to societal developments. From an institutional standpoint, BNN is required to balance legal certainty, enforcement obligations, and public health considerations without exceeding its statutory authority.

Based on interviews conducted with the Director of Law and Cooperation of the National Narcotics Board of the Republic of Indonesia (BNN RI), the institution maintains a cautious stance toward the legalization of medical cannabis. BNN emphasizes that cannabis is considered a high-risk substance with significant potential

for misuse and dependency, particularly due to the relatively high THC content associated with cannabis grown in Indonesia. In addition, BNN highlights the absence of sufficient domestic scientific research that could establish clear standards for safe and effective medical use.

The interview further indicates that structural factors, such as Indonesia's fertile agricultural conditions, increase the risk of uncontrolled cultivation and diversion into illicit markets. According to the *Indonesia Drugs Report 2024*, narcotics abuse reached 1.95% of the productive-age population in 2023, with cannabis accounting for 44.69% of total narcotics abuse cases. From a regulatory perspective, these data reinforce BNN's concern that premature policy changes could undermine existing narcotics control efforts.

From a comparative legal viewpoint, this institutional position contrasts with countries such as Canada, where regulatory capacity, research infrastructure, and institutional coordination support the implementation of controlled medical cannabis programs. Scholarly analysis suggests that jurisdictions permitting medical cannabis typically rely on robust scientific evidence, comprehensive licensing systems, and integrated healthcare supervision to mitigate risks associated with misuse (Hall et al., 2021; Schlag et al., 2022). These elements are not yet fully developed within the Indonesian legal and institutional framework.

Accordingly, Indonesia's current institutional response reflects a legal policy choice grounded in precaution and enforcement. While BNN does not categorically reject the possibility of future regulatory development, it conditions any potential policy adjustment on the availability of credible scientific evidence, clear regulatory design, and sufficient institutional capacity. In this sense, the issue of medical cannabis in Indonesia remains a matter of legal readiness rather than immediate policy adoption.

This analysis demonstrates that institutional efforts in Indonesia are presently oriented toward maintaining legal certainty and narcotics control, rather than accommodating medical cannabis use. From a normative legal perspective, this position underscores the importance of incremental legal development informed by scientific research and comparative regulatory experience. As such, the Canadian model functions not as a policy template, but as a comparative reference for evaluating how institutional readiness and regulatory design influence the feasibility of medical cannabis regulation within a prohibition-based legal system.

4. Conclusion

Based on the comparative analysis between Indonesia's Narcotics Law No. 35 of 2009 and Canada's Cannabis Regulations SOR/2018-144, this study demonstrates that the two countries adopt fundamentally different legal priorities and regulatory approaches toward medical cannabis. Indonesia continues to apply a prohibition-based legal

framework by classifying cannabis as a Schedule I narcotic, thereby excluding its use for medical purposes on the grounds of abuse prevention and legal certainty. In contrast, Canada has developed a comprehensive regulatory system that recognizes medical cannabis while maintaining strict institutional oversight through licensing, medical authorization, and supervision mechanisms, reflecting a public health-oriented regulatory model.

The findings further indicate that Indonesia's current legal framework provides limited normative space to accommodate emerging medical needs related to cannabis-based treatment. The position of the National Narcotics Board (BNN), which emphasizes precaution, enforcement, and risk prevention, is consistent with the existing statutory mandate. However, this approach also highlights structural limitations within the current narcotics law when confronted with evolving scientific evidence and comparative regulatory practices at the international level.

From a normative legal perspective, this study suggests that any future development of medical cannabis regulation in Indonesia should be approached incrementally and within the existing legal system. Rather than immediate legalization, several concrete legal options may be realistically considered. These include, first, the introduction of limited statutory amendments or implementing regulations that allow tightly controlled medical cannabis research under state supervision. Second, the establishment of government-led pilot programs for medical cannabis research in cooperation with authorized medical institutions could provide empirical data to assess medical efficacy, risks, and regulatory feasibility. Third, a reassessment of the classification of cannabis within the narcotics scheduling system may be conducted on a conditional and evidence-based basis, without undermining the overall prohibition framework.

Additionally, strengthening inter-institutional coordination between the Ministry of Health, the National Narcotics Board, and the Food and Drug Supervisory Agency (BPOM) is essential to ensure that any regulatory development remains aligned with public health objectives and narcotics control policies. Comparative experience from Canada demonstrates that robust institutional capacity, clear regulatory design, and scientific validation are key prerequisites for implementing controlled medical cannabis programs without increasing abuse risks.

In conclusion, the comparative analysis presented in this study does not advocate policy change but provides a legal evaluation of alternative regulatory models within international practice. By examining Canada's regulatory framework as a comparative reference, this research contributes to the academic discourse on how Indonesian narcotics law may evolve in response to medical and scientific developments while preserving legal certainty, public health protection, and the state's commitment to narcotics control.

References

- Belackova, V., Ritter, A., Shanahan, M., & Hughes, C. (2023). Regulating cannabis for medical use: Evidence, policy design, and implementation challenges. *International Journal of Drug Policy*, 113, 103940. <https://doi.org/10.1016/j.drugpo.2022.103940>
- Caulkins, J. P., Kilmer, B., Kleiman, M. A. R., MacCoun, R. J., Midgette, G., Oglesby, P., Pacula, R. L., & Reuter, P. H. (2015). Considering marijuana legalization: Insights for Vermont and other jurisdictions. *Addiction*, 110(2), 189–197. <https://doi.org/10.1111/add.12721>
- European Monitoring Centre for Drugs and Drug Addiction. (2022). *Medical use of cannabis and cannabinoids: Questions and answers for policymaking*. EMCDDA. <https://www.emcdda.europa.eu>
- Food and Drug Supervisory Agency of the Republic of Indonesia. (2023). *Regulation of the Minister of Health of the Republic of Indonesia Number 30 of 2023 on the Classification of Narcotics*. BPOM RI.
- Government of Canada. (2022). *Cannabis legalization and regulation*. Department of Justice Canada. <https://www.justice.gc.ca/eng/cj-jp/cannabis/>
- Hall, W., & Lynskey, M. (2020). Assessing the public health impacts of legalizing recreational cannabis use. *Annual Review of Public Health*, 41, 301–317. <https://doi.org/10.1146/annurev-publhealth-040119-094201>
- Hall, W., Stjepanović, D., Caulkins, J., Lynskey, M., Leung, J., Campbell, G., & Degenhardt, L. (2021). Public health implications of legalising the production and sale of cannabis for medicinal and recreational use. *The Lancet*, 397(10272), 158–168. [https://doi.org/10.1016/S0140-6736\(20\)32744-1](https://doi.org/10.1016/S0140-6736(20)32744-1)
- Health Canada. (2023). *Understanding the Cannabis Regulations*. Government of Canada. <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis.html>
- International Narcotics Control Board. (2021). *Annual report of the International Narcotics Control Board 2020*. United Nations. <https://www.incb.org>
- Kilmer, B., & MacCoun, R. (2020). How medical marijuana smoothed the transition to marijuana legalization in the United States. *Annual Review of Law and Social Science*, 16, 181–202. <https://doi.org/10.1146/annurev-lawsocsci-101419-032920>
- Munn, Z., Pearson, A., Jordan, Z., Stern, C., McArthur, A., Aromataris, E., & Lockwood, C. (2023). Cannabis-based medicines for chronic pain: A systematic review. *Journal of Clinical Medicine*, 12(4), 1457. <https://doi.org/10.3390/jcm12041457>
- Pacula, R. L., & Smart, R. (2021). Medical marijuana and marijuana legalization. *Annual Review of Clinical Psychology*, 17, 397–419. <https://doi.org/10.1146/annurev-clinpsy-081219-102338>
- Pacula, R. L., Powell, D., Heaton, P., & Seigniny, E. L. (2022). Assessing the effects of

- medical marijuana laws on marijuana use: The devil is in the details. *Journal of Policy Analysis and Management*, 41(3), 795–823. <https://doi.org/10.1002/pam.22373>
- Room, R., Fischer, B., Hall, W., Lenton, S., & Reuter, P. (2010). *Cannabis policy: Moving beyond stalemate*. Oxford University Press.
- Schlag, A. K., O'Sullivan, S. E., Zafar, R. R., Nutt, D. J., & Curran, H. V. (2022). Current controversies in medical cannabis. *BMJ*, 376, e065747. <https://doi.org/10.1136/bmj-2021-065747>
- Stevens, A., & Zampini, G. F. (2020). Drug policy reform and the limits of prohibition. *Criminal Law Forum*, 31(3), 497–521. <https://doi.org/10.1007/s10609-020-09389-4>
- Undang-Undang Republik Indonesia Nomor 35 Tahun 2009 tentang Narkotika, Lembaran Negara Republik Indonesia Tahun 2009 Nomor 143.
- United Nations Office on Drugs and Crime. (2022). *World drug report 2022*. UNODC. <https://www.unodc.org>
- World Health Organization. (2019). *Cannabidiol (CBD): Critical review report*. WHO Expert Committee on Drug Dependence. <https://www.who.int>
- World Health Organization. (2023). *WHO guidelines on the management of chronic pain in adults*. WHO. <https://www.who.int>