

Dr. Damian Cohall, Deputy Dean in the Faculty of Medical Sciences at The University of the West Indies, Cave Hill

Presentation to the Joint Select Committee of Parliament on the Medicinal Cannabis Industry Bill

A. Damian H Cohall

I am the Deputy Dean (Preclinical Sciences) and a Senior Lecturer in Pharmacology in the Faculty of Medical Sciences, The University of the West Indies (UWI), Cave Hill, Campus.

My research expertise is in the areas of ethnopharmacology and pharmacognosy. I have published extensively on use the medicinal plants and their bioconstituents, inclusive of medicinal cannabis. I am the Director of a Doctorate of Philosophy (PhD) programme in Pharmacology and currently supervise five postgraduate students of which three of them are undertaking medicinal cannabis research in the areas of Epilepsy, Hypertension and Type 2 Diabetes. I am a member of the International Cannabinoid Research Society and also a member of the Advisory Editorial Board for the West Indian Medical Journal.

I am also the author of the book entitled 'Medicinal Plants of Barbados'. Some of my most recent publications assess the social climate and construct towards Cannabis sativa and also policy towards the development of a local medicinal cannabis industry. Both studies and related publications were jointly collaborated with Dr. Alana Griffith, sociologist from The University of the West Indies, Cave Hill Campus. The latter research article is entitled "*Conceptualizing a policy framework for the implementation of medical marijuana in the Caribbean territory of Barbados*" and is published in the journal *Drug Science, Law and Policy*. This research was awarded **Best Industry Applied Research** at The University of the West Indies, Cave Hill's Research Week 2018.

I am a recipient of the Faculty of Medical Sciences' Award of Merit for Leadership in Education in 2011 and most recently, I was awarded a Principal's Award for Excellence in Teaching, University and Public Service in 2018.

Through my work on medicinal cannabis, I have advocated unequivocally for patients with qualifying conditions for medicinal cannabis and the public's welfare through various seminars and medical conferences. I have also led the efforts from the Faculty of

Medical Sciences, UWI, Cave Hill towards the support of the government's intended development of a medicinal cannabis Industry.

B. The University's Key Intentions

- i. The University supports that medicinal cannabis should be used or grown for scientific and medical purposes where the intended uses meets all regulatory requirements and approvals, and where appropriate protections for health and safety are in place.
- ii. Upon legalisation of the medicinal cannabis in Barbados, the University will follow national direction, with a focus on the research and development, and take a harm reduction and educational approach to enabling the industry.

C. Key Milestones in Support of the Industry

Historically, the UWI has done significant research in the area of medicinal cannabis. The Faculty of Medical Sciences, The University of West Indies, Cave Hill supports the government intentions to establish a medicinal cannabis industry. The following outlines the key milestones in the faculty towards the advancement of a medicinal cannabis industry in Barbados:

- **May 19, 2016:** The Faculty of Medical Sciences hosted a panel discussion on medicinal cannabis during the UWI's 50th Anniversary Celebrations of Barbados.
- **September 5, 2018:** Article published in Drug Science, Policy and Law entitled "Conceptualising a policy framework for the implementation of a medical marijuana industry in the Caribbean territory of Barbados" by Alana Griffith and Damian Cohall.
- **September 21, 2018:** There was mention of an interest to establish mechanisms within the Faculty of Medical Sciences to facilitate the development of the medicinal cannabis Industry in the Faculty of Medical Sciences' Board meeting. This was also noted at subsequent Academic Board meetings of the Cave Hill Campus. Academic Board is the highest decision making body of each of the university's campuses.
- **November 8, 2018:** Dr. Damian Cohall from the Faculty of Medical Sciences, UWI was invited to comment on a Draft National Policy for the Development of a Medical Cannabis Industry.
- **November 14, 2018:** Research publication which proposed a policy framework for the implementation of the local medicinal cannabis industry won UWI's Best Industry Applied Research Award at the UWI, Cave Hill Research Awards 2018.
- **January & February 2019:** On the invitations from the Ministry of Agriculture and Food Security, The Faculty of Medical Sciences, through Dr. Damian Cohall, had

discussions with the ministry officials on the revised policy paper for the local medicinal cannabis industry prior to submission to Cabinet.

- **February 26, 27 & 28, 2019** – The Faculty of Medical Sciences delivered sensitisation workshops requested by the Barbados Drug Service, Ministry of Health and Wellness on medicinal cannabis to private and public pharmacists. The attendance was over 120 public and private pharmacists across the island.
- **May 21 - 22, 2019** – Ministry of Health & Wellness – UWI hosted a training workshop for doctors and pharmacists on the prescribing of medicinal cannabis.
- **June 29 – 30, 2018** – UWI collaborated with Cannabis Management Resources Inc to host a two-day CME credited medical conference on medicinal cannabis. The first day of the conference had featured addresses from Honourable Indar Weir, Minister of Agriculture and Food Security, Barbados and the Honourable Sabato Caesar, Minister of Agriculture, Industry, Fisheries and Rural Transformation from the St. Vincent and the Grenadines.

D. The Medicinal Cannabis Industry Bill

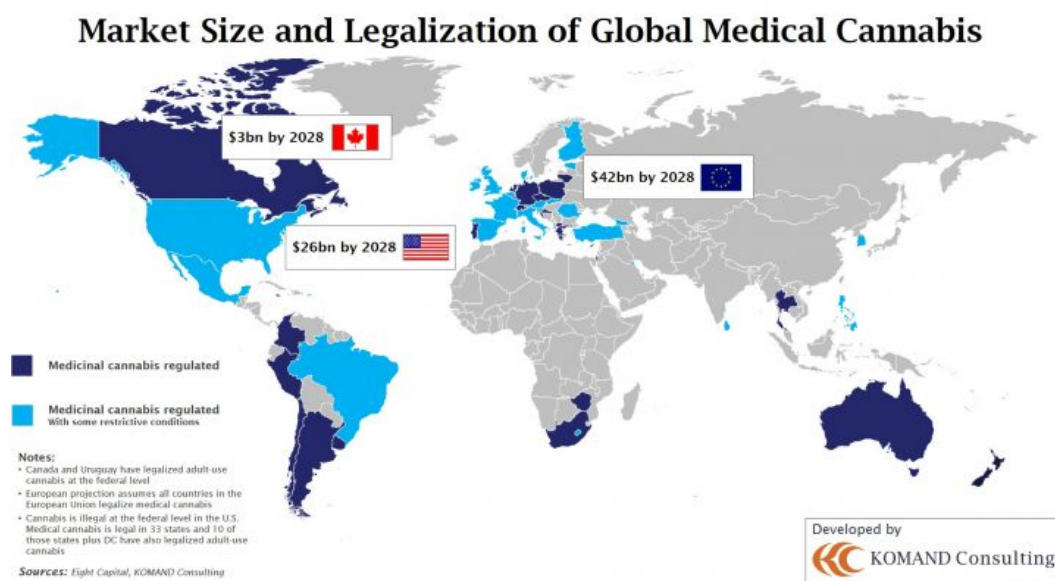


Figure 1. Global map showing the countries with legislative reform to allow medicinal cannabis. Komand Consulting Inc.

It has been noted that the **Medicinal Cannabis Industry Bill** addresses the key elements of establishing a medicinal cannabis industry. These findings have been corroborated by

research done by Griffith & Cohall, 2018¹ and Lynne-Landsman et al., 2013². The critical elements of an industry are:

- i. Establishment of a registry and a means of identifying persons who are legitimately prescribing and prescribed medicinal cannabis – ***Part II The Barbados Medicinal Cannabis Authority, Function of the Authority, Clause 4. (1) g.***
- ii. Guidelines for medical professionals which detail the conditions for which cannabis can be prescribed and dispensed similar to other controlled substances – ***Part II The Barbados Medicinal Cannabis Authority, Function of the Authority, Clause 4. (2) a.***
- iii. Regulations for cultivation, processing, possession, dispensing and sale of medicinal cannabis. These regulations should ensure the integrity of the product, enable traceability and limit diversion - ***Part II The Barbados Medicinal Cannabis Authority, Function of the Authority, Clause 4. (1) b & 4. (2) a.***
- iv. Protection for the patient from prosecution by authorising their access and use - ***Part II The Barbados Medicinal Cannabis Authority Function of the Authority, Clause 4. (1) g & i, PART III Access to Medicinal Cannabis, Use of Medicinal Cannabis, Clause 25, (1-3), Dose Limitation, Clause 26, Keeping Records, Clause 27. (1), Caregivers, Clause 28. (1).***
- v. Davenport and Pardo (2016) drew attention to the need for age restrictions for medical use, regulations on third-party possession, possible restrictions on advertising³ – ***PART III Access to Medicinal Cannabis – Use of Medicinal Cannabis, Dose Limitation, Clause 26, Keeping Records, Clause 27. (1), Caregivers, Clause 28. (1) & Part VII Miscellaneous, Regulations, Clause 42. (2) h.***

E. Intended work of public private partnerships with The University of the West Indies towards the development of medicinal cannabis industry will be facilitated primarily through the Faculty of Medical Sciences.

- i. UWI will work towards public education and awareness to:
 - a) Clearly differentiate policy approaches i.e. legalisation of medicinal cannabis from the decriminalisation of the recreational cannabis with the former being regulated by the best proven evidence to guide patient and public safety.

¹ Griffith, AD, Cohall, DC. Conceptualising a policy framework for the implementation of medical marijuana in the Caribbean territory of Barbados. *Drug Science, Policy and Law* 2018, 4:1-8. 10.1177/2050324518796349

² Lynne-Landsman SD, Livingston MD and Wagenaar AC. Effects of state medical marijuana laws on adolescent marijuana use. *American Journal of Public Health* 2013; 103(8): 1500–1506

³ Davenport S and Pardo B (2016) The Dangerous Drugs Act amendment in Jamaica: Reviewing goals, implementation, and challenges. *International Journal of Drug Policy* 37: 60–69.

- b) Impress upon the public that regulation is important towards safeguarding the public and patients' welfare but public education is equally impactful on harm/risk reduction and safeguarding the youth and the wider society.
 - c) Highlight many entrepreneurship opportunities to the wider society to enable their active participation in the industry.
 - d) Inform policy makers and the general public on the UN Single Convention on Narcotic Drugs 1961⁴ and UN Convention on Psychotropic Drugs 1971⁵ to guide the country towards exploring the medicinal and scientific purposes of cannabis until a reclassification of cannabis and related substance is scheduled.
- ii. UWI is committed to advocating for social accountability of the industry's participants in the public's interest.
 - iii. With training as a clear mandate of the university, UWI extends its mandate as an educational institution to:
 - a) Train doctors, pharmacists and nurses to become knowledgeable and informed practitioners of medicinal cannabis.
 - b) Collaborate where possible with other local tertiary educational institutions, TVET Council and international consortia to train and certify the workforce from seed to sale.
 - c) Integrate material about the endocannabinoid system and cannabinoids in the medical and health science programme for training doctors and other health care professionals.
 - iv. UWI intends to conduct research to leverage the unique selling points of the local industry:
 - a) Development of geographical indications and the generation of other Intellectual Property in the value-added segments of the value chain.
 - b) Conducting clinical research to identify new formulations of cannabinoids to treat patients with existing and new qualifying conditions.
 - c) Create opportunities through research-based postgraduate programmes to train and development a local critical mass of scientists to work in the industry and enhance the R&D and local IP generating opportunities.

⁴ United Nations Single Convention on Narcotic Drugs 1961.

⁵ United Nations Convention on Psychotropic Substances 1971

- v. UWI intends conduct quality assurance services to leverage the safety and efficacy of products for the sustainable growth of the local industry.

F. Suggestions/Recommendations for the Bill & Associated Regulations

- i. Collaboration between the Ministries of Agriculture and Food Security & Health & Wellness
 - a. At the level of the Barbados Medicinal Cannabis Licensing Board with ex officio memberships of the Permanent Secretaries of both ministries will ensure a collaborative stance on the regulation of the industry.
 - b. In operationalising the policies and procedures of the Barbados Medicinal Cannabis Licensing Authority.
 - c. In the regulation of cannabinoid pharmaceuticals and other formulations of medicinal cannabis and their approval to be added to a list validated for specific qualifying conditions.
- ii. Clarity on Recommendations vs. Prescriptions
 - a. United States of America Experience

It has been suggested that physicians in the USA may risk losing their Drug Enforcement Administration (DEA) license to prescribe medicine if they break federal law and hence in states where medicinal cannabis is legal, physicians recommend cannabis and its related medicinal products. Under Controlled Substance Act, the Drug Enforcement Administration issues registration numbers to qualifying doctors who become authorised to prescribe Schedule II, III, IV, and V controlled substances. Cannabis is a Schedule I drug in the USA⁶. Federal courts have found that “recommending” the use of cannabis for medical purposes is permitted, even if it is reasonably foreseeable that a recommendation would be used to obtain medicinal cannabis.
 - b. Canadian Experience

Medical practitioners must have patients under their care and provide their patients with an authorisation to use cannabis for medical purposes. [See Appendix 1 – Medical Cannabis Authorisation Form]⁷. Please note that pharmacological cannabinoids such as Sativex® (delta-9-tetrahydrocannabinol-cannabidiol) and Cesamet® (nabilone) have been approved for specific indications by Health Canada. Extracted medicinal

⁶ Title 21 United States Code (USC) Controlled Substances Act – Subchapter 1 – Control and Enforcement

⁷ Health Canada. Medical Document Authorizing the use of Cannabis for Medical Purposes under the Access to Cannabis for Medical Purposes Regulations [Internet]. Canada: Health Canada; 2019 [rev. 23-03-2017] cited 2019 Sept 21]. Available: <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/licensed-producers/sample-medical-document-marihuana-medical-purposes-regulations.html>

cannabis has not gone through Health Canada’s drug review and approval process, nor does it have a Drug Identification Number (DIN) or Natural Product Number (NPN)⁸.

c. Patient Awareness and Accountability

Systems to encourage patient awareness and accountability on using recommended products should be considered.

- Recommendations could be used for extracted formulations of medicinal products inclusive of balms, oils, tinctures and not for drug regulatory body approved pharmaceuticals.
- It is also key that patients are made aware of benefits and potential risks and how to ameliorate them. Authorised patients could proceed with an informed consent for recommended products by certified medical practitioners.

iii. Training and Certification

The industry is poised to be a leader regionally by its patient centric approach proffered by a highly trained and skilled workforce.

- a. Prior learning/experience certification of legacy/traditional growers and other practitioners to certify prior knowledge and practices through TVET is an opportunity to improve inclusivity among the potential participants in the industry.
- b. Utilising the Continuous Professional Education (CPE) training for healthcare professionals can be leveraged for the certification of the health practitioners to advance patient care in the industry.
- c. Additional training and certification for those stakeholders involved in the industry as outlined prior:
 - Undergraduate and Postgraduate degree programmes delivered by the UWI, Barbados Community College and other international institutions with consistent training standards.
 - Programme revisions to allow the inclusion of the Endocannabinoid System and cannabinoids in health and medical curricula at UWI and the Barbados Community College.

iv. Research & Development

⁸ Canadian Pharmacist Association. Medical cannabis Q & A Internet]. Canada: Canadian Pharmacist Association; 2019 [rev. 23-03-2017] cited 2019 Sept 21]. Available at: https://www.pharmacists.ca/cpha-ca/assets/File/cpha-on-the-issues/MedicalCannabis_FAQ_Final.pdf

One of the key pillars of the proposed medicinal cannabis industry is research and development. Potential niche markets in the global medicinal cannabis value chain may be sought by focusing on improvements or innovations of various aspects of the current value chain. These can be further categorised as follows⁹:

- Propagation of Barbadian medicinal cannabis cultivars;
- Standardisation and amelioration of registered Barbadian cultivars;
- Synthesis of value-added medicinal products through novel techniques such as biosynthesis;
- Using innovation to improve extraction of cannabinoids;
- Development of products with new treatment modalities.

This creates an opportunity for the transformation of a local scientific industry, the potential development of scientific entrepreneurs and Intellectual property through patents and geographical indications. The proposed Barbados Medicinal Cannabis Licensing Authority could establish grants to facilitate the research and development mandate by the local scientific community who have sought Research and Development Licenses.

v. Social Accountability in the Industry

There must be established opportunities enabled by the Barbados Medicinal Cannabis Licensing Authority and participants to promote or facilitate social accountability in the industry. This could be primarily through:

- Public education on benefits and safety issues of medicinal cannabis.
 - Safety issues related to the use of cannabinoids especially the delta-9-tetrahydrocannabinol based preparations must be highlighted in educational sessions to assist in harm/risk reduction and maintain patient and public safety¹⁰:
 - Short term adverse effects – perceptual alterations(hallucinations), prolonged psychosis, neurocognitive and psychomotor impairment, tachycardia, somnolence, increased appetite

⁹ Cohall, D, Naraine, S. The Business of medical cannabis in Business Barbados 2019. Bridgetown, Barbados: Miller Publishing Company Limited.

¹⁰ Weinstein, AM, Cohen, K. Synthetic and Non-synthetic Cannabinoid Drugs and Their Adverse Effects-A Review from Public Health Prospective. Frontiers in Public Health 2018; 6:1-8. doi: 10.3389/fpubh.2018.00162.

- Long-term effects – increased risk of developing psychotic disorders, impaired brain development and functioning, increased risk of cardiovascular disease
 - Drug – Drug Interactions with other drugs in managing comorbidity.
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- Supporting age restrictions (18 years or older) for access to medicinal cannabis and safeguards against potential substance induced conditions. Chronic cannabis use before the age of fifteen (15) years may have more deleterious effects on neurocognitive function than later use of cannabis in the adolescent stage of development¹¹.
 - Recommending levies within the industry to support rehabilitation services, the National Commission of Substance Abuse, other national health priorities can be explored.
 - Ensuring that the Barbados Medicinal Cannabis Licensing Authority policies and practices are fair and inclusive.

¹¹ Fontes, M.A., Bolla, K.I., Cunha, P.J., Almeida, P.P., Jungerman, Laranjeira, R.R., Bressan, R.A. & Lacerda, A.L.T. Cannabis use before age 15 and subsequent executive functioning. *The British Journal of Psychiatry* 2011, 198, 442 – 44