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### **Summary of the Main Points:**

#### **The Idiosyncratic, Unpredictable, Psychotomimetic Effects of Marijuana's Active Principle, THC and Its Implications for Public Policy:**

Research long ago established the idiosyncratic psychotomimetic effects of THC, the active principle in marijuana (Isbell et al., **Psychopharmacologia**, 1967). Owing to this finding and subsequent studies since that time, common sense alone dictates there is no "safe" amount of marijuana with THC, there is no assurance that its use will not trigger a psychotic-type reaction. Using marijuana is tantamount to playing Russian Roulette with one's brain and one's mental health. There are also numerous physical effects that will be noted later. The primary ways to be assured of avoiding being harmed by marijuana are as follows:

- For individuals not to use it and not to be exposed to its use;
- For government and persons in roles of public responsibility, including public health officials, and educators, not to sanction its use and to do all that is possible to discourage its use and educate people of all ages concerning its known harmful effects.
- For those in roles of public responsibility to engage in a public health approach to dealing with marijuana use and the use of other psychoactive substances. Such a public health approach should be along the lines being implemented in Portugal and in some parts of the United States In the US. This would include drug court and other "in lieu of prosecution" programs that provide education, counseling, treatment, and rehabilitation, and other social services aimed at getting users to stop taking drugs and getting them to refocus their lives along more constructive lines that does not include dependency on psychoactive drugs. The bottom line is this: **No amount of regulation can prevent the harmful effects that follow from marijuana use and exposure.** Owing to the idiosyncratic nature of the effects of THC, there can never be a guarantee of total safety.

To believe that regulation can somehow prevent the mental, psychological, and physical harm caused by marijuana use or exposure has no basis in science.

### **Factual Information:**

**The use of marijuana with THC or the use of THC alone, has proven in scientific studies to have idiosyncratic effects, including idiosyncratic psychotomimetic effects. This has been known since initial studies on normal human subjects in 1967. See H. Isbell, C.W.**

**Gorodetzky, D. Jasinski, V. Claussen, F.V. Spulak, & F. Korte. (1967) Effects of (-) $\Delta^9$ -trans-tetrahydrocannabinol in man. *Psychopharmacologia*, 11 (1967), pp. 184-188.**

**(<https://link.springer.com/article/10.1007%2F978-1-4939-9125-6>. Also see the voluminous literature providing evidence of the triggering of psychoses and schizophrenia. (See lists of references at <http://GordonDrugAbusePrevention.com> or use Scholar.Google.com and search on the key words of “marijuana or cannabis and the triggering of psychoses and schizophrenia”).**

Owing in some measure to the increasingly high levels of THC found in the marijuana that is available and used today, there are increasing numbers of individuals presenting in hospital emergency rooms seeking treatment owing to the mental, psychological, and physical effects of marijuana. There are also significant increases in suicidal depression and acts of suicide on the part of users of marijuana. Fatal automobile accidents involving marijuana users is at an all time high in locals where marijuana has been legalized.

Any marijuana in one's system should preclude a person from driving, flying airplanes, operating trains, and from operating machinery, as well as from using delicate electronic equipment. **There is no safe level of THC.** The senses of a marijuana user are immediately modified affecting one's ability to read an eyechart or walk a straight line. One's sense of time and space are disrupted. Common sense alone dictates that no one under the influence of marijuana should engage in activities that involve all of one's concentration, judgement, and mental capabilities. Even organizations of individuals supporting marijuana use have said that individuals should not use marijuana and drive. They have also said that women who are pregnant or lactating should not use marijuana.

## **In Locations Where Marijuana Has Been Legalized, Emergency Rooms in Hospitals Are Being Overwhelmed:**

Persons experiencing psychotic episodes are increasingly turning up in Emergency Rooms, some of them in quite violent states in need of restraint.

Persons experiencing nausea and using marijuana are also increasingly presenting at Emergency Rooms showing all the signs of Cannabis Hyperemesis Syndrome. These individuals may be in such a state of denial that they do not believe that their violent vomiting is a consequence of their use of marijuana, even after seeing the research showing the connection between marijuana use and Cannabis Hyperemesis Syndrome.

Owing to the unpredictable effects of THC, I urge that you consider that it is not possible to regulate the marijuana in a way that can ever effectively prevent the harmful effects of the drug. This is owing in part to biochemical individuality and to the fact that the effects of THC can neither be fully predicted nor controlled. Whatever one's age, one is playing Russian Roulette with one's brain and mental functioning, not to mention other aspects of one's mental and physical health and functioning.

### **Addiction Rates:**

I hope you will bear in mind that according to longitudinal studies, one in six youth who use become addicted to marijuana and one in ten adult users become addicted (W. Hall, 2014, <http://onlinelibrary.wiley.com/doi/10.1111/add.12703/full>).

Marijuana addiction is a terrible addiction to try to overcome. Suicidal depression and acts of suicide have also been noted in the same longitudinal studies. It is important to note that these longitudinal studies were completed before the THC levels in readily accessible marijuana increased to all-time high levels.

### **A Non-Punitive Public Health Approach that Should Replace the Approach Supported in the Bill:**

It is my hope and prayer that you take these findings into consideration as you determine what Canada's policies should be going forward in its efforts to safeguard the health and well-being of the people of Canada and set a positive example for the rest of the world.

I have included a presentation of mine on the topic of the need for a public health approach to addressing the challenges of drug-taking behavior. The approach that I advocate is not that different from the approach currently being taken by Portugal now or the approach that China took to undo the great damage that the use of opium had done to their country decades ago. I sincerely hope that you will lead efforts on the part of your government to consider how the nation might best protect the health and well - being of its most precious human resources, its people and its rising generation, not to mention the health of the progeny of those of child-bearing age. As you must be aware, it has long been known that babies born to marijuana users have lower birth weight and shorter gestation periods. This has been known for decades. Also note that research on the brains of miscarried or aborted fetuses have also alarmingly been shown to have anomalies. (X Wang et al., Discrete opioid gene expression impairment in human fetal brain associated with maternal marijuana use, **The Pharmacogenomics Journal**, 2006, 6, 255–264, <https://www.nature.com/articles/6500375> and MS Spano et al., “Cannabis Exposure Increases Heroin Seeking with Allostatic Changes in Limbic Enkephalin Systems in Adulthood. **Biol Psychiatry** 2007;61:554 –563, [http://www.biologicalpsychiatryjournal.com/article/S0006-3223\(06\)00557-9/abstract](http://www.biologicalpsychiatryjournal.com/article/S0006-3223(06)00557-9/abstract).) (Also see Stuart Reece, M.D. review of the scientific literature entitled “Cannabis Arteriopathy, Teratogenicity, and Genotoxicity” posted at <http://GordonDrugAbusePrevention.com> .)

Of the many harmful effects of marijuana use or exposure on those infants born to parents of users, two that have been unquestioned for decades are low birth weight and shortened gestation period. See the Health Canada Report for confirmation of these facts.

### **Consequences for Society ~ Consequences for Canada:**

To paraphrase, Governor of California, Jerry Brown, no society can become great if it allows or sanctions the use of recreational drugs that in effect dumb down those of all ages who use those drugs, undermines their capacity to make sound judgment and undermines their motivation and

productivity. It should also be recognized that owing to the immense and even incalculable costs to government, to individuals, families, and communities; there is only a down-side to trying to raise tax revenues through the sale of drugs. It would never be possible to recoup the losses and the costs. Ask the administrators of any hospital whose Emergency Rooms are currently be overwhelmed by marijuana users and other drug users. Please note that polydrug use readily occurs where marijuana has been legalized. Black marketers can easily undercut the prices of the “sanctioned dispensaries” and they can also easily sell heroin for less than marijuana. The public officials in places where this is happening may well be in denial concerning this unintended consequence of legalization.

I hope that you and your staffs may take note of the three- and four-week online courses that I am teaching for Auburn University Outreach on the topic of marijuana use and other psychotropic drug use and policies to address the challenges. Those registering for the courses to an extremely wide range of scientific research concerning the harmful effects of marijuana, research which is virtually unknown to those in the marijuana industry and a majority of marijuana users and proponents, and alas, unknown to many policymakers and individuals in roles of public responsibility. Information about the courses can be found at <http://www.auburn.edu/outreach/opce/marijuana.htm> and <http://GordonDrugAbusePrevention.com>

### **Recommendations:**

- 1) **There be a Two Year Moratorium on the Implementation of the Act in its Current Form and to Allow for a Two Year Period of Time for the Act be Rewritten to Focus on a Public Health Approach That Does Not Sanction the Use of Marijuana:** I urge that instead of moving ahead with legalization of marijuana that there be a moratorium for two years while the government takes the time to study and assimilate the results of the Health Canada Report and study and comprehend the significance of the findings of the many decades' worth of research on marijuana and THC and the public policy implications of these findings. I think that if this were done that the Bill would be greatly modified.

I would recommend that the legislation be entirely revamped and that a public health approach similar to that of Portugal be adopted instead. Portugal, as you are aware from recent testimony before you, has a Commission that works with users to help them get off of drugs and that provides counseling, education, treatment and rehabilitation, and social services and job placement services to users. This is an option that is given to users in lieu of a fine or other justice system-based alternatives.

- 2) **The Act be Re-Written to Include Provisions for the Implementation of a Massive Education Campaign:** I recommend that the Act be modified to focus also on educating Canadians to the harmful consequences of marijuana use for those of all ages and stages of development. Statistics Canada and the Ministry of Health should lead this education campaign, the purpose of which would be to dissuade individuals of all ages from experimenting with and using marijuana with THC. -
- 3) **The Act be Re-Written to Prohibit the Production, Distribution, Advertising, and Use of Cannabis and Cannabis Products:** I urge that the Act be radically modified to prohibit the production, distribution, advertising, and use of cannabis and cannabis products.
- 4) **The Act be Re-Written to Include Acknowledge that There is No Way to Use THC “Safely” Without Incurring Idiosyncratic Effects, and Without Numerous Psychological, Mental, and Physical Effects:** I urge that the government public acknowledge that there-is no way to use any quantity of marijuana with THC safely and without idiosyncratic effects and other numerous psychological, mental, and physical effects. Such effects are dependent on biochemical individuality and a wide range of other uncontrollable variables, including, but not limited to the following: age, weight,

metabolism, health; family history; use of other drugs, including alcohol and nicotine; and place and setting.

5) **The Act be Re-Written to Prohibit the Smoking or Vaporizing of Marijuana in All**

**Venues:** I urge that the bill be radically changed to prohibit the smoking or vaporizing of marijuana in public or in homes and in workplaces. There is no way in which individuals whose brains are still developing and individuals who are particularly and immediately susceptible to the ill effects of exposure to second and third hand smoke can be protected from the effects of such smoking and vaporization. Currently Canada is a signatory to The Rights of the Child Treaty. There is no way that the law as written could be enforced to protect the rights of children, born and unborn. There is also no way that the rights of those with developing brains (those in their mid- to late twenties) could be adequately protected. There is also no way for the infirm, former users, the mentally and developmentally disabled could be adequately protected. Note that in places where marijuana is smoked that the smoke permeates the building and the environment and the residue left by such smoking can persist and can be extremely difficult to remove. Aside from health consequences, it also lowers property values.

Thank you for considering the very great peril in which you will be placing your citizens, the rising generation, and generations to come if you proceed to implement this Bill as it presently stands. This has all come about owing to groupthink, magical thinking, social pressure, and denial, not to mention the venality of those who are promoting the use of marijuana for material gain.

**Additional References of Note:**

- 2018-04-24 Nora Volkow, M.D. and Dalai Lama Video on Addictions with Brain Scans. (Brief article: “An Online Video Featuring Dr. Nora Volkow & the Dalai Lama on the Topic of Addictions”: When one gives up one’s will power to drugs, one gives up one’s authentic self and one’s initiative. See the Dalai Lama/ Dr. Nora Volkow video exchange at <https://www.youtube.com/watch?v=1aLDyTgkTvY>. Dr. Volkow shows the Dalai Lama brain scans of users. The effects on the functioning of the brain are discussed).
- 2018-04-27 Paula D. Gordon, Ph.D. Submission to the Food and Drug Administration re Cannabis (Also to be posted <http://GordonDrugAbusePrevention.com>).
- 2018-02-23 Paula Gordon, Ph.D. Letter to Members of the Canadian Parliament. (Also to be posted <http://GordonDrugAbusePrevention.com>).
- 2018-04-15 S. Reece, M.D. - Cannabis Arteriopathy, Genotoxicity & Teratogenicity Fed. Register (Also posted <http://GordonDrugAbusePrevention.com>).
- 2016-10-17 Paula D. Gordon, Ph.D. Presentation for October 14, 2016 (Also posted <http://GordonDrugAbusePrevention.com>).