Bill C-45 places significant responsibility for regulating the production, storage, handling and distribution of all cannabis on the provinces and municipalities. It does not differentiate between hemp, cannabis and marijuana. CHTA is requesting the federal government make two changes:

- Include hemp whole plants and plant parts in the exempted products listed in Schedule 2 of Bill C-45, thereby exempting it from the regulatory requirements outlined in Bill C-45

- Carve out industrial hemp from the definition of *Cannabis* in Schedule II of the Controlled Drugs and Substances Act

INTRODUCTION TO THE CHTA

The Canadian Hemp Trade Alliance ("**CHTA**") was established in 2003 as a national organization to represent Canada's industrial hemp industry. The CHTA promotes Canadian industrial hemp and hemp products globally, disseminates information and coordinates research. It currently has over 360 members, including farmers, processors, manufacturers, researchers, entrepreneurs and marketers.

Hemp is currently grown in Canada for grain and fibre. It is produced under licenses issued by Health Canada pursuant to which fibre, seed and grain can be sold and transformed. The remaining plant parts (other than stalks) cannot currently be harvested or sold under Canadian law. However, these remaining plant parts (and in particular, the leaves and modified leaves surrounding the seed (bracts)) contain non-psychotropic cannabinoids and terpenes which are currently being studied for a number of therapeutic uses.

Canada has been a world leader in hemp production, and is a large exporter of hemp grain products. Exports in 2016 surpassed $145 million from an industry that employs over 1,200 Canadians. With a modernized regulatory regime, the agricultural hemp industry is poised to grow to $1 billion in sales, creating another 2,000 new jobs over the next six years. However, competitors in the US, Europe, Australia, China and other countries could dominate this new and potentially very lucrative market because governments in those countries are amending regulatory regimes to allow for the harvest, sale and processing of non-psychotropic cannabinoids. Doing the same in Canada would bring great financial benefit to Canadian industry, amounting to potential revenues of several hundred million dollars to the industry from a multi-billion dollar cannabidiol (CBD) market.

THE CANADIAN INDUSTRIAL HEMP INDUSTRY

Commercial hemp has been successfully cultivated in Canada since the introduction of the *Industrial Hemp Regulations* in 1998. Hemp is an important and growing part of the Canadian agriculture industry. High margins for producers have attracted many new growers, and licensed acres have grown by over 20% per year for the last five years, reaching a recent high of 108,000 acres. This is impressive growth for a crop introduced to a new generation of Canadian farmers less than 20 years ago.

In the past 19 years, there have been no documented instances of public safety risk or criminal activity associated with hemp cultivation, storage and distribution. It has proven itself to be a safe agricultural crop.

As demonstrated by the impressive growth in hemp production and exports, Canadian farmers have an excellent capacity to adopt new crops and expand production in response to growing demand. Canola

and pulse crops are two excellent examples. A new market opportunity, arising from the use of Canadian industrial hemp as a source of non-psychotrophic cannabinoids, can also be readily captured by Canadian producers.

THE CANNABINOIDS PRESENT IN INDUSTRIAL HEMP

The *Cannabis sativa* plant species is highly complex, with hundreds of chemical constituents, including over 80 cannabinoids, a unique set of compounds secreted in trichomes found primarily on the bracts surrounding the flower or seed. It is generally understood that cannabinoids imitate endocannabinoids (compounds made naturally by the human body) and in this way, have a host of potential therapeutic uses.

The most abundant (and talked-about) cannabinoids in *Cannabis sativa* are tetrahydrocannabinol ("THC") and cannabidiol ("CBD"). One of the main differences between hemp and marijuana is the cannabinoid profiles, or more specifically, the ratios of THC and CBD.

Canadian industrial hemp contains less than 0.3% tetrahydrocannabinol ("THC") and other non-psychotropic cannabinoids, including cannabidiol ("CBD"). These non-psychotropic cannabinoids have a number of therapeutic uses and, when harvested from industrial hemp, exist in the absence of THC and display superior medicinal properties compared to synthetic cannabinoids.

Hemp generally has more CBD than marijuana, and can often reach 6% in the leaves and bracts, as analyzed according to Health Canada guidelines. A field of hemp is estimated to produce over 12 kg CBD per hectare. It is well known that THC is the cannabinoid in *Cannabis* that is responsible for the plant's psychoactive effects. It is also well known that CBD has no psychotropic properties.

CONCLUSION

In conclusion, the CHTA once again thanks the Canadian Government for the opportunity to discuss these issues and to work together to create a regime that reduces regulatory burden on an agricultural crop and that allows for whole plant use to facilitate the harvest, sale and processing of non-psychoactive cannabinoids from industrial hemp.

We recognize that the Government will likely have additional questions and we welcome the opportunity to engage in a lasting and meaningful discussion.

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Appendix

Evidence for the Safety and Clinical Efficacy of Cannabidiol

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Summary

Cannabis sativa contains a wide variety of phytochemical constituents, many of which have not yet been fully characterized. The two most abundant (and well characterized) phytochemicals found in marijuana are delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD). Whereas THC is now firmly established as representing the primary psychoactive component in marijuana, considerable evidence demonstrates that CBD possesses no psychoactive properties and indeed, may counteract the psychoactive effects of THC. Thus, whereas THC has been repeatedly demonstrated, in both clinical and pre-clinical research studies to possess psychoactive effects in the mammalian brain, emerging evidence demonstrates that CBD can block the effects of THC both in terms of central nervous system side effects, and at the pharmacological level. Furthermore, a large and growing body of clinical and pre-clinical research conclusively demonstrates that CBD possesses powerful therapeutic properties across a wide domain of clinical symptoms and disorders.

Cannabidiol Has No Known Psychoactive Properties

Despite the fact that CBD is not scheduled by the *Convention on Psychotropic Substances*, it remains classified as a Schedule II substance in Canada. Nevertheless, there is currently no scientific evidence to demonstrate that CBD possesses any psychoactive properties. In addition, in contrast to the known psychoactive effects of THC there is currently no evidence to suggest that CBD possesses reinforcing or addictive liability. On the contrary, current scientific evidence (both pre-clinical and clinical) suggests that strains of marijuana possessing relatively lower levels of CBD vs. higher levels of THC (e.g. cannabis strains such as “sinsemilla”) possess far greater abuse liability and risks for psychoactive side effects. Such evidence is consistent with the established scientific evidence demonstrating that CBD and THC produce opposite effects within brain regions associated with addiction and other psychiatric disorders such as schizophrenia. Furthermore, these findings are consistent with the established role of CBD as a pharmacological blocker of the central, psychoactive properties of THC.

Cannabidiol’s Therapeutic Properties and Potential

There is now compelling clinical and pre-clinical evidence demonstrating that CBD possesses powerful potential for therapeutic applications in the treatment of numerous disorders. For example, pre-clinical studies have found that CBD blocks many of the neuropsychiatric side-effects associated with THC. Furthermore, compelling clinical evidence has found that CBD acts as a highly effective anti-psychotic medication for the treatment of serious psychiatric conditions such as schizophrenia, with greater tolerability and fewer side-effects, relative to traditional schizophrenia medications. In terms of other neurological disorders, a recent series of studies have found that CBD serves as a highly effective treatment in children and young adults for treatment-resistant epilepsy, showing high tolerability and minimal side-effects. In addition,

compelling clinical and pre-clinical evidence is pointing to a potential therapeutic role for CBD in the treatment of chronic, neurodegenerative brain disorders including Alzheimer's, Parkinson's and Multiple Sclerosis. Notably, virtually all of the extant clinical evidence demonstrates a high tolerability and excellent safety profile for the clinical use of CBD, with efficacy rates comparable or superior to traditional pharmacological treatments.

A wealth of clinical and pre-clinical scientific evidence now points to the therapeutic potential and efficacy of CBD in the treatment of numerous medical conditions. CBD possesses no psychoactive properties, is non-habit forming, and well tolerated in patient populations. Importantly, CBD has been demonstrated to pharmacologically and functionally counteract the negative effects of THC, the actual psychoactive component of marijuana, and to interact with pharmacological and molecular pathways that are distinct from those of THC. Currently, there is no justification for the classification of CBD as a narcotic compound. Indeed, the current controlled status of CBD as a Schedule II compound in Canada continues to impede progress in the scientific and medical research communities. Currently, access to CBD as a clinical or experimental compound is difficult to acquire for Canadian Scientists performing either pre-clinical or clinical medical research. Given the above described scientific evidence pertaining to CBD, de-scheduling of CBD and CBD-containing products would invariably open exciting new opportunities for the development of novel, natural and safe pharmacotherapeutic compounds. Given the urgent need for more effective treatments for mental health and neurological disorders, research into the clinical potential of CBD is of timely importance.