

**ASX Announcement****12 December 2019****HOLISTA FILES PATENT FOR WATER-SOLUBLE TECHNOLOGY TARGETING CANNABIDIOL (CBD) AND OTHER HIGH-VALUE, FAT-SOLUBLE NUTRACEUTICALS****HIGHLIGHTS**

- **FORMULATION MAKES WATER SOLUBLE CANNABIDIOL (CBD) OIL UP TO 40 TIMES BETTER ABSORBED**
- **TASTE MASKING TECHNOLOGY INCREASES ACCEPTANCE IN ORAL PHARMA AND FOOD FORMULATIONS**
- **PROJECT LEADER IS DR ROSCOE MOORE JR – RETIRED UNITED STATES ASSISTANT SURGEON GENERAL – AN ADVOCATE OF EVIDENCED BASED CBD**
- **TECHNOLOGY COULD APPLY TO MOST FAT-SOLUBLE MEDICATIONS AND FOODS, INCLUDING CURCUMIN AND VITAMIN D**
- **COMMERCIALISATION BY LICENSING BEGINS IN NORTH AMERICA IN 2020**

Holista CollTech (ASX: HCT, Holista) today announced that it has filed its 100%-owned global patent for platform technology that will deliver many fat-soluble medications by creating a water-soluble delivery system. This patented process can apply to a whole range of molecules including the **Cannabidiol (CBD) oil** industry.

The commercial benefits for the CBD producers include making their CBD formulation up to **40 times more potent** (allowing them to reduce their dosages significantly) as well as making their product **palatable for the young and the elderly**.

Fat-soluble molecules have poor bioavailability as they don't dissolve well and reach the bloodstream. As such, a higher dosage needs to be ingested. This is both wasteful and costly. The platform technology will particularly benefit the Cannabidiol (CBD) oil industry where the active material is scarce, costly and poorly water-soluble.

In a statement released this week, by our Project Leader and head of Holista's Technical Advisory Panel, Dr Roscoe Moore Jr stated "Working on developing this technology is exciting. Most medicine consumed orally is wasted due to its poor absorption by the body. This is especially true for CBD, which is also expensive. More important, **the integrity of the final molecule is preserved exactly as it is found in nature and hence, there is no apparent need for any lengthy approvals process anywhere in the world.** We only use materials certified as '**Generally Regarded as Safe**' (GRAS) by the FDA<sup>1</sup>."

Dr Moore is the retired Assistant Surgeon General of the United States. He currently sits on several Company boards linked to CBD in the United States and Canada.

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<sup>1</sup> FDA – Food and Drug Administration, USA

CBD Oil has an earthy, musky and lingering bitter taste due to the high concentration of organic compounds that make it very unpalatable. This makes formulating CBD for oral consumption difficult. The **taste masking technology** linked to this patented formulation used GRAS botanicals to allow wider applications in pharmaceutical and food with oral dosing.

“Holista drew from parallel work done on the turmeric molecule which is also very fat soluble” said Dr Swanand Malode, leader the teams in Europe and Asia that worked on this technology for more than five years.

“We note that there is growing consensus in the medical community that CBD can be used to improve patient outcomes for conditions such as seizure, inflammation, pain, psychosis or mental disorders, inflammatory bowel disease, nausea, migraines, depression, anxiety” said Dr Rajen Manicka, CEO of Holista.

Holista is focused on fat-soluble substances such as CBD, curcumin and Vitamin D, targeting initially the food and nutraceutical markets in Australia and North America.

According to a new estimate from cannabis industry analysts the Brightfield Group<sup>2</sup>, the hemp-CBD market alone could hit \$22 billion by 2022. The prospects for Australia are also increasing. According to a 2016 University of Sydney report<sup>3</sup>, *Medicinal Cannabis in Australia: Science, Regulation & Industry*, found that the Australian medicinal cannabis market, if it emulates cannabis regulations in Netherlands and Canada, may produce demand for as much as 8,000 kg of product. Australia approved medical cannabis in 2016 and is working towards liberalising this space further.

CBD, a non-psychoactive cannabinoid found in cannabis, has had a surge in popularity. Unlike Tetrahydrocannabinol (**THC**) the chemical compound that gives cannabis its psychoactive effects, CBD has been shown to help patients with Post Traumatic Stress Disorder (**PTSD**), anxiety, Multiple Sclerosis and epilepsy — without having the harmful effects.

The patent was registered in the USA and filed for a global coverage, as **US Filing No: 16/694,197 (the patent may be viewed on the Holista website)**. Holista has instructed its patenting firm to secure all global strategic markets world-wide.

With the patent filing completed, Holista has commenced negotiations with companies involved in CBD processing in North America and expect these negotiations to complete in 2020, leveraging the expertise and network of Dr Moore Jr.

The commercial model will seek to charge an industry-standard formulation fee for non-exclusive access and then a quarterly licensing fee and royalty based on wholesale pricing of the licensee product.

**ENDS**

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<sup>2</sup> For more information on the Brightfield Group, refer to [www.brightfieldgroup.com](http://www.brightfieldgroup.com)

<sup>3</sup> Details of the study can be found at [mgcpharma.com.au/wp-content/uploads/2016/03/mgc\\_whitepaper\\_final-sml.pdf](http://mgcpharma.com.au/wp-content/uploads/2016/03/mgc_whitepaper_final-sml.pdf)

**For further information, please contact:**

**Corporate Affairs & Business Opportunities**

Dr Rajen Manicka: rajen.m@holistaco.com  
General Enquiries: enquiries@holistaco.com

**Australia**

283 Rokeby Road  
Subiaco WA 6008  
P: +61 8 6141 3500 ; F: +61 8 6141 3599

**Malaysia**

12th Floor, Amcorp Trade Centre, PJ Tower  
No. 18, Persiaran Barat off Jalan Timur  
46000, Petaling Jaya, Malaysia  
P: +603 7965 2828 ; F: +603 7965 2777

**Media and Investor Relations Enquiries**

WeR1 Consultants Pte Ltd  
3 Phillip Street #12-01  
Singapore 048693  
E: holista@wer1.net; P: +65 67374844

**About Holista CollTech Ltd (Holista)**

Holista is a research-driven biotech company, the result of a merger between Holista Biotech Sdn Bhd and CollTech Australia Ltd. Headquartered in Perth and with extensive operations in Malaysia, the company is dedicated to delivering first-class natural ingredients and wellness products globally. Holista is a leader in the research of herbs and ingredients for the making of healthier food.

Listed on the Australian Securities Exchange (**ASX**), Holista researches, develops, manufactures and markets "health-style" products to address the unmet and evolving needs of natural medicine. Holista's suite of ingredients, among other things, includes low-GI baked products, reduced-sodium salts, low-fat fried foods and low calories sugar without compromising taste, odour and mouthfeel. Holista remains the only company to produce sheep (ovine) collagen using patented extraction methods.

For more information, please refer to <http://www.holistaco.com>