28 August 2017

FOLLOW UP Q&A TO ANNOUNCEMENT ON 21 AUGUST 2017 (FOOD-GRADE COLLAGEN)

The Board of Directors of Holista CollTech Limited ("Holista" or the "Group") refers to its announcement dated 21 August 2017, "ASX-Listed Holista Retrofits Western Australia Facility to Produce World's First Halal Food-Grade Sheep Collagen for Global Market". In view of recent queries received from investors and the media, the board wishes to provide the following clarifications and updates:

1. What is collagen?

Collagen is the most abundant protein in your body, accounting for about a third of its protein composition. It is the major building blocks of bones, skin, muscles, tendons and ligaments. Collagen is also found in many other body parts, including blood vessels, corneas and teeth, and can be considered the "glue" that holds them together. In fact, the word comes from the Greek word "kólla" which means glue.

2. What does collagen do in the body?

There are at least 16 types of collagen that basically function as "glue" in the body. The four main types are type I, II, III and IV, and their roles in the human body are as follows:

Type I: accounts for 90% of the human body's collagen. Made of densely packed fibres, it provides structure to skin, bones, tendons, fibrous cartilage, connective tissue and teeth.

Type II: made of more loosely packed fibres and is found in elastic cartilage, which cushions joints.

Type III: supports the structure of muscles, organs and arteries.

Type IV: helps with filtration and is found in layers of the skin.

As humans age, our bodies produce less and lower-quality collagen. As a result, the skin becomes less firm and supple. Cartilage also weakens with age making us more prone to joint injury with increased potential for osteoporosis and osteoarthritis.

HOLISTA COLLTECH

3. So, you can take collagen from another species?

Although it is a protein substance, it has low-allergenic potential and hence, can be transferred across species.

4. How is sheep collagen different from other mammals?

The major sources of mammalian collagen are pigs and cows. These two mammals have many issues including:

- Religious restrictions and barrier for pigs in the Islamic world
- Dietary restriction amongst Hindus, Buddhists and Sikhs
- “Mad Cow” disease and other related diseases

5. What is mad cow disease?

The actual name of the disease is bovine spongiform encephalopathy (“BSE”), a name that refers to the changes seen in brain tissue of affected cows. Abnormal proteins called prions are found in the brain tissue of diseased cattle and appear to be the particle that transmits the infection.

Characteristic changes are seen in the brain of infected cattle. Infection leads to tiny holes in parts of the brain, giving the tissue a sponge-like appearance when viewed with a microscope. These so-called spongy holes cause slow deterioration within the cow's brain and eventually other symptoms develop affecting the whole body. Death follows.

If humans eat diseased tissue from cattle, they may develop the human form of mad cow disease known as variant Creutzfeldt-Jakob disease (“vCJD”).

6. Is there a sheep equivalent of “mad cow” disease?

Yes, the deadly brain condition known as "mad cow disease" could potentially be transmitted to humans by sheep carrying a disease called scrapie.

Scientists have concluded that scrapie – the sheep equivalent of mad cow disease, or BSE, in cows – has the potential to infect humans. This disease does not exist in Australia and the Australian quarantine systems prevent imports of potential disease-carrying products.

7. What is the big deal about "disease-free" and "prion-free"?

Australia has strict quarantine measures and surveillance programs in place to meet international standards for the detection of TSE. Australia has a recognised TSE-free status and is considered a "negligible risk" BSE country (the highest status attainable).

Australia is the only nation with "prion-free" sheep. This is certified by Agricultural authorities the world over. Accordingly, meat from Australia does not experience import barriers when imported into other countries. That is also why Australian sheep and lamb cost a little more than their equivalents from elsewhere.

8. What about chicken as a collagen source?

Avian collagen was quite a popular source of "warm blooded collagen" but that market virtually disappeared with the advent of bird flu.

9. There is a lot of fish-based collagen out there. What is your comment?

Marine collagen being from a cold blood animal is quite removed from humans, evolutionally. The effectiveness is significantly reduced and moreover, there is no capacity to trace origins, other than from countries. Quality standards in Australia provide tracing to the farm gate for every skin used in our process, at all times.

10. What is Holista's competence in producing collagen?

Holista has a strong patent, AU 2005201970 – that treats the sheepskin which allows for easier removal of the wool and hence, easier digestion of the remaining skin for its collagen. We also own many proprietary technologies that allow us to make cosmetic (already being done), food (now being undertaken) and medical grade collagen (now being pursued).

11. How is food-grade collagen different from cosmetic-grade collagen?

Cosmetic collagen is "intact" collagen that takes four weeks to process. Food-grade collagen is hydrolysed (broken down) and processed within a day. This allows for best throughput and mass production for the food-grade collagen market.

12. What about medical-grade collagen?

This is the premium collagen. Collagen has many medical uses and a prion-free collagen that is sourced neither from pigs or cows is a significant differentiation. While cosmetic-grade collagen commands a premium of more than 20 times over food-grade collagen, the wholesale price of medical-grade collagen usually around 250 times greater than food grade collagen. Our next R&D focus and some of our latest joint-ventures are moving us towards the medical-grade collagen market, with our strategic alliances with companies already in the wound-care industry, the organic growth (through collagen scaffolding) industry and the cosmetic injectables industry. Collectively, these are in excess of USD$30 billion and growing at nearly twice the rate of most global industries.

13. Who is Holista's supplier of sheepskins?

Fletcher International Exports is one of Australia's most integrated processors and exporters of lamb and sheep meat products. A private, family-owned company, Fletcher International operates two highly efficient processing facilities in Dubbo, New South Wales, and the other near Albany in Western Australia. These two plants have a combined processing capacity of more than 90,000 sheep and lambs per week, which equates to over 4.5 million head per year.

14. On what basis was Fletcher's chosen as a partner?

We have good long-standing relationship with the company. They also work with us to treat the skins as per our patent. The Company is expected to participate in our R&D program for 2017-18, ensuring export value of Australian products can be significantly increased from the killing floor to the many applications we create.

15. Has Holista received any R&D grants for its efforts on food grade collagen?

In recognition of our commitment to research and development, the Australian Government has contributed to our programs through the retrospective tax concessions provided each year. 2018 will be the first year we conduct R&D programs in concert with tertiary institutions, industry peak bodies and our suppliers, to increase the export capacity and revenues for Australia, in the longer-term.

16. How much is the Chinese market worth to Holista, in dollars?

We have rejected orders for annual supply contracts (from one China-based company) of around 280 tonnes per annum as we could not produce this volume in an efficient manner. At US$42,000 per tonne, this would have amounted to US$11.7 million per year, if we have the capacity to accept such an order.

The Directors recognise the risk of increasing production capacity for a single customer and are looking to use our reduced capacity in 2017, to produce sample batches for more diverse geographic and demographic markets, to mitigate the associated risks.

Our current plant is a mid-scale production plant. We will need to get a full-scale plant to cater for these volumes, hopefully by mid-2019.

17. What are Holista's largest expected markets for food collagen?

The key target demographic will be aging men and women who are more prone to osteoarthritis, expecting mothers and body-building supplements industry. In terms of geography it will be USA, China, Japan and Korea.

18. What are Holista's largest markets for cosmetic collagen?

We sell to global ingredient wholesalers who supply throughout Asia. We cannot determine which cosmetic companies contain Holista's disease-free sheep collagen unless these Wholesalers choose to disclose.

19. What happened to the Ovinex production deal announced in 2015?

We had to test product options and production methods. We have now built the plant to produce Ovinex. We will be commissioning this and starting the supply to the first customer at the end of 2017. Most of our last-quarter 2017 production will be shipped as samples to buyers who are seeking substitutes to the types of collagen they are presently using. It is safe to say that even at a premium, consumers will always prefer collagen from certified prion-free and disease-free sources.

20. How will the retrofitting be funded?

This project is being funded by internal resources of Holista.

21. If China is going to be the biggest market, what is the AU$1,000,000 being invested in Australia and not China?

The key market differentiator is our source of "disease-free Australian sheep." In many consumer surveys, China buyers prefer to consume products from western countries which have stringent controls and enforceable product standards. Holista has a patent which ensures that our method of extracting collagen from sheepskins cannot be replicated by others.

If collagen is produced (even from Australian sheepskins) outside of Australia, it is no longer subject to the Australian Quarantine protection. It cannot therefore claim to be prion-free and free of other diseases. This is a significant market differentiation that cannot be rivalled. Australian sheep herds have been prion-free since federation and this is not the case on any other continent on Earth.

Holista has committed to maintain our plant in Australia, to acquire prion-free sheepskins and to process these all the way through to food-grade, cosmetic-grade and soon medical-grade collagen, without exposure to any diseases. This could command a substantial price premium for our disease-free guarantee, but at this point Holista is using low-contact marketing to simply replace existing suppliers with a superior product.

About Holista CollTech Ltd (HCT)

Holista CollTech Ltd (“Holista”) is a research-driven biotech company and is the result of the merger of Holista Biotech Sdn Bhd and CollTech Australia Ltd. Headquartered in Perth with extensive operations in Malaysia, Holista is dedicated to delivering first-class natural ingredients and wellness products and leads in research on herbs and food ingredients.

Holista, listed on the Australia Securities Exchange, researches, develops, manufactures and markets “health-style” products to address the unmet and growing needs of natural medicine. It is the only company to produce sheep (ovine) collagen using patented extraction methods, and is on track in nanonising and encapsulating liposomes for the ovine collagen. Holista has suite of ingredients that is capable of serving the industry to provide low-GI baked products, low sodium salt, low fat fried foods and low calories sugar without compromise in taste, odour and mouth feel.

For more information on Holista: *www.holistaco.com*

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