

Ashwagandha and Propolis may Hold COVID-19 “Preventative and Therapeutic Value,” say Researchers

By Catherine Durrell, Nutrition Insight



Natural compounds from ashwagandha and propolis could be used as an effective tool against the novel coronavirus, according to a study from DAILAB at the Indian Institute of Technology Delhi, India, and DAILAB at the National Institute of Advanced Industrial Science and Technology (AIST), Japan. The team state that their findings may not only save time and money in the screening for drugs against COVID-19, but may also offer some preventive and therapeutic value for the management of the pandemic. NutritionInsight speaks to industry movers about the potential this avenue could hold.

“While the well-trusted reputation of ashwagandha as an immunity enhancer forms a basis of the recent initiative of the Indian Government in forming an Interdisciplinary Task Force to launch its clinical research studies related to SARS-CoV-2 and the COVID-19 disease, the current research report of this team provides hints on its direct antiviral activities,” says Durai Sundar, Coordinator of DAILAB at IIT Delhi and Head of the Department of Biochemical Engineering and Biotechnology at IIT Delhi.

The researchers examined the main enzyme of SARS-CoV-2 (the virus causing the disease known as COVID-19) for splitting proteins, known as the Main protease or Mpro, which plays a key role in mediating viral replication. As humans do not naturally have this enzyme, compounds targeting Mpro are likely to have low toxicity. The researchers found that Withanone (Wi-N), a natural compound derived from ashwagandha, and Caffeic Acid Phenethyl Ester (CAPE), an active ingredient of New Zealand propolis, have the potential to interact with and block the activity of Mpro.

Propolis propelled to the front-line

This news was received positively by Disproquima, which offers Flavoxale, a combination of propolis extract, manuka honey and manuka essential oil. It is touted for its proven functional properties in terms of being antibacterial, anti-inflammatory and healing wounds.

“Our product improves upper respiratory tract health, since it liquefies the bronchial secretions and it has a balsamic effect. Its strong antibacterial and anti-inflammatory properties are beneficial for upper respiratory tract wellness, but this is not exclusive to COVID-19,” says Begoña Sorriano of Disproquima.

She continues that due to its immunomodulatory effect, Flavoxale provides a different opportunity to enhance the content of food supplements and pharmaceuticals in an innovative way. “Nowadays we see new launches appearing into the market that contain propolis and manuka honey. We believe these two trendy ingredients have lots of potential due to their properties and natural origin.”

Sorriano has also observed an increase in consumer consumption of dietary supplements with immunity claims and well-known immunity-boosting ingredients. She also spoke to NutritionInsight about immunity concerns at Nutraceuticals Europe, held in early March in Spain, shortly before the country was hit by the pandemic.

Thumbs up for ashwagandha

Arjuna Natural, a major ashwagandha manufacturer, has responded positively to this latest study. “Research worldwide is pointing to the binding of the COVID-19 virus protein with Angiotensin-Converting Enzyme-2 (ACE2) receptor in the human body as the major mode of entry. The virus is also thought to block Nicotinic acetylcholine receptors (nAChRs), which are found in the body’s nervous system and are hypothesized to be engaged in the COVID-19 inflammatory syndrome. Ashwagandha is known to inhibit SARS-CoV-2 virus protein by preventing entry into the body, and it is also a nAChRs agonist, meaning it prevents inflammatory storm,” says Dr. Benny Antony, Joint Managing Director at Arjuna.

He continues that the pandemic has created multiple challenges for people around the world. “Apart from the direct impact of the disease which has infected many, the fear of infection, the impact of stress caused by the confinement, loss of jobs and human and economic suffering has had a domino effect on health. This has impacted the demand for key natural ingredients.”

Speaking specifically about the impact on sales of its ashwagandha product, Shoden, Dr. Antony states that the company has seen an uptick in demand. He believes that this is due both to the immunomodulation effect, as well as its positive impacts on restorative sleep.

Calls for prioritized validation

In light of these revelations, the research team argues that the Mpro findings warrant prioritized validation in the laboratory and clinical tests. The study is now under review and is expected to be published in J Biomol Struct Dyn in the near future.

The researchers flag that although the bioactive ingredients are easily available and affordable, it is necessary to be cautious about their content. While CAPE is a major component of propolis,

its amount and stability are critical factors that could be managed by generating its complex with cyclodextrins. Meanwhile, Wi-N varies with the geography, parts and size of the ashwagandha plant.

“The traditional medicine system Ayurveda has been practiced for thousands of years in India. Unlike modern medicine, the mechanism of action of natural drugs has not been resolved so far. IIT Delhi and AIST researchers have been working together for more than a decade and trying to strengthen this avenue by merging the traditional knowledge with the modern technologies,” concludes Sundar.

“Ayurveda, with its focus on holistic cures, had always been aware of adaptogens, even before they were recognized widely,” Dr. Antony previously told NutritionInsight. Ashwagandha itself has also been in the spotlight recently as COVID-19 turns up the pressure on mental health. However, the strict lockdown imposed in India at the start of a month has majorly impacted supply chains.

To keep readers informed of these rapid developments, NutritionInsight is updating its daily news feed for the coronavirus-related information and insights you need to guide your business through this challenging period.