

# Immunomodulating Powerhouse

*Scelta Ceuticals is a new company division focused on the research and development of functional ingredients and ultimately medicines, based around the health potential of mushrooms.*

by Robin Wyers

**T**he immune system is the first line of defence against disease and ingredients that can balance or boost immunity are in demand. Mushrooms have traditionally been associated with health, and particularly for modulating immunity, with these beneficial properties steeped in tradition in Asian regions. The mushroom variety *Ganoderma*, for example, has been used in traditional Asian medicines for thousands of years.

## Beyond Mushrooms

Netherlands-headquartered Scelta Mushrooms has been moving far beyond its mushroom commodity base in recent years, with innovation including their mushroom concentrate flavor product, an ingredient that can function as a natural alternative to monosodium glutamate. The company has now made a significant investment in eyeing the potential of functional foods. Scelta has just announced the creation of Scelta Ceuticals, a new division focused on the research and development of functional ingredients and ultimately medicines, based around the health potential of mushrooms.

In its initial stages, Scelta Ceuticals will be particularly looking at the properties of the *Agaricus Blazei Murill* mushroom, which is high in beta glucan content and is therefore believed help to modulate immunity. The ingredient has been re-

searched heavily since the late 1960s, with various papers showing that it has active ingredients, including beta glucans. Recent animal research into the mushroom's immunomodulating potential has been conducted at Wageningen University in the last ten years. While this mushroom variant has been used in supplements in Asian markets and in the US [e.g. Immune Assist Critical Care Formula, Aloha Medicinal], European regulations are far stricter with regard to health claims. Scelta is therefore first planning to assess the role for the medicinal properties of mushrooms in the feed sector, where it could function as an alternative to antibiotics in animal feed. "The main motivator behind the project is based on the problem that humans are getting immune against antibiotics. This starts at the base, where chicken and other livestock are getting antibiotics as a precautionary measure," says Wim van den Elshout, who is leading the research behind this project. "This problem is acknowledged by the European Union and they are working towards a resolution where antibiotics in livestock has to be decreased. Therefore, we want to introduce this new product as an alternative to antibiotics," he adds.

## Assessing Immunity

Researchers will assess the immunomodulating potential of a dried mushroom ingredient based on *Agaricus Blazei Murill* in young chickens, as various issues threaten the mortality of chickens in their earliest lifestages. The mushroom powders will be mixed with grain powders, with researchers also assessing the required dosage in order to achieve immunomodulating benefits. Several independent veterinarians will assess the bloodwork and mortality of the chickens.

"What we want to do is develop an ingredient with components which support the immune system to a normal balance

that it will be active against pathogens or bacteria that come into that animal every day. An animal with a good functioning immune system will not get sick. But the immune system can be hampered by stress, insufficient minerals and vitamins and all these things which occur in the current diet. What we want to do is come up with is a solution where these 'old' ingredients are back in the diet, so the animals stay much healthier than they are and as a result don't need antibiotics," says van den Elshout.

Should the tests [which begin in April], prove to be successful, the company will aim to take the platform to market and eventually conduct tests on humans. Jan Klerken Jr., who will be heading the new division, is confident that health claims will eventually follow for the ingredients, allowing them to be taken to the food supplement sector. "If we can produce studies that show that our product really works, we can provide a solid base for a health claim on the product after a year and move on from that point," he says.

The next step will be the move into functional foods. When this happens, Scelta Ceuticals will work with companies that are already active in that field, which could include supplements manufacturers.

What the company is not planning to do, at least in the short term, is extract ingredients from the mushroom. The only alteration to the original mushroom will be the drying process. "We have to respect the integrity of the matrix as a complete system. Nature has had a lot of time to fine balance these products from a nutritional perspective into one matrix. Taking out could give one good functionality but you may be missing something else in terms of modulating and balancing effect," van den Elshout concludes. Ingredients offered in a very similar form to what nature intended may well be the future of cutting edge nutraceuticals.

**For more information: Scelta Mushrooms BV**  
[www.sceltamushrooms.com](http://www.sceltamushrooms.com)

