

RESEARCH DIRECTIONS

Mushrooms - Ultimate Super food?

Associate Professor Yip Cho, Associate Professor Gerald Pang, Dr Sundar R Koyyalamudi and Dr Sang-Chul Jeong from the School of Natural Sciences and the Centre for Plant and Food Science (PAFS), are collaborating with the Australian Mushroom Growers Association (AMGA) to explore the health benefits of eating mushrooms. This project is being funded by Horticulture Australia Limited (HAL) using the mushroom levy and voluntary contributions from AMGA and the University of Western Sydney with matched funding from the Australian Government.

'Mushrooms have been a source of food and medicine for millennia. The old Chinese saying that "food be your medicine and medicine be your food" still holds true to this day,' says Associate Professor Pang. 'About 80% of the world's population consumes mushrooms as food and for their healing properties, and the link between diet and disease is clear, underpinning the nutritive value of mushrooms as 'functional food'. Mushrooms contain many different bioactive compounds which may be responsible for its nutritional and therapeutic effects. In order to maximise the nutritional and therapeutic potential of mushrooms, the project will use state-of-the-art technology to identify and determine the functional properties of individual biologically-active compounds in *Agaricus bisporus*, commonly known as white button mushroom.

The multi-disciplinary research team, with extensive experience in biochemistry and immunology will focus on *Agaricus bisporus* mushrooms grown in different regions and conditions throughout Australia with a particular emphasis on vitamin B12, D2, antioxidants and other immunotherapeutic



compounds in the mushrooms. The investigators will also study the cardiovascular and anti-diabetic properties and how people's immune system function may be boosted or modulated when given a diet high in mushrooms.

This project will increase awareness and provide valuable evidence of the human health and disease prevention benefits of mushrooms commonly eaten in Australia, and thus will give consumers in Australia an essential guide to how a diet rich in mushrooms could improve the health and wellbeing of themselves and their families.

Project Title: Nutritional and therapeutic values of *Agaricus bisporus*

Funding has been set at: \$951,500

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