

RESEARCH DIRECTIONS

Identification of anti-inflammatory compounds from mushrooms

Professor Gerald Muench and Dr Ritesh Raju of the School of Medicine are working together with partner investigator Mr Greg Seymour from the Australian Mushroom Growers' Association Ltd. Their research aims to identify anti-inflammatory compounds in white button mushrooms.

'Age is the leading risk factor for many devastating diseases including neurodegenerative diseases such as Alzheimer's disease,' says Professor Muench. 'Increasing evidence suggests chronic inflammation contributes to these age related diseases. Pharmacological treatment includes non-steroidal anti-inflammatory drugs (NSAIDs), however NSAIDs do not possess a broad suppressive anti-inflammatory action and can cause serious side effects such as stomach ulcers. Previously we have tested a range of foods with promising anti-inflammatory properties. In this study we want to identify any anti-inflammatory compounds in white button mushrooms.'

The research will focus on extracting and identifying the anti-inflammatory compounds in white button mushrooms. Mushroom flesh will be blended, filtered and then sequentially extracted using a range of chemicals. The extracts will then be analysed for their anti-inflammatory activity by measuring the concentration required to stop the inflammatory response. Fractions with the lowest value will be further analysed by identifying the chemical responsible for the biological effect.



With the increasing amount of evidence of the role of inflammation to cause a range of diseases, a potent and natural alternative is currently being sought. Identifying an anti-inflammatory compound in mushrooms may lead to better tolerated medication and an increase consumption of white button mushrooms.

Project Title: Identification of anti-inflammatory compounds from white button mushrooms

Funding has been set at: \$12,000

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