

Gynostemma pentaphyllum was recently approved by the Therapeutics Goods Administration for use in listed medicines. Since no official monograph exists for this herb, we undertook phytochemical investigations for the development of quality standards.

Methods: Saponins and flavonoids were isolated by solid phase extraction and preparative HPLC and characterised by mass spectrometry and NMR. Hydrolyses were performed using Simulated Gastric Fluid at 37°C (USP) as well as complete hydrolysis in hydrochloric acid at 100°C.

Results: Gypenosides LVI and XLVI, two major saponins of *G. pentaphyllum*, were confirmed as precursors of damulins A and B and two related gypenosides. Treatment with simulated gastric fluid caused the formation of damulins and thus had similar effect to high temperature treatment. The flavonoid profile provided a characteristic fingerprint for authentication of raw herb and extracts.

Discussion/Conclusion: Precursor saponins are likely hydrolysed in the stomach to form damulins with activity on AMP-activated protein kinase. Hydrolysis in the digestive tract may render redundant heat treatment employed in the manufacture of some proprietary extracts. Quality specifications for pharmaceutical *G. pentaphyllum* should include both saponins and flavonoids.

Turmeric and the role of inflammation in managing depression: a randomised, double-blind, placebo-controlled trial

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Biography:

Laurence Katsaras is a medical herbalist and naturopath with a passion for merging the traditional understanding and philosophy of naturopathy with modern validated research. Laurence currently works as the Technical Support Manager at Health World and has many years of experience in research and education alongside his years in clinical practice. He has a special interest in the treatment of mood and stress-related disorders, and helping people achieve better mental health through holistic treatments. Laurence's presentations are an inspiring blend of technical knowledge and practical clinical application.

Introduction: It is now well-accepted that depression is associated with increased inflammation.

Turmeric is a natural anti-inflammatory herb with demonstrated efficacy in the reduction of inflammatory markers up-regulated in depression. The Health World Ltd Clinical Research Program supports innovative research into the use of effective natural medicines within Australia and New Zealand. The highlighted trial investigated the use of BCM-95[®] turmeric as a novel treatment strategy for depression. BCM-95[®] turmeric is a proprietary whole turmeric extract that enhances bioavailability by 700%, and is exclusive to Health World Ltd in Australia and New Zealand.

Methods: In a recent randomised, double-blind, placebo-controlled study supported by Health World Ltd, 56 individuals with major depressive disorder were treated with BCM-95[®] turmeric (25g turmeric per day) or placebo for eight weeks.

Results: Statistically significant improvements in mood were seen in the treatment group after four and eight weeks.

Discussion/Conclusions: While much is gained from traditional knowledge of herbal medicines, scientific research offers additional contributions including investigating novel mechanisms, as seen in this study. With approximately one third of patients with depression unresponsive to conventional antidepressant therapies, this is a critical area of research. BCM-95[®] turmeric, through its actions in attenuating inflammation, is an effective treatment for the management of major depression.

Pyrrolizidine alkaloids in herbal medicines – re-emergence of an old threat?

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Biography:

Hans Wohlmuth, PhD is a pharmacognosist with over 30 years' experience in herbal medicine. Now the Research & Development Manager for Integria Healthcare, he spent 16 years at Southern Cross University, where he established the university's Medicinal Plant Herbarium and co-founded the Herbal Authentication Service. Hans has published over 50 scientific articles on medicinal plants, natural products and complementary medicine and was a member of the Therapeutic Goods Administration's Advisory Committee on Complementary Medicines from 2010 to 2015. He is an adjunct associate professor at the University of Queensland and serves on the Advisory