



Dr Lyndy McGaw

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Biological activity and toxicity of plant-derived extracts and isolated compounds

Lyndy McGaw studied at the University of Natal in Pietermaritzburg (now University of KwaZulu-Natal) and obtained her PhD in 2001. She subsequently completed postdoctoral fellowships at King's College London and at the University of Pretoria, and worked for a year at the University of Adelaide, Australia, before being appointed as a senior lecturer at the University of Pretoria in 2011. She is currently deputy leader of the Phytomedicine Programme (www.up.ac.za/phyto). She has authored 45 scientific publications and seven book chapters, and has presented research findings at 11 international and 22 national conferences. She has a C2 rating from the NRF, an H-index of 16, and is a member of the editorial boards of South African Journal of Botany and BMC Complementary and Alternative Medicine. Awards she received include the Young Researcher of the Year (non-teaching staff) at the University of Pretoria in 2009 and being one of three finalists in the 2005 Department of Science and Technology Women in Science Awards (category of Best Emerging Young Woman Scientist).

Research

Plants are an important source of potentially novel pharmaceuticals, and many extracts and chemicals therein exhibit interesting bioactivities. A major area of Dr McGaw's research concentrates on the antimycobacterial (antituberculosis) testing of plant extracts and isolated compounds against various species of mycobacteria. To identify selective activity and exclude general toxicity, her research also includes investigation of cytotoxicity and genotoxicity of potentially useful plant extracts and compounds, using various parameters as criteria for assessment. Ethnoveterinary medicine at the Faculty of Veterinary Science is another important area of her research. She is also investigating cell culture techniques to analyse the transport of substances across cellular layers.

Key Publications

McGaw, L.J. & Eloff, J.N. 2010. Methods for evaluating efficacy of ethnoveterinary medicinal plants in *Ethnoveterinary Botanical Medicine: Herbal Medicines for Animal Health*. Katerere, D.P., Luseba, D. (Eds), Taylor & Francis, New York, pp 1-24. ISBN 978-1-4200-4560-4.

McGaw, L.J. & Eloff, J.N. 2008. Ethnoveterinary use of southern African plants and scientific evaluation of their medicinal properties. *Journal of Ethnopharmacology* 119, 559-574.

McGaw, L.J., Lall, N., Hlokwé, T.M., Michel, A.L., Meyer, J.J.M. & Eloff, J.N. 2008. Purified compounds and extracts from *Euclea* species with antimycobacterial activity against *Mycobacterium bovis* and fast-growing mycobacteria. *Biological and Pharmaceutical Bulletin* 31, 1 429-1 433.

