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Phytochemical studies of selected South African medicinal plants

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Traditional medicine is a cultural practice with a long history in South Africa and involves the use of approximately 3000 plants, out of a national biodiversity represented by about 30,000 higher plant species. A number of these medicinal plants have been investigated in our lab for their phytochemical composition and this paper will describe some of the contributions which we have made in this regard during the last few years. Selected plant species, which included *Sutherlandia (Lessertia) frutescens*, *Galenia africana*, *Cissampelos capensis* and *Gethyllis multifolia* among others were subjected to extraction using a variety of organic solvents followed by chromatographic fractionation of the extracts obtained. Isolated compounds were examined for their chemical structural features with the aid of nuclear magnetic resonance and mass spectroscopy, leading to the identification of compounds belonging to the following classes: Alkaloids, flavonoids and, triterpenoid and flavonoid-glycosides, some of which were of novel character. Some of the crude extracts and purified compounds were also studied for cytotoxicity using the brine shrimp lethality bioassay and for antimicrobial activity against gram-negative and gram positive bacteria as well as fungal species.

Biography

Wilfred T Mabusela has completed his PhD at the University of Cape Town, South Africa and this was followed by two years of Postdoctoral studies at the same institution and extended his Doctoral work on structural studies of plant polysaccharides. He subsequently took up a Lecturer position at the University of the Western Cape where he is currently an Associate Professor. He has published more than 30 papers in reputable journals and has been a Visiting Scientist at institutions in Europe and North America.

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