A Natural Preservative Extracted from Honeybush (*Cyclopia spp.*)

A method of preventing or treating a microbial infection or contamination.
BRIEF DESCRIPTION
Extracts from honeybush (Cyclopia spp.) are known for their anti-oxidant, anti-mutagenic, anti-carcinogenic and phytoestrogenic activities. This invention shows that it also has anti-fungal and antibacterial activities.

VALUE PROPOSITION/BENEFITS
The invention provides a method of preventing or treating a microbial infection or contamination by inhibiting the growth of specific organisms.

Honeybush extracts strongly induced biomass production in the filamentous fungi, suggesting that it could be used as a growth stimulant, perhaps to enhance growth of Aspergillus niger during the production of industrially important compounds.

UNIQUE CHARACTERISTICS
Honeybush tea extracts have a bacteriostatic effect on the bacterial species Escherichia coli, Propionibacterium acnes, Pseudomonas aeruginosa and Staphylococcus aureus, while a fungicidal effect was shown against growth of Candida albicans, which is the causative agent of common yeast infections in humans.

Additionally, the ability of Botrytis cinerea, a pathogenic plant fungus, to cause necrosis in white grape berries was inhibited by 55% in the presence of the honeybush extract.

TARGET MARKET
• Cosmetic and food industries that require more “natural” preservatives;
• Pharmaceutical companies looking for “natural” antimicrobial agents to be incorporated into ointments, lotions, soaps, etc.
• Activity against Streptococcus mutants also suggests an application in oral hygiene.

TECHNICAL DESCRIPTION
Water or organic solvent-based extracts in the range of 10 mg/ml to 50 mg/ml of Cyclopia subternata and Cyclopia genistoides (and possibly also other Cyclopia sp.) leaves can be used alone or in combination with extracts from Aspalathus linearis (redbush) to inhibit the growth of selected micro-organisms.

Sensitive organisms include Escherichia coli; Salmonella enterica; Vibrio spp.; Staphylococcus aureus; Pseudomonas aeruginosa; Propionibacterium acnes; Enterococcus faecalis; Streptococcus mutans; Listeria monocytogenes and Candida albicans.

Extracts used for the evaluation were prepared by the ARC (C. genistoides) or provided by Raps GmbH (A. linearis and C. subternata).

This invention shows that honeybush also has antifungal and antibacterial activities.