Inhibition of substrate binding to ovine adrenal microsomal p450 enzymes by Rooibos (*Aspalathus Linearis*) and Honeybush (*Cyclopia Intermedia*) extracts

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Rooibos (*Aspalathus linearis*) and Honeybush tea (*Cyclopia intermedia*), indigenous to South Africa, have been claimed to be useful in the treatment of a variety of disorders in the endocrine system which are probably precipitated by dysregulations of the stress response. In humans the glucocorticoid, cortisol, plays a central role in the stress response and stress management system. This hormone is the final product of the steroidogenic pathway, situated in the mammalian adrenal cortex, and is synthesised by a series of cytochrome P450-dependent hydroxylations using cholesterol as the originating substrate. To determine possible effects on cortisol biosynthesis, the inhibitory activity of water, methanol and chloroform extracts of unfermented ("green") Rooibos and Honeybush tea on Progesterone binding to ovine adrenal microsomal cytochrome P450-dependent enzymes was determined by substrate induced difference spectroscopy. Data will be presented to show that different extracts affected substrate binding to different degrees. The possible physiological implcations of these findings will be discussed.