

## **New studies provide scientific evidence for the anti-inflammatory value of emu oil**

### **Project Leader**

Professor Tony Ferrantia, Head of the Department of Immunopathology, Women's and Children's Hospital Adelaide and his research team are conducting a project to establish whether or not emu oil has anti-inflammatory activity. They hope to identify biomarkers which are indicative of this activity and attempt to devise an approach to improve the efficacy of emu oil

### **Emu oil tests on human blood cells**

Current scientific evidence on anti-inflammatory properties of oil is poorly based because of lack of standardisation (collection, rendering, filtration) and inability to predict oil quality. Oils currently being examined showed a variation in linoleic acid content from 2-16%. Twelve different preparations of emu oil from around Australia have been tested to determine their direct effect on human peripheral blood lymphocyte function *in vitro*. Results are encouraging with T cell proliferation (characteristic of inflammation) reduced by one oil while another oil reduced levels of a hormone known to promote arthritis.

### **Emu oil test with animals**

*In vivo* studies of the effects on inflammatory reactions in mice have shown promising results. One of the emu oil preparations has been extensively studied for its efficacy in a delayed type hypersensitivity reaction and carrageen-induced inflammation in mice. This oil significantly reduced both types of inflammation. Other emu oils are being tested in these models of inflammation and preliminary results have shown that some of these are also effective in reducing inflammation although to varying degrees.

### **New Promise**

Work is in progress to try to identify the basis for differences between the emu oil batches as well as the identification of the active fraction(s)/component(s) in emu oil. These results yield new promise in the realisation of the value of emu oil application and its establishment as an anti-inflammatory agent. The research is being funded by a consortium which includes EIDC, SAEICC, SAEFA, NSWFEFA, QldEFA, TEFA, WAEFA and RIRDC. Further results will be available in October 2000.