

# Traditional Chinese Medicines as Immunosuppressive Agents

V Ramgolam,\**BSc, MSc*, S G Ang,\*\**BSc (Hon), PhD*, Y H Lai,\*\**BSc (Hon), PhD*, C S Loh,\*\**BSc (Hon), MSc, PhD*,  
H K Yap,\*\*\*\**M Med (Paed), MD, FRCPC*

## Abstract

**Introduction:** Traditional Chinese Medicines (TCM) have been used for centuries in China to treat various immune-mediated disorders. **Methods:** This review focuses on the clinical and experimental studies that have been performed with TCM as immunosuppressive agents for the treatment of systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), atopic eczema and solid organ transplantation. **Results:** The “thunder god” vine, *Tripterygium wilfordii* Hook F (TWHf), has been extensively used in China to treat SLE and RA. TWHf not only inhibited mitogen-stimulated lymphoproliferation, but its active derivatives have also been shown to inhibit production of proinflammatory cytokines by monocytes and lymphocytes, as well as prostaglandin E2 production via the cyclooxygenase, COX-2, pathway, a potential mechanism of action in patients with RA. Demethylzelastral (TZ-93), a triterpenoid isolated from the root cortex of TWHf, the plant alkaloid berbamine, and the hydrophobic extract of a Chinese herbal decoction, CMX-13, were all shown to be active in prolonging allograft survival in experimental animal models of heart, skin and single lung transplants, respectively. There are few well-designed randomised placebo-controlled clinical trials demonstrating the efficacy of TCM in various diseases. Zemaphyte, a decoction of 10 herbs, has been shown to be efficacious in the treatment of atopic dermatitis in both children and adults in two randomised double-blind placebo-controlled trials. **Conclusion:** There is both laboratory and clinical evidence that the derivatives of many of these herbs may have significant beneficial immunosuppressive effects, however, concerns of toxicity must also be addressed, as exact dosing of the active derivatives is difficult to achieve with the current prescriptions of TCM.

*Ann Acad Med Singapore* 2000; 29:11-6

**Key words:** Atopic eczema, Rheumatoid arthritis, Systemic lupus erythematosus, Transplantation, *Tripterygium wilfordii*

---

\* Graduate student

\*\*\*\* Professor

Department of Paediatrics

\*\* Associate Professor

Department of Chemistry

\*\*\* Associate Professor

School of Biological Science

National University of Singapore

Address for Reprints: Dr Hui-Kim Yap, Department of Paediatrics, National University Hospital, 5 Lower Kent Ridge Road, Singapore 119074.