Advance Access Publication 27 April 2005

eCAM 2005;2(2)237–238
doi:10.1093/ecam/neh083

Meeting Report

Maintenance of an Efficient and Equilibrated Immune System Through the Novel Use of Natural Health Products: Synopsis of a Symposium

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The Instigator and the Vision

The philanthropic Lucie et André Chagnon Foundation was created in October 2000 with the aim of improving quality of life by centering on the prevention of poverty and disease. In order to have a significant and novel impact, the Foundation concentrated its efforts on the margins of the modern medicine mainstream and identified the immune system and natural health products as promising perspectives to explore. It thus convened a group of 20–30 experts in immunology, natural health products (NHPs) and related fields for a day-and-a-half symposium held at the Hôtel XIXe Siècle, Montreal, Quebec, Canada, on September 23 and 24, 2004 to discuss the validity of these approaches and the most promising avenues to encourage in the future.

The Topics of Discussion

During the day-and-a-half symposium, the group of 20–30 experts discussed the appropriateness of targeting the immune system to prevent chronic diseases, assessed the experimental tools and models available to researchers, and evaluated the most promising NHPs to act in prevention. In conformity with the NHP definition of the Natural Health Product Directorate of Health Canada, the following products were considered for their immunomodulatory potential: probiotics, products of animal origin (e.g. milk proteins, bovine colostrum and thymic extracts), vitamins and minerals, isolates (e.g. fatty acids) and herbal products (e.g. *Echinacea* spp., *P. ginseng*, green tea and others).

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Consensus and Future Research Directions

Participants were in agreement on the following points: (i) the immune system is immensely complex but its dysfunction has been clearly implicated in the aetiology of various chronic diseases; (ii) the evidence base supporting the immunomodulatory effects of NHPs is of variable quality and undermined by the lack of clinical trial success related to poor study protocols and weak quality control of source materials; (iii) standardization of test methods and of source materials would be crucial to identify and distinguish effective from ineffective immune modulating NHPs; (iv) certain NHPs such as probiotics, micronutrients and plants show great promise in the prevention of chronic diseases related to immune dysfunction; and (v) research in NHPs is largely under funded.

Points identified as requiring further attention were as follows. (i) How should NHPs be promoted for the prevention of chronic diseases and to what target population should such a strategy be promoted? Partial answers provided were (a) to develop research networks including scientists from various fields (e.g. research 'pillars' of the Canadian Institutes of Health Research; basic, clinical, population health and health system research); and (b) to target children and the elderly in whom immune function is developing or compromised. (ii) What biomarkers should be measured to determine immune function equilibrium? Partial answers provided were (a) to use a constellation of biomarkers, including natural killer cells and cytokines; and (b) to explore novel blood-borne markers such as microparticles.

List of Participants

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