香港浸會大學
HONG KONG BAPTIST UNIVERSITY

School of 中醫藥學院
Chinese Medicine

Autoimmunity to Cartilage Predicting and Regulating Rheumatoid Arthritis

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Facilitator	: **Dr. Zhang Ge**

Abstract

Extensive genome wide association studies have recently shed some light on the causes of chronic autoimmune diseases and have confirmed a central role of the adaptive immune system. Moreover, better diagnostics using disease-associated autoantibodies have been developed, and treatment has improved through the development of biologicals with precise molecular targets.

We have used rheumatoid arthritis (RA) as a prototype for chronic autoimmune disease to propose that the pathogenesis of autoimmune diseases could be divided into three discrete stages. Stage 1: yet unknown environmental challenges seem to activate innate immunity thereby providing an adjuvant signal for the induction of adaptive immune responses that lead to the production of autoantibodies and determine the subsequent disease development. Stage 2: a joint-specific inflammatory reaction occurs. This inflammatory reaction might be clinically diagnosed as the earliest signs of the disease. Stage 3: inflammation is converted to a chronic process leading to tissue destruction and remodeling.

In this lecture I will discuss mainly the stage 2 of rheumatoid arthritis. This is the stage, which in the future we would like to treat, for preventing and curing RA. This requires fundamental knowledge and I will discuss the use of animal models and translational approaches to develop better diagnostics and development of vaccination against RA.

**** All are welcome ****