FRANCE - SINGAPORE
SCIENCE AND INNOVATION LECTURES SERIES

Jointly organised by the Embassy of France in Singapore, the Collège de France and the National Research Foundation, this lecture series is part of the activities of the newly established joint Committee for Science and Innovation France-Singapore.

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Thursday
16 January 2020
12pm-1pm

From inherited diseases of the immune system to genes (patho)physiology and gene therapy

Professor Alain Fischer
Chair of Experimental Medicine, Collège de France

Venue:
Duke-NUS Medical School
8 College Road
Amphitheatre, Level 2
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Registration is free

The immune system is made of myriads of components that play key roles in the control of infection autoimmune diseases, allergy and cancer. The discovery over the last 30 years of more than 400 inherited diseases of the immune system has contributed to decipher key mechanisms of immune responses. This will be illustrated by the study of inherited autoimmune diseases by which at least seven checkpoints controlling reactivity of T and B-lymphocytes to self have been identified.

In some cases, somatic (besides germ-line) mutations have been found causal broadening the potential spectrum of genetic contribution to autoimmune diseases in conjunction with environmental factors.

These advances also led to develop better strategy of targeted intervention. Among them over the last 20 years, gene therapy has been implemented as a strategy to fix the most severe forms of inherited immunodeficiencies. The method is based on gene addition using virus carriers that bring the therapeutic gene into bone marrow cells. The cells, once corrected ex vivo, can give rise to normal lymphocytes in vivo. This has now led to safe and efficacious usage for 3 diseases, while further extension is being considered to treat more genetic diseases of the hematopoietic system, i.e. the building of blood and the immune system.

Attend the talk by pioneering scientist and eminent physician Professor Alain Fischer to learn more. Registration is free via the stated link.

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