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**THEME : 3 A Immune system**  
**Série S/L/ES**

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**Embryo survival gene may fight range of diseases**

A gene that keeps embryos alive appears to control the immune system and determine how it fights chronic diseases like hepatitis and HIV, and autoimmune diseases (...), scientists said on Monday.

(...)

5 Lead author Marc Pellegrini at the Walter and Eliza Hall Institute of Medical Research in Australia said the gene appears to act like a switch, flipping the immune system on and off.

"If the gene is on, it dampens<sup>1</sup> ... the immune response. And if you switch it off, it greatly enhances immune responses," Pellegrini said in a telephone interview.

"It is probably one of the few genes and pathways that is very targetable and could lead to a drug very quickly."(...)

10 In a paper published in Nature Immunology, Pellegrini and his team described how mice embryos died when the gene was removed.

Next, they removed the gene from adult mice and noticed how their immune systems were boosted for a short period of time. But it quickly went into an overdrive and started attacking the rodents' own healthy cells, skin and organs.

15 "The mice survived for six weeks quite well. Then they started developing this very hyperactive immune responses and if you leave it for too long, it starts reacting against the body itself," Pellegrini said.

Pellegrini and his colleagues hope that scientists can study the gene further and use it as a drug target to fight a large spectrum of diseases.

20 "It's like an accelerator. In infectious diseases, you want to slam on the brakes on this gene, and for autoimmune diseases, you want to push the accelerator to make it work much harder to stop the whole immune response," said Pellegrini.

By Tan Ee Lyn, Sciencedaily  
2012/11/26

**Sum up this article and explain the main ideas using your scientific knowledge**

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<sup>1</sup> To dampen : to diminish