Controlled release formulations for the induction and proliferation of regulatory T cells

Published date: Aug. 28, 2016

Technology description

Background
The absence of regulatory T cells (Treg) is a hallmark for a wide variety of disorders such as autoimmunity, dermatitis, periodontitis and even transplant rejection. A potential treatment option for these disorders is to increase local Treg numbers. Enhancing local numbers of Treg through in situ Treg expansion or induction could be a potential treatment option for these disorders.
Technology
Investigators at the University of Pittsburgh have developed a synthetic formulation that provides controlled release of several cytokines and drugs that are known to induce Tregs. The Tregs induced with this method express the same cell markers as natural Tregs and are able to suppress nave T cell proliferation. In fact, this controlled release system induced FoxP3 Tregs in human cells in vitro.

Application area

Treat diseases and conditions where Tregs are depleted
Autoimmunity
Dermatitis
Periodontitis
Transplant rejection

Advantages

Current methods of expanding Tregs are flawed as they are not Treg-specific and have many side effects

Institution

University of Pittsburgh

Inventors

Siddharth Jhunjhunwala
Angus Thomson
Steven Little
Giorgio Raimondi

联系我们

叶先生

电 话：021-65679356
手 机：13414935137
邮 箱：yeyingsheng@zf-ym.com