



673-A536

Vaccination vector inducing CD4 and CD8 responses

Invention

For immunotherapy to be effective against cancer and infectious diseases, presentation on both MHCI and MHCII is required: presentation on MHCI activates CTLs to kill tumour/infected cells whereas presentation on MHCII is required to activate T helper cells which provide the appropriate environment for CTLs to carry out their cytotoxic function.

Researchers at the University of Geneva have developed a new vaccination vector for peptide vaccination or adoptive immunotherapy with ex-vivo loaded dendritic cells that allows simultaneous multi-epitopic presentation of CD4 and CD8 epitopes, inducing a potent immune response involving both CTLs and Th.

PTD

AG1-
EP1(CD4)AG1-
EP2(CD4)AG1-
EP1(CD8)AG1-
EP2(CD8)AG2-
EP1(CD4)AG2-
EP1(CD8)

Applications

- Vaccination vector for cancer immunotherapy
- Other possible applications in infectious diseases

Advantages

- Antigen presented on both MHCI and MHCII
- T-cell responses for multiple epitopes of a given antigen
- Potential for direct injection into patients without requiring DC loading

Status

- Induction of antigen-specific CD4 and CD8 response in mice through peptide vaccination and through ex-vivo loading of dendritic cells.
- Priority patent application filed (11 March 2011).



Université de Genève
24, Rue Général-Dufour
1211 Geneva 4
Switzerland

Contact:

Raluca Flükiger, Ph.D.
Phone: +41(22)379 0353
E-mail: raluca.flukiger@unige.ch



UNIVERSITÉ
DE GENÈVE



Hôpitaux Universitaires de Genève

