

Peptide for cancer control linked to IL13R α 2 overexpression

CSIC has developed a peptide capable of inhibiting the signaling of IL-13 mediated by IL13R α 2. This peptide alone or within a nanoparticle or virus-like particles can be used in a pharmaceutical composition for the treatment of pathologies in which IL13R α 2 is overexpressed. This composition would be useful in the treatment and control of metastasis of colon cancer and other tumors (i.e glioblastoma), as well as in other pathologies such as asthma, atopic dermatitis or fibrosis.

Industrial partners are being sought to develop and commercialized the products through a patent licence agreement.

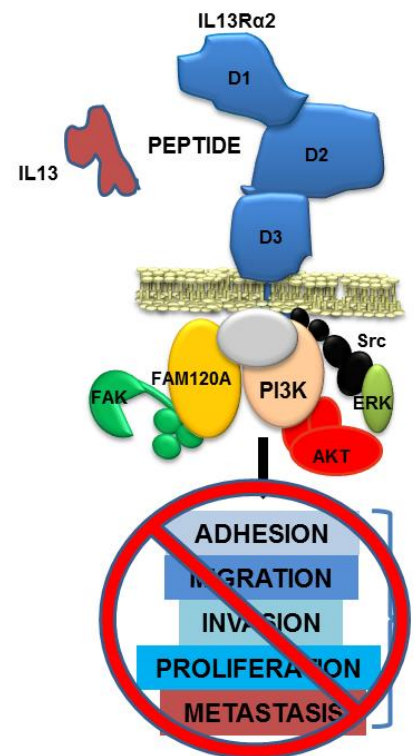
An offer for Patent Licensing

Control of cancer

Recent studies have identified a pro-metastatic role for human interleukin 13 (IL-13) in colorectal cancer mediated through the interleukin 13 receptor α 2 (IL13R α 2). The binding of IL-13 to IL13R α 2 triggers different cellular pathways to promote migration, invasion and survival of the metastatic cells. In addition, IL13R α 2 is overexpressed in a variety of human tumor types such as glioblastoma, renal cell carcinoma, pancreatic, melanoma, head and neck, mesothelioma and ovarian, where it has been proposed as biomarker and potential therapeutic target.

There is a need for improved strategies for treating tumors and other diseases where IL13R α 2 is expressed, like glioblastoma and metastatic colorectal cancer.

The authors have found a peptide that is capable of inhibiting IL13/IL13R α 2 signaling. They have also developed a fusion protein with the peptide and at least a heterologous polypeptide. Both can be introduced in a nanoparticle or virus-like particle to be included in a pharmaceutical composition to be used in cancer and metastasis control when IL13R α 2 is overexpressed. Besides this composition can be applied to other pathologies related with IL13R α 2 such as asthma, atopic dermatitis or fibrosis.



Main innovations and advantages

- A new strategy for the treatment of cancer is presented related to IL13 / IL13R α 2 and the derived metastases.
- Peptides and derivative pharmaceutical compositions can be applied to other pathologies of high incidence.

Patent Status

Priority patent application filed

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