Epidermal Growth Factor-Receptor Related Protein (ERRP), A Newly Isolated cDNA

(VA Reference No. 99-013)

Novel inhibitor used for diagnosis, prognosis, and therapy for epithelial cancers, particularly pancreatic cancer

Technology

The Department of Veterans Affairs has discovered that a novel inhibitor of epidermal growth factor related protein (EGFr) is an important biological discovery with potential wide-reaching implications for the therapy of a number of diseases, particularly pancreatic cancer.

Description

Tyrosine kinases and the signaling pathways in which they are involved play key roles in a variety of normal cells, including the growth of epithelial cells, angiogenesis, the proliferation of connective tissue cells, and the regeneration of tissue during wound healing. Imbalances in the proteins involved in signal transduction have been shown to result in a variety of chronic pathological conditions, including cancer and diabetes, as well as dermatological and immunological disorders.

The VA invention relates to the EGFr, certain polynucleotides (genes or gene components) encoding these proteins, methods for using the proteins, and the methods employed for the detection of the nucleotides and certain monoclonal antibodies directed toward a particular protein isolated in this research. At the heart of the invention is the discovery and characterization of a complementary DNA (cDNA) molecule encoding a protein that binds to EGFr, and of the protein so encoded, EGF receptor related protein (ERRr).

Competitive Advantage

Inhibition of the activation of tyrosine kinase through the EGFr is therefore likely to inhibit tumor growth, in particular of tumors over-expressing the EGF family of receptors.

This invention:

- Represents a potentially useful diagnostic, therapeutic, or prognostic marker.
- Could be used as a tool to allow researchers to study the functional properties of ERRP.

Status

The Department of Veterans Affairs is looking for a partner for further development and commercialization of this technology through a license, and the VA inventors are available to collaborate with interested companies through a Cooperative Research and Development Agreement (CRADA).

Technology

Complementary DNA molecule for diagnosis and/or prognosis of epithelial cancers

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Key Features

- Inhibitor of epidermal growth factor receptor related protein could result in tumor inhibition
- Multiple applications including cancer diagnosis, cancer therapy, cancer prognosis, and as a research tool

Stage of Development

Reduced to practice with successful demonstration *in vitro*

Keywords

Therapeutic
- Cancer diagnosis
- Cancer therapy
- Cancer prognosis
- Epithelial cancer
- Epidermal growth factor
- Receptor related protein

Patent Status

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