

Patents available for licensing and collaborations

Ignacio Casal Alvarez

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.

[More information](#)

Carmen Gil Ayuso

Piperidine derivatives for the control of Parkinson's and Alzheimer's

CSIC has synthesized a series of piperidine derivatives that are capable of inhibiting the activity of the enzyme phosphodiesterase-8 (PDE8). This inhibitory activity makes them useful for the treatment of neurodegenerative diseases in which this enzyme is overexpressed. The compounds developed are, therefore, a new therapeutic alternative for Alzheimer's disease, and Parkinson, among others. Industrial partners from pharmaceutical industry are being sought to develop and commercialized the compounds through a patent licence agreement.

[More information](#)

Alicia Prieto Orzanco

Use of immobilized enzymes in the synthesis of biodiesel

CSIC has developed a process for the enzymatic synthesis of alkyl esters of long chain fatty acids in the presence of an alcohol and an enzymatic preparation with a sterol esterase/lipase covalently immobilized on magnetic particles functionalized on its surface. The process increases the yield of the synthesis of alkyl esters, and allows recovery of the catalyst. The synthesized compounds can be used as biofuel. Industrial partners are being sought to use the technology through a patent licence agreement.

[More information](#)

Ángel Tomás Martínez Ferrer

Enzymatic production of 2,5-furandicarboxylic acid from 5-methoxymethylfurfural

CSIC, University of Zaragoza and Technische Universität Dresden have developed an enzymatic composition and its use as an enzymatic cascade for the production of 2,5-furandicarboxylic acid (FDCA) from 5-methoxymethylfurfural (MMF). This cascade is self-sustained with the only consumption of atmospheric oxygen and the MMF itself. The method can be applied to the conversion of MMF into FDCA step in the bioplastic producing industry, switching from the current inorganic catalysts employed to the use of enzymes for the FDCA production. Industrial partners are being sought to develop and commercialize the enzymatic composition through a patent licence agreement.

[More information](#)

Ana Martínez Gil

Purine derivatives for the treatment of neurodegenerative diseases

CSIC has developed a new protein, the vector encodes it, the plants that express it and method for protecting plants from viral infections by these instruments. Specifically, it has been seen its effect on virus belonging to the genus Tobamovirus. This is an alternative for the biological control of pests and plant diseases. Enterprises are sought to apply this technology under a patent licence.

[More information](#)

José Luis García López

Biotechnological production of 11 α hydroxylated steroids using recombinant bacteria.

CSIC has developed a procedure for the biotechnological production of 11 α hydroxylated steroids by generating and subsequent use of recombinant bacteria. These recombinant bacteria allow to perform microbial biotransformation processes that result in 11 α -hydroxylated steroid compounds from raw materials such as phytosterols and intermediate products efficiently and economically. These compounds have numerous applications in pharmacology. Companies are sought for implementing and commercializing the new technology under patent license agreement..

[More information](#)

Ana Martinez Gil

Phenothiazine Derivatives for the Treatment of autism and syndrome fragile X

CSIC has synthesized group of phenothiazine derivative compounds having activity in the interaction of Ric8 and NCS-1 proteins which are involved in the synaptogenesis process. Therefore, these compounds have application in diseases of the central nervous system that have abnormalities in synapses such as autism and Fragile X. Pharmaceutical companies interested in a patent licence are sought for.

[More information](#)

Ana Martinez Gil

Benzothiazole Derivatives as CK-1 Inhibitors for the Treatment of Amyotrophic Lateral Sclerosis

CSIC has synthesized a family of benzothiazoles which acts as casein kinase 1 (CK-1) inhibitors. Therefore, these compounds are useful for the treatment of diseases related to circadian rhythm and neurodegenerative, inflammatory, autoimmune, neurological and psychiatric diseases where CK-1 is relevant. Furthermore, these compounds induce cell regeneration. Pharmaceutical companies interested in a patent licence are sought for.

[More information](#)