



Diagnostics.

New components for cephalosporin allergy diagnosis.

A research group from the Andalusian Public Health System (SSPA) and University of Málaga, belonging to the Institute of Biomedical Investigation in Málaga (IBIMA), has developed pyralozone type metabolites for its use in beta-lactam antibiotic allergies, concretely cephalosporins, also useful for penicillin

Oficina de
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Description

Cephalosporins are a type of beta-lactam antibiotics derived from cephalosporin acid. After penicillin, cephalosporin is the most extensively used antibacterial agent for treatment and prevention of infectious diseases, but also one of the major reasons of adverse immunological reactions.

Nevertheless, unlike what happens with penicillin, for which the responsible structures for allergy have been identified, cephalosporine's metabolites still have not been totally characterized. These responsible structures present antigenic character, and therefore provoke immunological answers. So, this lack of information handicaps the development of diagnostic tools that allow to evaluate the existence of an allergic reaction to this group of antibiotics and neither present a suitable sensibility.

In order to provide a suitable diagnosis tool and allow to evaluate in a correct way the existence of an allergic reaction to this group of antibiotics, **a series of pyralozone structure compounds have been developed, derived from alpha – aminocephalosporins, allowing the detection of IgE antibodies generated in the allergic reactions to aminocephalosporins and/or aminopenicillins, raising the sensibility opposite to the synthetic determinants developed up to the moment.**

The immunological recognition of the developed compounds has been evaluated through competitive inhibition studies in radioallergosorption tests (RAST), fluorescence allergy-deactivation test (FAST), latex-allergy-adsorption test (LAST). Multiple chemiluminescence-allergy-adsorption (MAST) test by immunosorption linked to enzymes (ELISA) and immunoassay were performed in microarray support with fluorescent detection, using blood serum of allergic patients.



Advantages

- The most important advantage is the remarkable **increase of sensibility in the diagnosis** of hypersensitivity to IgE antibodies against aminocephalosporin and /or penicillin with regard to available methods nowadays.
- **Well identified structures and easy to synthesize.**



Industrial Property

This technology is protected by nacional and international patent application (PCT) with possibility national phase entry.



Aims

The research group is looking for partnership and/or license agreement.



Classification

Area: Diagnostics.

Pathology: Allergy.



http://www.ibima.eu/grupo_investigacion/enfermedades-alergicas-farmacos-alergenos/



<https://www.zinkinn.es/compuesto-para-diagnosticar-alergias-aminocefalosporinas>