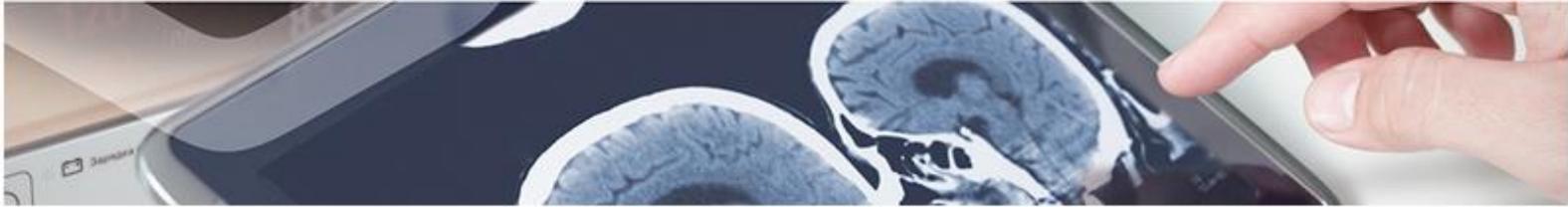


Diagnostics.

Useful composition in detection of allergy to clavulanic acid.

A research group from the Institute of Biomedical Investigation in Málaga (IBIMA) has developed a new method that allows the immediate evaluation of allergic reaction to clavulanic acid with a suitable sensibility.



Description

The most frequent reason of allergy to medicines is due to beta-lactam antibiotics (BL), resulting allergic an average 10% of the general population. This has enormous implications since the physicians face the decision to choose an alternative antibiotic treatment, which, though it is not their first choice, is more expensive and has more side effects.

At present, the development of new antibiotics is not a priority for the pharmacy industry and bacterial resistances rates are in continuous increase. Therefore, BL allergy has turned into a global health problem.

However, less than 20% of adults and 10% of children considered allergic to BL are indeed allergic. Due to this fact it is **very important a correct diagnosis for the safety of the patient and sustainability of the sanitary system.**

The complex chemical reactivity of clavulanic acid (CLV) has impeded the identification of its antigenic determinant. After its conjugation to proteins, the resultant chemical structure is not stable, what has involved that very little information is known about its immunogenicity. It is assumed that developing an allergic response to CLV requires a nucleophile attack to CLV's beta-lactam carbonyl by the protein, which leads to conjugate proteins. Nevertheless, the instability of the resultant structure after the conjugation drives to complex routes of degradation giving place to multiple possible determinants, which avoids the identification of the molecules that shape the antigenic determinant.

To solve the need that appears, different synthetic approaches of potential antigenic determinants of CLV have been made, corresponding to different fragmentations of the drug after its union to proteins, for its immunological evaluation.



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



<https://www.zinkinn.es/diagnostico-de-alergia-al-acido-clavulanico>



Advantages

- **These compounds can be used for *in vitro* tests (immunoassays) and *in vivo* tests (cutaneous test) for the diagnosis of allergy to CLV.**
- **Allows major sensibility in the diagnosis.**
- **Being able to confirm allergy to CLV turns out to be beneficial for the patient and might be translated in a considerable **cost saving**.**



Intellectual Property

This technology is protected by European and U. S. patent application.



Aims

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



Classification

Area: Diagnostics.

Pathology: Allergy / Autoimmune and inflammation

