

Food Analytical Immunotechnology



The group is open to discuss any kind of collaboration with industry and academia related to these topics.

The aim of the group is to develop bioanalytical systems for toxic compound detection. The methods are based on antibody technology and can be used for the detection of a wide variety of chemical contaminants in food or environmental samples, such as pesticides, additives, antibiotics, toxins and other emerging contaminants.

FIELD OF EXPERTISE

The group has expertise in the development of immunoanalytical methods for the detection of analytical targets. Given a target analyte, the group synthesises the functionalised and rationally designed derivatives (haptens), develops and applies novel methods to bioconjugate the haptens, generate the antibodies (polyclonal and monoclonal) and based on those develop novel analytical tools that are faster, sensitive and more economical. The different assays include competitive ELISA, lateral flow tests (immunochromatographic test strips), immunoaffinity columns and biosensors.

The group has also developed a deep expertise in the development and application of novel biomaterials that can increase the immune response to haptens. They can characterise the immune response to bioconjugates and develop and apply new markers and detection systems for the development of novel detection systems.

MAIN APPLICATIONS AND SERVICES

- Synthesis of functionalised haptens and bioactive conjugates.
- Production of polyclonal and monoclonal antibodies specific for analytes of interest for the food industry.
- Development of analytical tools based on antibodies for the detection of contaminants.
- The analytical targets include veterinary compounds (hormones, antibiotics...), agrochemicals (pesticides, phytohormones...), natural toxins (mycotoxins, phycotoxins...), industrial contaminants



FURTHER INFORMATION

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