

LCSN ANTENNE IUT

CHEMICAL LABORATORY FOR NATURAL SUBSTANCES

Field of expertise

- Prebiotic oligosaccharides and probiotic bacteria: study of their interactions with the gastrointestinal system of the host
- Extraction, purification and physicochemical and biochemical characterisations of natural substances of biological interest (proteins, enzymes, polysaccharides, polyphenols, antimicrobial substances). Perfection of specific proportions for constituent ingredients of various biological and cosmetic matrices

Identity

The laboratory, an outpost of the LCSN, is housed within the Biological Engineering department of the IUT of Limousin. It has 3 teachers and researchers, assisted by an research engineer and a technician. The organisation welcomes doctoral candidates and post-doctoral candidates but also DUT or Masters Trainees, in partnership with regional businesses. The LCSN and its IUT part are the structures of academic backing to Recovery Centre Food resources (CVA).

Activities

Main component, developed in partnership with the LMBA, UMR 5248 CNRS University of Bordeaux-1 ENITAB

- Study of molecular entities of the bacterial surface implicated in the relationship of probiotic microorganism with their host. The probiotic bacteria manifested its beneficial effects on host health by protecting the intestinal mucosa against microorganisms, and enteropathogenic microorganism attacks and by stimulating the immune system
- Research into new antibiotic substances antimicrobial limiting the proliferation of enteropathogenic bacteria
- Obtaining and characterising prebiotic oligosaccharides from plant polymers.

Applied component:

- Extraction of proteins, polysaccharides from the by-products of the agricultural and food industries. Perfection of procedures involving mastering processes common to procedure engineering, such as filtration, centrifugation, ultrafiltration, reverse osmosis, electrodialysis, etc. (e.g. animal serum protein fractionation, assessment of canning industry effluent recovery, by-products processing plant etc.)
- Physicochemical and biological characterisation of biological substances of interest, perfection of specific proportions by high performance liquid chromatography, gaseous phase chromatography and electrophoresis (e.g. characterisation and proportions of enzymes, proportions of allergens, preservatives, etc.)

Partners

Examples of industrial collaborations:

- Company ID BIO (87) - within the framework of an effective permanent partnership agreement since 1999, the IUT outpost of the LCSN contributes to the company's Research and Development activity, for the extraction and purification of biomolecules such as albumins, fibrinogen, protease inhibitors, etc.
- Company Melipharm (87) Characterization of antimicrobial activity of honey and other bee products.



Contact

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