

Research internship offer (Master)

TITLE	Valorization of animal whey proteins and their vegetal equivalents by enzymatic hydrolysis
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INSTITUTE	Université Claude Bernard Lyon 1
LABORATORY (Specify address and website)	BioDyMIA (Research Unit University Claude Bernard Lyon 1 - ISARA Lyon) Website : biodymia.univ-lyon1.fr
CONTEXT ABSTRACT OBJECTIVES	<p>Context: Whey from cheese making is a polluting effluent, currently poorly valorized as animal feed, spreading or even lactose fermentation for the production of biomass or biofuels. Other ways of turning this effluent into added value products, such as the production of bioactive peptides, have been widely explored in the scientific literature concerning sweet bovine whey, with however limited outlets in terms of authorized health claims. On the other hand, whey from acid coagulation, and in particular milk from small ruminants, have specific characteristics that limits its recovery. These issues are also shared with their vegetal equivalents, from the manufacture of tofu, among others. We propose to seek new ways for their valorization in the form of antimicrobial/antioxidant peptides thanks to their digestion by enzymes of plant origin. For this, model wheys will be prepared and then digested with enzymatic extracts either prepared in the laboratory, or commercial mixtures. Enzymatic extracts will be prepared by the student, from domestic cardoon flowers of different origins, using diafiltration and FPLC devices. The resulting digestates will be analyzed by RP HPLC and by electrophoresis and FPLC, then tested for their antimicrobial/antioxidant power by tests already implemented in the laboratory.</p> <p>Skills: The candidate should be interested in academic research, have solid knowledge in peptide biochemistry and, if possible, in microbiology. He must be able to work independently quickly, show initiative and be proactive. Knowledge of cheese technologies would be a plus. Reading/comprehension of written scientific English is essential: a bibliographic synthesis work will have to be carried out at the beginning of the internship. Ideally, this work should lead to the writing of a scientific article in English at the end of the internship.</p>

LOCATION OF THE INTERNSHIP	Bourg-en-Bresse, France
DURATION	3 to 5 months, from the end of January 2024. The internship should end before the end of June 2024 or early July.
STIPEND	The hosting lab will pay the monthly internship stipend which amounts to around EUR 540,00 (full time basis).
ADDITIONAL COMMENTS	