



Società Chimica Italiana

Divisione di Spettrometria
di Massa

<http://www.spettrometriadimassa.it>

DSM Speciale GIOVANI: lavori in corso

Posizioni aperte riguardanti la spettrometria di massa



Ref. 2018Agro1

Supervisor name and surname: Juan R Castillo

Title of the research project:

Towards a sustainable use of new nanobactericides in the frontier of fight with antimicrobial resistance

Description of the research project:

1.-The idea of the project and where it sits within the state-of-the-art

The poultry production in Cataluña, Aragón, Navarra and La Rioja is 35 % of the total one in Spain and it has a strong impact in the economy of the Campus Iberus area. Innovative nanotechnological applications have emerged as very useful candidates to develop and transform the agrifood sector, increasing global food production, its nutritional value, quality and safety. The project aims to enhance the microbiological safety (fight against antimicrobial resistance, AMR), assess the adoption of nanoenabled disinfectants and develop new biocides. The project is located on the forefront of the new applications of Nanoscience and Nanotechnology in the agri-food sector and its implementation will promote important technological advances, economical and social benefits

2.- The objectives of the project, as well as the progress beyond the state of the art

The general objective is to substitute or reduce considerably the use of antibiotics in poultry farms through bactericidal nanomaterials, validating the effect of nanomaterials based on silver, zinc, or others, including mixtures with natural products with bactericidal activity against the most frequent bacteria species like Salmonella, Campylobacter, Clostridium, Coccidium and Mycoplasma. The project will also verify the effectiveness of different nanomaterials against the most common infections in chicken production, and will tackle the biosecurity of nanoparticles and environmental safety, contributing in an outstanding way to new treatment methodologies to avoid antimicrobial resistance (AMR).

If the project is selected, the Doctoral Thesis supported by the Iberus Talent Program will be centered on the objective cited above, and he will be able to do work and research stays at the University of Lleida (Chemistry Department), at the IPREM-CNRS in Pau (France) as well as in the companies Enosan Laboratories and Abac Therapeutics. The microbiological work will be supervised by Dra. P. Goñi from the Microbiology Department and the "in vivo" assays by the Dr M.Fondevila from the Department of Animal Production, both from the University of Zaragoza.

The applicant research group (NANOACT Iberus) will also develop -by other means and in a parallel way- the investigation and optimization of innovative processes to improve the quality of feeding water in poultry farm and to develop and apply new sustainable techniques for the treatment of wastewater products of avian slaughterhouses, generating new efficient and economically affordable decontamination technologies.

3.The linkage of the research project with the suitable Action Plan of Campus Iberus, as well as with any other activity implemented by the Campus of Excellence.

The project is focused on the Iberus Action Plan "Agro-Food and Nutrition" and the innovation trends identified in section 3:

Nanotechnologies, biotechnologies, extraction technologies, mass screening, bioinformatics.

It will also help to keep a high level of water quality (reducing pollution) and to reuse water from the production processes of the agri-food industry of the avian sector.

The Iberus Action Plan "Agro-Food and Nutrition" also proposes as Action 1: the search for alternatives in the production of food in order to reduce its allergenicity (gluten-free, lactose-free, without additives) and with fewer chemical contaminants and waste (reduction of use of zoosanitaries, phytosanitaries, etc.). The project, by aiming to reduce the use of antibiotics, fully responds to this action.

Finally, the Pyrenean Strategy document 2018-2024 of the Pyrenees Working Community (CTP) also points in this same direction.

The project is fully integrated into the actions described in the report of the creation of the Iberus NANOACT Action Group approved in December 2017 by the Campus Iberus.

Deadline: January the 31th, 2019, at 14:00 CET .

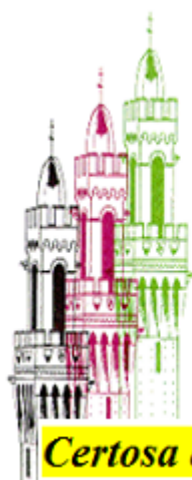
<http://iberustalent.campusiberus.es/en/2018Agro1>

Prossimi Eventi



Le indagini forensi ed il contributo della spettrometria di massa

Direz. Centrale Anticrimine della Polizia di Stato
Roma, 1 marzo 2019



23°

CORSO DI SPETTROMETRIA DI MASSA 2019

Certosa di Pontignano (SI), 11 - 15 Marzo 2019



5th MS IMAGING SCHOOL
Tissue Molecular MS-imaging

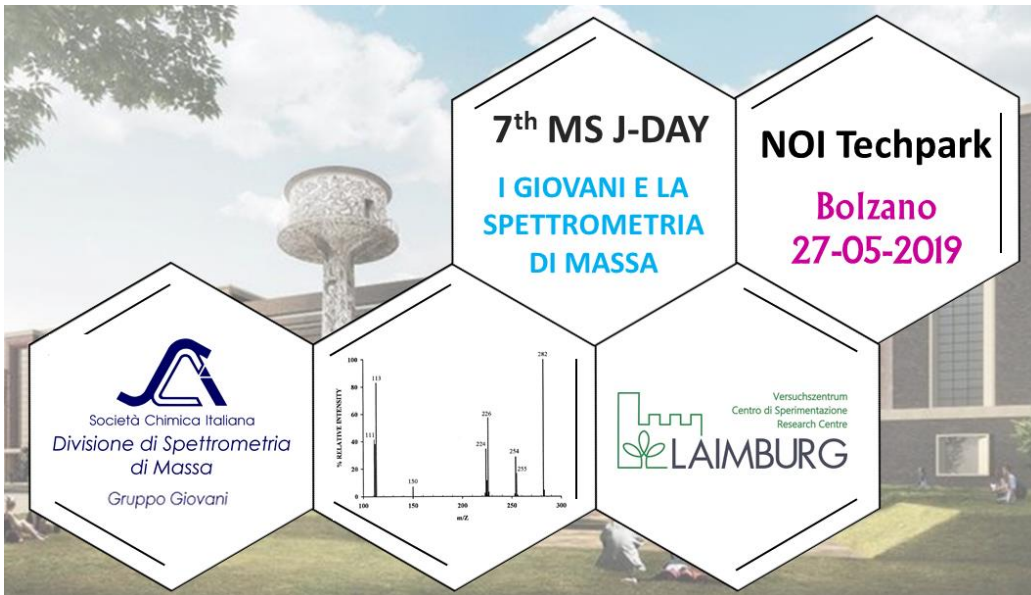
Univ. Milano Bicocca 16-17 Aprile 2019

3rd MS-Wine Day
May 16 - 17, 2019




Fondazione E. Mach
San Michele all'Adige (Trento)

10 fellowships

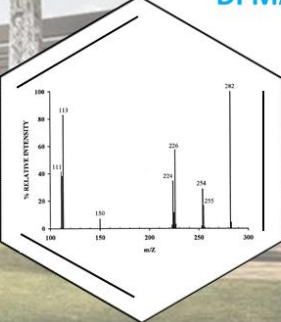


7th MS J-DAY
I GIOVANI E LA SPETTROMETRIA DI MASSA

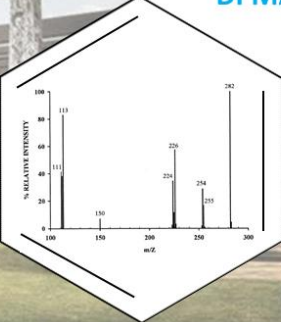
NOI Techpark
Bolzano
27-05-2019



Società Chimica Italiana
Divisione di Spettrometria di Massa
Gruppo Giovani



m/z	Relative Intensity (%)
113	100
130	10
224	40
234	50
244	30
255	20
282	100



Versuchszentrum
Centro di Sperimentazione
Research Centre
LAIMBURG

<http://www.spettrometriadi massa.it>