

# MIRIAM ESPIN

## CONTACT

### LOCATION

8/2 Montgomery Avenue  
Main Beach, Gold Coast

### PHONE

0467051304/ +34610465875

### EMAIL

miriamesp1986@gmail.com

### LinkedIn

<https://www.linkedin.com/in/m-esp%C3%ADn-734982131/>



## PROFESSIONAL PROFILE

With over 7 years of experience working for a flavouring company, both at the laboratory and commercial level, I'm proactive, methodical, good critical thinking, technical skills an excellent multitasker

## EDUCATION

- 2016: FEFANA Training. Introduction to the EU Feed Legislation. FEFANA, Brussels
- 2011-2016: Biochemistry Degree, Science. Universitat Autònoma de Barcelona
- 2009-2011: Advanced training: chemical analysis and quality control laboratory. EMT Granollers
- 2007-2010: Physiotheraphyst Degree. EUIF Blanquerna

## EMPLOYMENT HISTORY

### THE UNIVERSITY OF QUEENSLAND | Project Research Assistant | March 2018 – September 2018

Project Research Assistant in Centre for Nutrition and Food Science

#### Duties and Responsibilities

- Project management
- Develop research protocols
- Conduct literature reviews
- Prepare materials for submission to granting agencies and foundations
- Request or acquire equipment or supplies necessary for the project
- Manage and respond to project related email
- Travel to field sites to collect and record data and/or samples as appropriate to the specific objectives of the study
- Give support in a molecular biology laboratory

### LUCTA | Flavourist Trainee | March 20016 – December 2017

Lucta is a multinational Spanish company dedicated to the manufacturing and research of fragrances, flavours and feed additives and was founded in Barcelona in 1949.

Reporting to the main flavourist of the feed additives nutrition division, I started training in Lucta's "creation school."

This training is a combination of theoretical/practical technical training and usual activity in the feed additives division.

The school's mission is the creation of a flavourist focused on developing flavours intended to increase the palatability of animal feed.

#### Duties and Responsibilities

##### On theoretical training

- Physicochemical characteristics of aromatic products; Introduction to flavour world and flavours used for animal nutrition
- Sensory perception: Olfactory and taste system; Interactions of molecules with olfactory receptors
- Voltage components separation techniques; SDE, liquid extraction, SPME, etc.
- Analytical techniques of aromatic compounds; Gas chromatography applied to flavours
- Aromatic profiles and volatility of aromatic components
- Flavour application; Substrate used interactions between flavour-substrate, specific flavourings depending on animal species.
- EU Feed legislation

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## EMPLOYMENT HISTORY (continued)

### On practical training

- Recognition of aromatic families (more than 300 raw materials)
- Recognition of other raw materials studied according to their retention index (more than 400 raw materials)
- Sensorial analysis of known composition products (recognition “by nose” of chromatographic pick areas)
- Aromatic chords

### Activity in the Feed additives division

- Management, Start-up and follow up of commercial projects
- Analysis of analytical results and commercial presentations
- Analysis of competing products
- Use of analytical techniques and extraction methods (SPME, Soxhlet, Karl Fisher, etc.)
- Encapsulation methods (Büchi)
- Analysis of market trends by reading scientific impact publications and newsletters among others

### **Significant achievements**

- Collaboration in the adaptation of the formulations to the current European legislation
- Study of the interaction of flavours with different aromatic profiles in a mineral base; Chromatographic and sensory monitoring of the loss of aromatic compounds and the monitoring of reaction-products
- Study on ammonia masking agents

### **LUCTA | Technician in molecular biology | September 2016 – March 2016**

Reporting for the same company on the innovation department. The main functions were the studies of cellular impact of the use of flavours and additives through *in vivo* study in pigs

### **Duties and Responsibilities**

#### On the farm

- Attendance to experimental farm sampling
- Extraction and management of biological samples
- Cryopreservation of samples

#### On the lab

- Purification techniques of DNA / RNA and proteins
- Electrophoretic separation techniques
- Southern Blot technique (detection of specific sequences of DNA)
- Northern Blot (detection of specific sequences of RNA)
- Western Blot (protein detection with specific antibodies)
- Real Time Polymerase Chain Reaction (RT-PCR)
- ELISA (Enzyme-Linked Immuno Sorbent Assay)

### **LUCTA | Technician in Applied Research. Department of Samples | March 2010 – September 2016**

Worked as a laboratory technician in food flavours division and was responsible for the samples department in the feed additives division

### **Duties and Responsibilities**

- Management, handling, and shipment of commercial samples to customers
- Study of competing antioxidant products; Oxidative stability studies (Rancimat), peroxidase analysis, spectrophotometry, acid-base determinations, pH, Ash, humidity analysis, etc.
- Collaboration with the application feed additives department in the development of commercial projects; application of aromas in final feed, sensorial evaluation, feed granulation, collaboration in scaling processes
- Medium-scale encapsulation techniques; Niro atomizer spray dryer

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## **PHYSIOTHERAPIST | Collaborations with other institutions | January 2009 - February 2010**

For over a year I worked as a physiotherapist in the sports field (Athletic Club n'Armon). The main duties were; development of personalised training plans, rehabilitation of inflammatory processes, drainage techniques and ergonomics. As a physiotherapist I also performed various collaborations with health entities, which include (center and specialty):

- Mutua Universal del Carmen (traumatology unit)
- Granollers Hospital (geriatrics unit)
- Granollers Hospital (cardio-respiratory unit)
- Mutua Universal Mugenat (traumatology unit)
- Schools in Barcelona (neurology unit: neurological infantile physiotherapy)

## **LANGUAGES**

- Native Spanish
- Native Catalan
- Advanced English
- Basic French