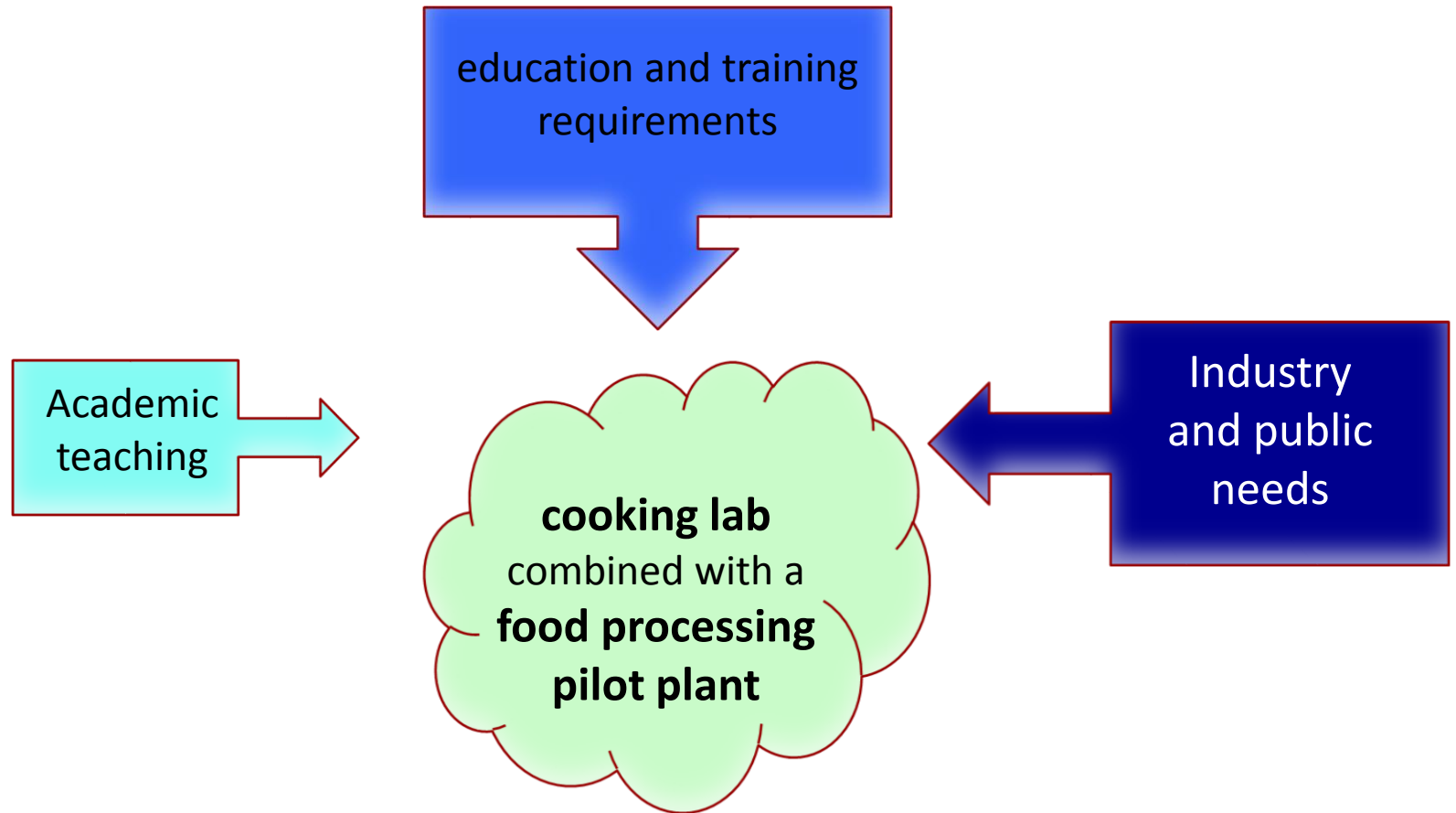


# ADVANCES ON PILOT PLANT AND COOKING LAB FACILITIES FOR TRAINING AND EDUCATION

*Cristina L.M. Silva, Marta Guimarães, Maria C.S. Hogg & Manuela  
Pintado*

CBQF – Centro de Biotecnologia e Química Fina – Laboratório Associado,  
Escola Superior de Biotecnologia, Universidade Católica Portuguesa/Porto

- ◆ Food processing is constantly facing new challenges in terms of developing:
  - ✓ new products
  - ✓ innovative
  - ✓ healthy
  - ✓ easy to consume
  - ✓ sustainable
  - ✓ .....
  
- ◆ The combination of food science and technology with nutritional knowledge is more and more a requirement



- ◆ The modern food system is very complex and can be considered to have almost all scientific disciplines embedded in its development, control and day-to-day running.
- ◆ Food is intrinsically linked to health and wellbeing, to land use and sustainability and to the wealth of regions and nations.
- ◆ CBQF Goals:
  - ✓ **Food:** safer, healthier, more nutritious and more competitive food
    - Food Safety
    - Food Quality and Nutrition
  - ✓ **Environment:** Innovative approach to environment and sustainability challenges
    - Environmental diagnosis
    - Environment mitigation tools and strategies

**CBQF – Centro de Biotecnologia e Química Fina –**  
Laboratório Associado, Escola Superior de Biotecnologia, Universidade  
Católica Portuguesa/Porto

<http://cbqf.esb.ucp.pt/>



# College of Biotechnology

## Activities:

- ❖ Education and Training
  - (BSc, MSc and PhD degrees, professional training)
- ❖ Research
- ❖ Scientific Services for industry and community needs



## Degrees offered – 1<sup>st</sup> Cycle



### ■ BIOENGINEERING (180 ECTS)

Minors:

- Food Engineering
- Environmental Engineering
- Biomedical Engineering

### ■ MICROBIOLOGY (180 ECTS)

### ■ NUTRITIONAL SCIENCES (240 ECTS)



## Degrees offered – 2<sup>nd</sup> Cycle

- **Food Engineering (120 ECTS)**
- **Environmental Engineering (120 ECTS)**
- **Biomedical Engineering (120 ECTS)**
- **Applied Microbiology (120 ECTS)**
- **Biotechnology and Innovation (90 ECTS)**





## European MSc Degrees (120 ECTS)



- **SEFOTECH – Food Science, Technology and Nutrition**



- **EDAMUS – Sustainable Management of Food Quality**

## Degrees offered – 3<sup>rd</sup> Cycle

- **Biotechnology (240 ECTS)**

### Majors:

- Food Science and Engineering
- Environmental Science and Engineering
- Microbiology
- Chemistry



## Degrees offered – 3<sup>rd</sup> Cycle



- **Food Science, Technology and Nutrition (240 ECTS)**  
(Univ. Minho – UCP – Univ. Aveiro)
- **Enology and Viticulture (240 ECTS)**  
(UCP – UTAD)

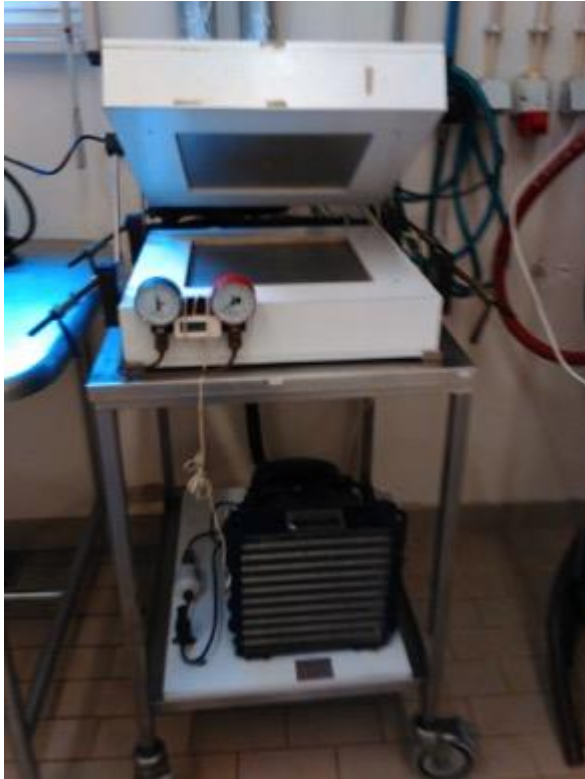
## Post-Graduate studies in:

- **Food Safety**
- **Food Innovation**
- **Nutrition and Aging**
- **Enology**
- **Innovation in Monitoring and Technologies for Water Treatment**
- **Education for Sustainable Development**
- **Sustainability and Local Agenda 21**





# PILOT PLANT AND COOKING LAB FACILITIES



- ◆ Several training requests:
  - ✓ Students (all levels)
  - ✓ Professional students
  - ✓ Employees
  - ✓ Public





◆ Several industry requests:

- ✓ New products
- ✓ Preservation
- ✓ Innovation
- ✓ Combined with training





◆ With support of many other laboratories

- ✓ Microbiology
- ✓ Analytical chemistry
- ✓ Physical analysis
- ✓ Sensory analysis
- ✓ Packaging
- ✓ .....



- ◆ Cooking facilities allow:
- ✓ Product development
  - ✓ Consumer studies
  - ✓ Nutritional research
  - ✓ Gastronomic approaches
  - ✓ .....





## ◆ Shelf-life studies

- ✓ Packaging
- ✓ Safety
- ✓ Quality
- ✓ Predictive tools
- ✓ .....

**THANK YOU !**

