

# Mathieu CESARI

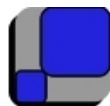
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## Engineer INSA

## Biochemistry & Bioprocess

**Objectives:** After a complete and versatile education, I have made my first work experience in R&D. I want now to use this experience to enter the Industry and go deeper into the application field.



### WORK EXPERIENCE IN BIOCHEMISTRY

#### **TOTAL S.A./ LISBP** **Research engineer**

Toulouse (Fr)

2008 – 2010

*Skills developed*

Metabolic engineering of bacteria (*Clostridium sp.*) to increase bioethanol production.

- Planning and realization of all the laboratory work
- Regular presentation of the results obtained to the steering committee
- Search for new approaches in the frame of a patent application and bibliographical monitoring

Co-inventor of a patent application (publication : WO/2010/063766).

- *Personal:* Oral communication to (non)-specialized audience, organization of experiments, reports writing skills, interaction with multiple partners
- *Technical:* use of anaerobic chamber, HPLC (Agilent/HPChem), Protein purification (AKTA/Unicorn)

#### **Oxyrane / LISBP** **Study engineer**

Toulouse (Fr)

2007

*Skills developed*

Evaluation of the productivity of epoxide hydrolase-producing recombinant yeast (*Yarrowia lipolytica*).

- Design of new protocols, adaptation of procedure from industry to the laboratory (scale-down)
- Fermentation tests at the laboratory scale (5 l)
- Regular oral reports in English to the industrial partner
- *Personal :* English oral communication, writing skills
- *Technical :* yeast cultivation and fermentation (Sartorius fermentors), Gas chromatography (Chromeleon)

#### **BELDEM** **Engineer R&D Enzymes**

Andennes (Belgium)

Internship 2006

*Skills developed*

Increase of heterologous enzyme production by metabolic engineering of bacteria (*Bacillus subtilis*) for food industry utilization

- Integration in a very dynamic team
- Definition of a metabolic engineering strategy from the beginning (new approach in this laboratory)
- Realization of the experiments and analysis of the results
- *Personal :* team work, autonomy and adaptability, bibliographical reports
- *Technical :* metabolic engineering techniques *in vitro* and *in silico* (VNTI)

#### **UNI project** **BIOMASA** **Technician**

Managua (Nicaragua)

Internship 2005 (3 months)

*Skills developed*

Methane production tests with agricultural wastes.in UASB digester

- Installation of a small pilot scale unit (100 l)
- Analyzes of input substrate (Organic charge) and output products (methane content)
- Work experience with very limited material means, adaptation of procedures to the laboratory facilities
- *Personal :* adaptability, inventiveness
- *Technical :* analytical chemical technics, digester operation

## EDUCATION : Equivalent to Master grade

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- Sept. 2006*      **Engineering diploma of Biochemistry and Bioprocess** obtained at INSAT (Institut National des Sciences Appliquées de Toulouse) in France  
**Specialization : Industrial microbiology**
- 2003-2006*      **INSAT : Major French engineering school (a five year diploma of engineering)**  
*Courses* : biochemistry, microbiology, bacterium genetics, enzymology, bioprocess, metabolic engineering, modelling, fluid mechanics
- 2001-2003*      **Intensive scientific preparation at INSAT (Physics, Mathematics, chemistry...)**
- 2001*            **Baccalauréat S with honours** (secondary school diploma specialised in Mathematics and Physics)

## SPECIAL SKILLS

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**Languages:** French, mother tongue

English, very good skills (4.5/5), TOEIC score : 890/990

Spanish, very good skills (4.5/5)

**Computer knowledge:** bureautics (Microsoft and Open Office), knowledges in **XHTML** 1.0 strict, CSS and PHP programming (I made my own website), basics in **programming**.

## HOBBIES AND SUMMER JOBS

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**Summer jobs:** Recreationist in a vacation camp(*july 2001*) ; Mathématiques and Physics courses to high-school pupil (*2002-2003*) ; Office employee (*Oct. 2004*).

**Volunteer:** festival organisation with the association YEMAYA (31) (*2002-2005*) ; Recreationist in Mexico (*2002*).

**Sports:** Indoor and Outdoor Climbing (since 2006), Judo (3 years), Fencing (4 years).

**Trips and photography:** Mexico, Niger, Nicaragua, Ireland, Argentina, Laos.