

Mathilde Leriche- Grandchamp

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Engineer in Microbiology

DOB: April, 17th 1981 (France)

Present & previous positions

2014 - **Engineer in microbiology**, *Chaire Agro-Biotechnologies Industrielles (ABI)*, Reims, France.
Present

Projects

- Development of a process to valorize lignin of agricultural byproducts by Solid-State Fermentation (SSF)
- Scientific support of a biotechnology start-up

Realizations

- Fermentation with Zygomycota, Ascomycota et Basidiomycota
- Characterization of enzymatic cocktails (spectrophotometric assays)
- Development of analytical methods to monitor the catabolism of lignin
- Improvement of sporulation
- Management of two trainees

Aug. 2009 - **Research Engineer**, *Soufflet Group*, Nogent-sur-Seine, France.
Oct. 2014

Project *Development of process to valorize agro-industrial byproducts (wheat bran, straw, rape oil cake, ...) by Solid-State Fermentation (SSF) ; enzyme production*

Realizations

- Optimization of a growth fermentation media of a commercial product sold in feed. Increase of hemicellulases production by 15%. New formula marketed
- Design of a screening method of soil isolates, based on straw
- Development of a protocol to produce spores of 4 fungi which are antagonists of the phytopathogen *Fusarium graminearum*. Tests carried out in experimental fields
- Development of a purification process of a protease produced by SSF. Production of a protein purity of 91%

Feb. 2006 - **Development Engineer**, *Eco-solution*, Romanville, France.
July 2009

Project *Development of microbiological solutions for water treatments applied to industrial wastes (at lab and pilot units)*

Realizations

- Conception of a microbiological consortium of bacteria to treat waste water of a paper mill ; reduction by 2% of the TOC (Total Organic Carbon)
- Scale-up : starting of the pilot unit (9 m³) in the factory. Training of the customer to check the pilot and long-range monitoring
- Metabolic improvement by the "'evolution-selection platform"' of a bacteria's skill to neutralize arsenic
- Culture of microalgae in photoreactor (Infors)

Education

- 2006 - Engineer diploma in Biotechnology , UTC (Technological University of Compiègne), France
- Bachelor's degree in biochemistry with first class honors
- Realization of 2 training periods in academic laboratories (ENS at Lyon and INSERM 517 at Dijon)
- Scientific High School diploma with first class honors

Key Skills

Technical Skills

- Solid-state fermentation of agro-industrial byproducts
- Liquid-state fermentation in bioreactor
- Standard techniques of microbiology implemented to bacteria, fungi (Ascomycetes, Basidiomycetes) and microalgae (*Spirulina*, *Chlorella*)
- Biochemistry methods : enzymatic assays, proteins purification (ÄKTA systems)

Project management

- Pilot study : bibliographic overview, design of experimental plans
- Project : management chart, planning, resources allocation; monitoring of partnerships and appliers, reporting
- Scale-up to pilot units

Staff management

- Recruitment and training ; management of a staff of 2 technicians and trainees (bachelor's and master's degree)

Communication

- QHSE
- Lab train in security
- Contributor to microbiologic lectures at UTC and at the professional licence (Airion High School)



Languages

French **Native Language**

English **Fluent**

German **Beginner**

Chinese **Beginner**