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Spray-drying - concentrated matrices –functionalities team objectives

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Spray-drying - Concentrated Matrices – Functionalities Team (SMCF Team)



STL Open Days
19-21 March 2019



Cécile Le Floch-Fouéré



ID Card of the SMCF Team

❖ 15-20 employees

- 10 permanent staff (6 scientists)
- 7 PhD / post-doc / master students (5 Phds)

❖ 25-30 publications / year

❖ Skills & Expertise

- Process engineering
- Colloids science
- Proteins and lipids biochemistry
- Dairy and cheese processing.



A strong network of collaborations

France: FAST, IPR, LGC, UMET Inra Lille, AgroParisTech, ESPCI, IES Montpellier ...
CNIEL, Régilait, BBA, Lactalis, SILL, Laita, SODIAAL ...

Netherlands: WUR
Denmark : KU, Arla Foods
Ireland: Teagasc

China: ★
Soochow

Australia: Monash

Brasil: UFViçosa

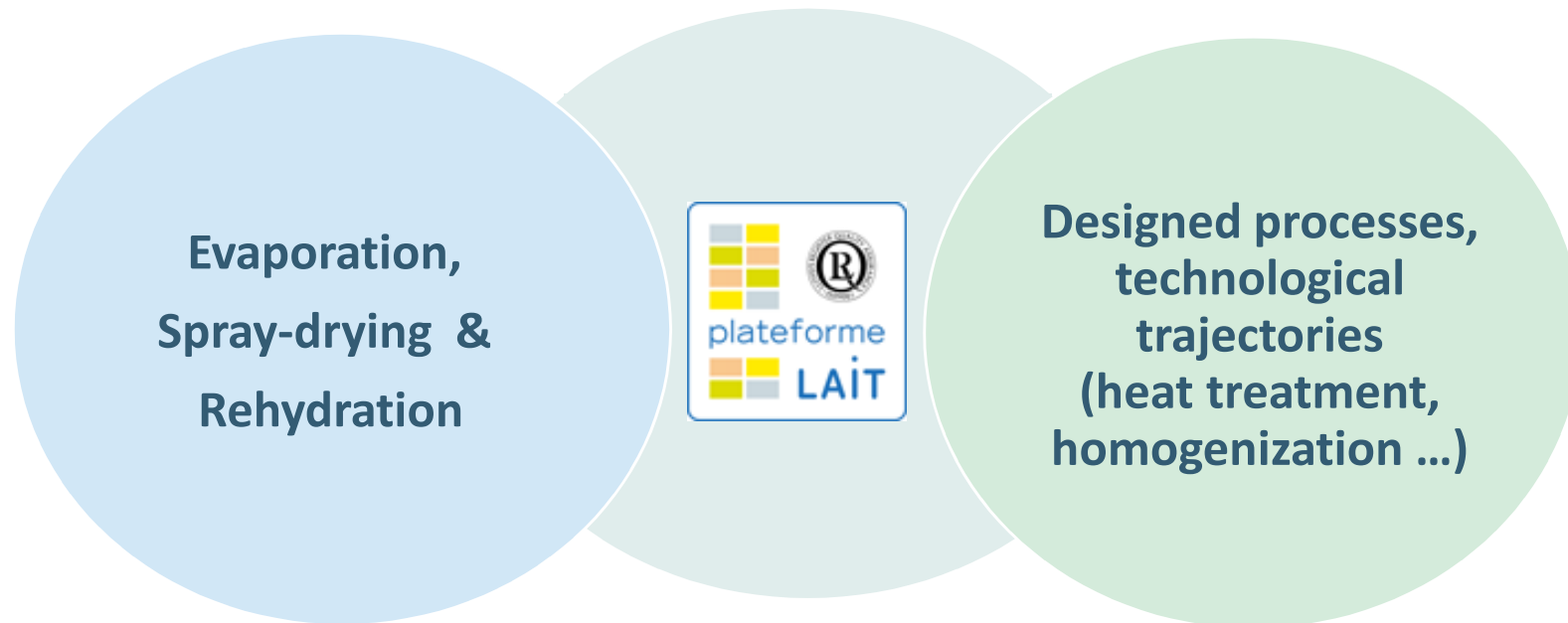
1 software : Spray Drying Parameters Simulation & Determination SD2P (36 licenses)
3 recent patents



LIA Food Print : «FOOD engineering for nutrition and health: Phenomena Related to INTerfaces »

Objective / Strategy

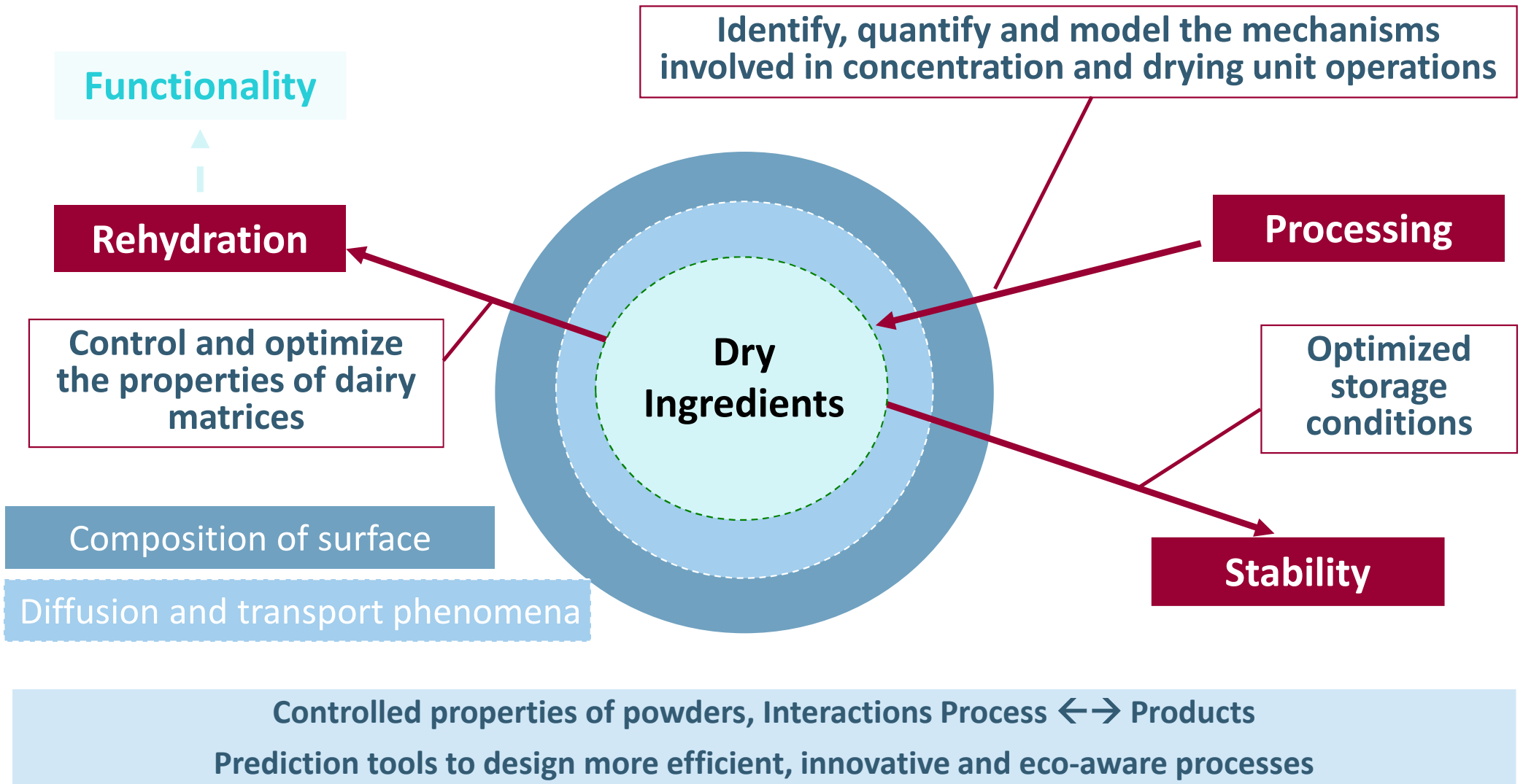
Control of unit operations / master of manufacturing processes to obtain a wide range of ingredients with controlled structures and properties



Work developed at different scales, from molecular to macroscopic, alternating model and real systems

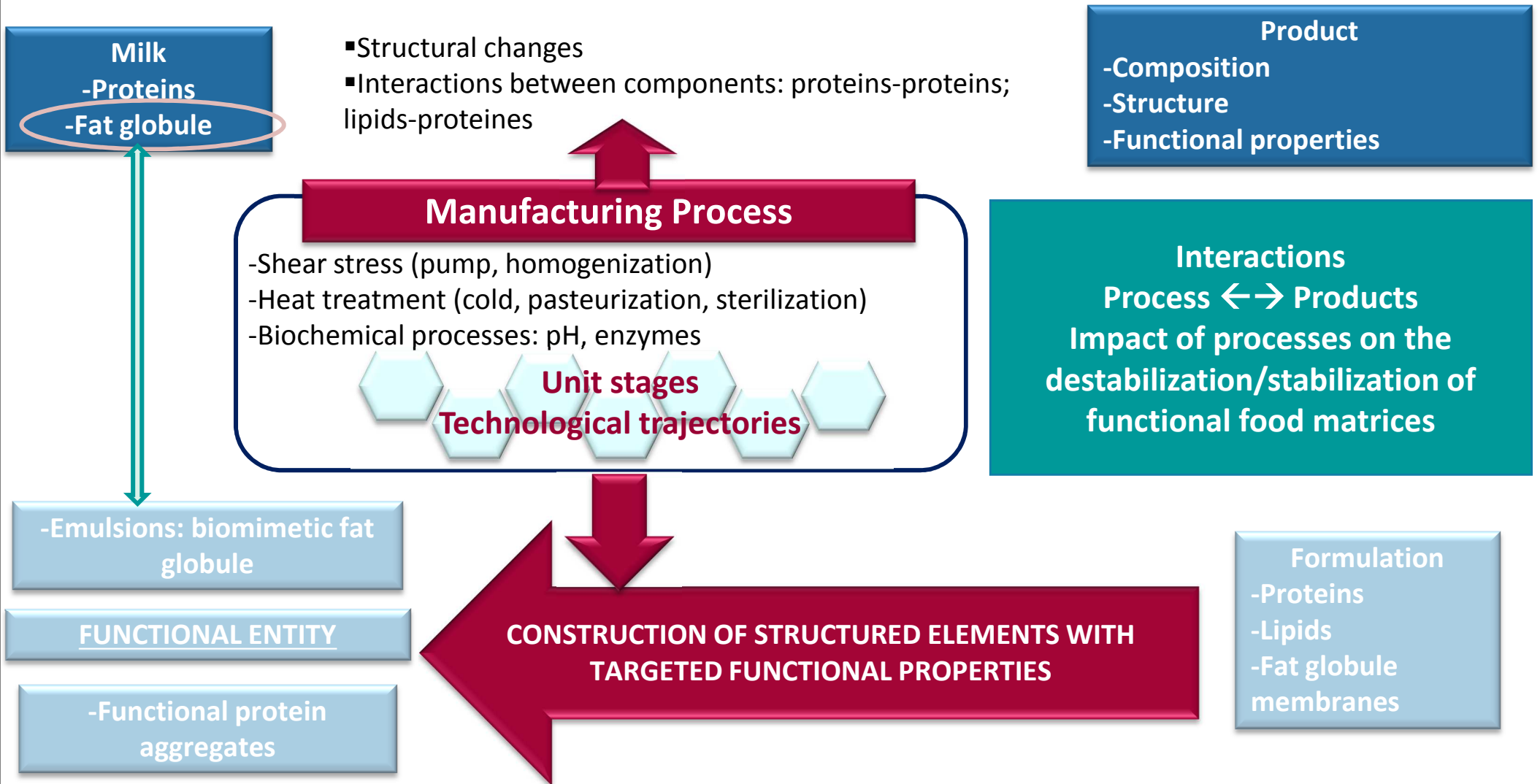
General research lines

Axis of research : Evaporation, Spray-drying & Rehydration



General research lines

Axis of research : Designed processes, technological trajectories (heat treatment, homogenization ...)



To be continued at STLOpen Days

Oral presentation

Gaëlle Tanguy
(concentration of wheys)

Visit of STLO Dairy platform

Oral presentation

Romain Jeantet & Luca Lanotte
(drying research)

Poster presentation
(N°4)

Domitille de Guibert
(innovative technological routes and protein fractal assemblies)

Poster presentation
(N°5)

Ming Yu
(single and monodisperse droplet)

Poster presentation
(N°6)

Erica Felipe Mauricio
(sweetened condensed milk)

Poster presentation
(N°7)

Sameh Obeid
(milk fat globules surface properties)



***THANK YOU FOR
YOUR ATTENTION***

MERCI

