

# ELVE FLOW

PLUG & PLAY MICROFLUIDICS

## The Origins of Life meet Microfluidics... Inside a startup!

Camila Betterelli Giuliano



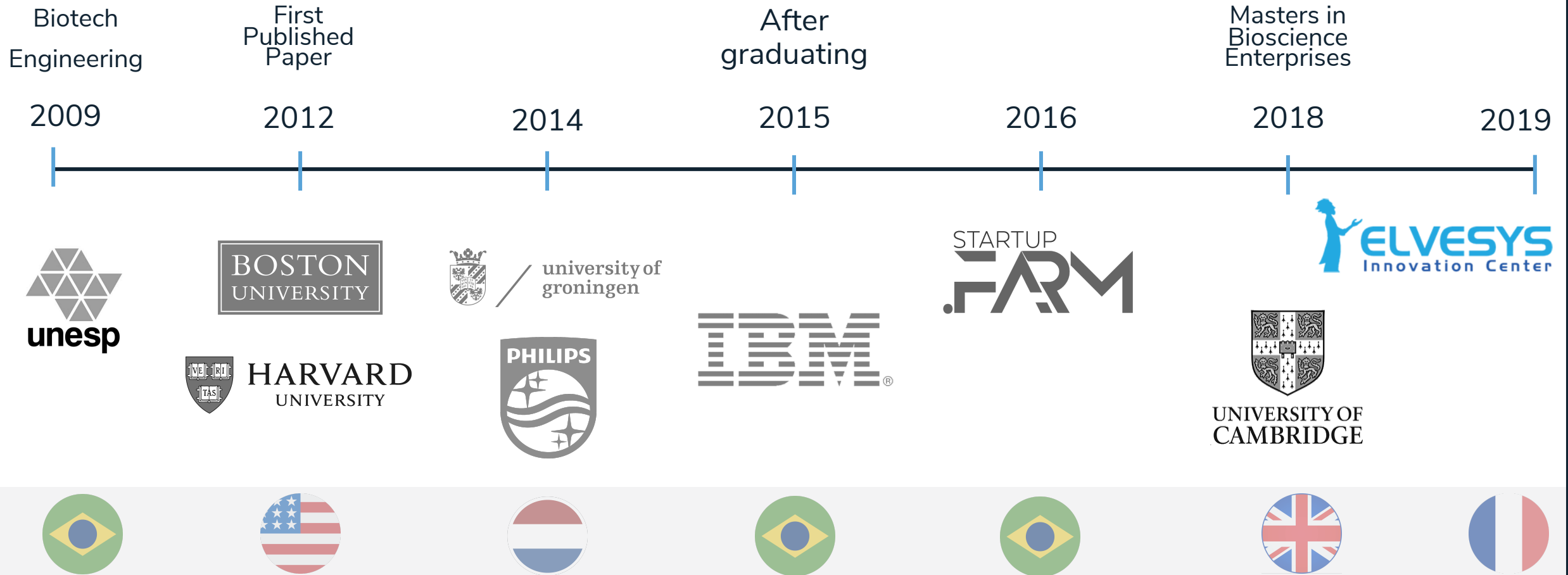
This project has received funding from the European Union's Horizon 2020 MSCA-INT under grant agreement No 813873 (ProtoMet).

Paris, France - March 2021

# Last 10 years of my life in a nutshell



Some degrees, quite a few countries



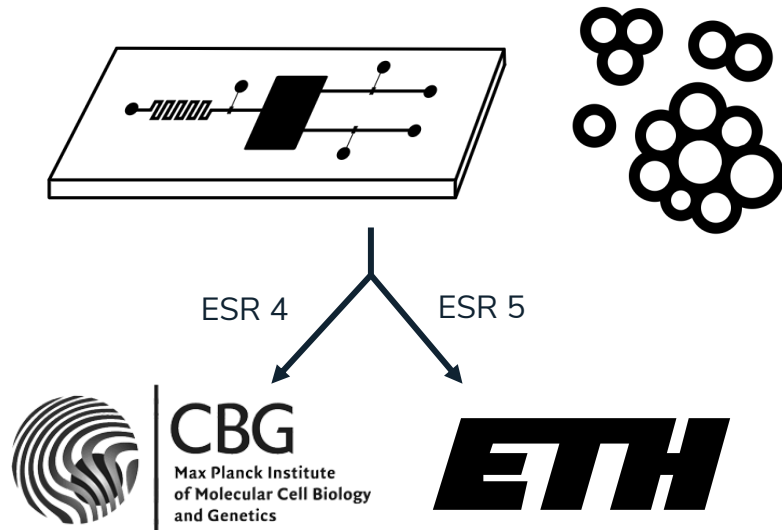
# PhD Project



## Precise control of pH and droplet size and composition within microfluidic devices

### 1<sup>st</sup>. Scientific Collaboration Project: Compartmentalization

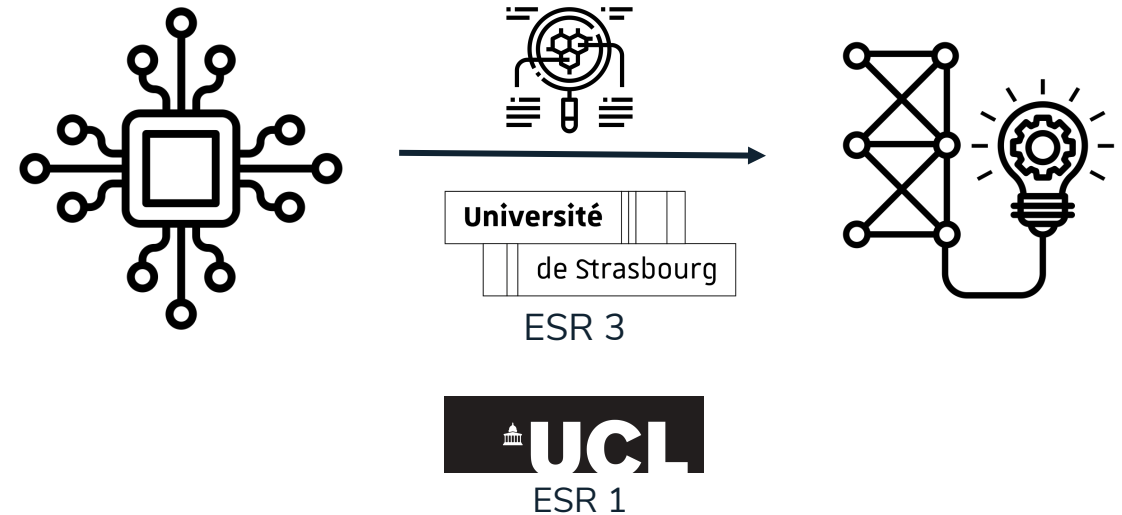
Produce giant lipid vesicles  
(GUVs) via microfluidics



### 2<sup>nd</sup>. Product Development: pH control platform

Create a microfluidics  
platform to precisely control  
pH

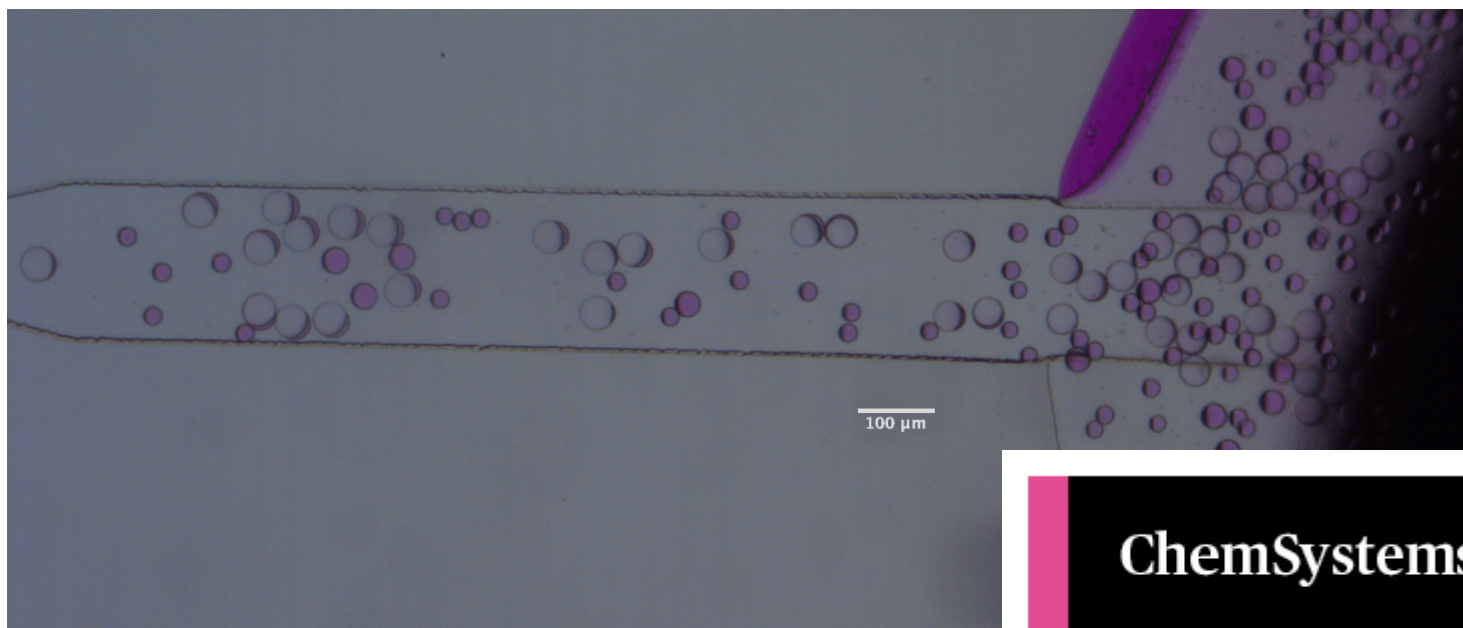
Integrate pH platform with a  
temperature platform to  
perform protometabolic  
reactions



# Some Results



## Compartment production via microfluidics



Publication of a  
Comprehensive Review  
about Compartments

ChemSystemsChem

Chemistry  
Europe  
European Chemical  
Societies Publishing

Review | Open Access |

### Multivesicular Vesicles: Preparation and Applications

Camila Betterelli Giuliano, Nemanja Cvjetan, Dr. Jessica Ayache, Prof. Dr. Peter Walde

First published: 19 December 2020 | <https://doi.org/10.1002/syst.202000049>

# ELVE FLOW

A white silhouette of an elf's head and shoulders, facing right, with its right hand held out palm up. The elf has pointed ears and a beard. It is positioned to the right of the word 'ELVE' in the main title.

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