

PolyPeptide Group is pleased to announce the start of a research collaboration program with the Green Chemistry and Enabling Technologies Team of [IBMM](#) (Institut des Biomolécules Max Mousseron) in Montpellier.

The project is supporting our ambition to be a leading company in the development of green processes for the manufacturing of peptides. It is also supporting our strategy to develop external partnerships to boost our innovation strengths.

The Green Chemistry and Enabling technologies team of IBMM is a leading academic group developing a new technology called **Mechanochemistry** to synthesize peptides without solvent (or with a limited amount of solvent). The proof of concept was already completed, offering great opportunities for future applications at manufacturing scale.

Mechanochemistry is an emerging technology, with an unexplored potential. It is mentioned by IUPAC as one of the 10 chemistry innovations that will change the world. It is also considered as one of the promising approaches to develop greener processes for peptide manufacturing by the American Chemical Society.

The goal of the project is to assess the potential of this technique compared to our current practices, to challenge the preliminary results and to develop an industrial solution to apply Mechanochemistry at large scale. This disruptive technology can significantly influence the existing manufacturing practices and help in developing greener solutions to produce synthetic peptides.

Olivier Ludemann-Hombourger

Global Director, Innovation & Technology



"Ten Chemical Innovations That Will Change Our World", Gomollón-Bel, F. , *Chemistry International*, **2019**, 41(2), 12-17.

"Sustainability Challenges in Peptide Synthesis and Purification : From R&D to Production", Isidro-Llobet A. *et al.*, *J. Org Chem.* **2019**, 84, 8, 4615-1628

"Peptide synthesis : ball-milling, in solution, or on solid support, what is the best strategy ?", Maurin *et al.*, *Beilstein J. Org Chem.* **2017**, 13, 2087

"Peptide Couplings by Reactive Extrusion : Solid-Tolerant and free from carcinogenic, mutagenic and reprotoxic Chemicals", Yeboue, Y. *et al.*, *ACS Sustainable Chem. Eng.* **2018**, 6, 16001-16004

<https://ibmm.umontpellier.fr/>

<http://greenchem.cnrs.fr/>

<https://www.polypeptide.com/>