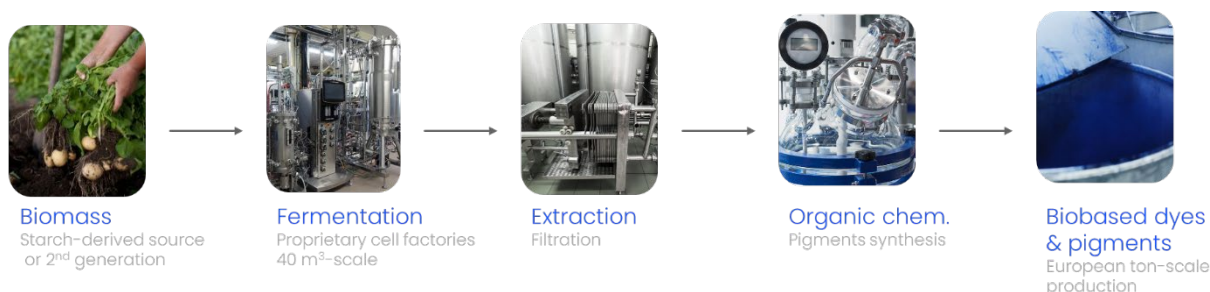


## ***Biobased aromatic intermediates: Pioneering sustainability to decarbonise the industry***

Pauline RULLIERE, Head of Research and Development  
Pili, Toulouse, FRANCE. Contact: [pauline.rulliere@pili.bio](mailto:pauline.rulliere@pili.bio)

The replacement of fossil-based chemicals in supply chains is a major concern of the industry in order to reduce CO<sub>2</sub> emissions. Much has been done in that regard, especially with the development of biobased supply of alkyl alcohols such as ethanol or butanol, as well as organic acids such as acetic acid, succinic acids or propionic acids. However, biobased aromatic building blocks, of particular importance in the chemistry of dyes and pigments, fragrances, polymers and consumer care industries are still lacking.



*Figure 1 Pili's hybrid technology based on a combination of metabolic engineering, fermentation, DSP and organic chemistry*

Pili has developed a unique and proprietary process to generate ton-scale samples of biobased anthranilic acid and para-aminobenzoic acid, both derivatives of aniline and benzoic acid. These compounds are produced by fermentation in Europe. They are 100% biobased and reduce significantly the CO<sub>2</sub> emissions linked to the incorporation of such aromatics into chemical products. These molecules have great potential for dyes and pigments intermediates synthesis, phenols or aniline derivatives production as well as benzoic acids and salicylates. During this presentation, the development, challenges and success from laboratory-scale toward ton-scale industrial production of Pili's first biobased aromatic, anthranilic acid, will be presented.



Seed fermenter of 10 m<sup>3</sup>



Powder Aspect



Pili's first big bags of Anthranilic Acid