

# **Biorefinery of plant materials: focus on dry fractionation processes to produce healthy food, energy, molecules and materials**

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Dry bio-refinery of lignocellulosic materials appears as the most appropriate processing to integrate for the development of green products (food, packaging, bio-chemicals, energy...) in order to maintain a sustainable chain. It allows water economy and avoids energy consumption in drying operations. Plants are heterogeneous material made up of distinct organs (stem, grains, leaves...) composed themselves of different tissues with specific composition and structure. The way they broke under constraints will determine the composition of produced particles. These particle can be advantageous sorted with adequate physical processes in different fractions intended to make healthy food products or serve for feed, materials or energy producing depending on their biochemical composition and specific properties.

Based on several innovative applicative examples, we will exposed in this presentation how a good interaction between the properties of the raw biomass and the process parameters allows to obtained tailor-made powdered fraction suitable for different green high-tech used.

## ***Biosketch.***

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