

Building a sustainable tropical bioeconomy: Natural Ingredients (NI) from the local agrobiodiversity in Colombia

Myriam Sánchez-Mejía / Eduardo Enciso / Ana Milena Gutiérrez / Juan Sebastián Ramirez-Navas



GOBERNACIÓN
VALLE DEL CAUCA



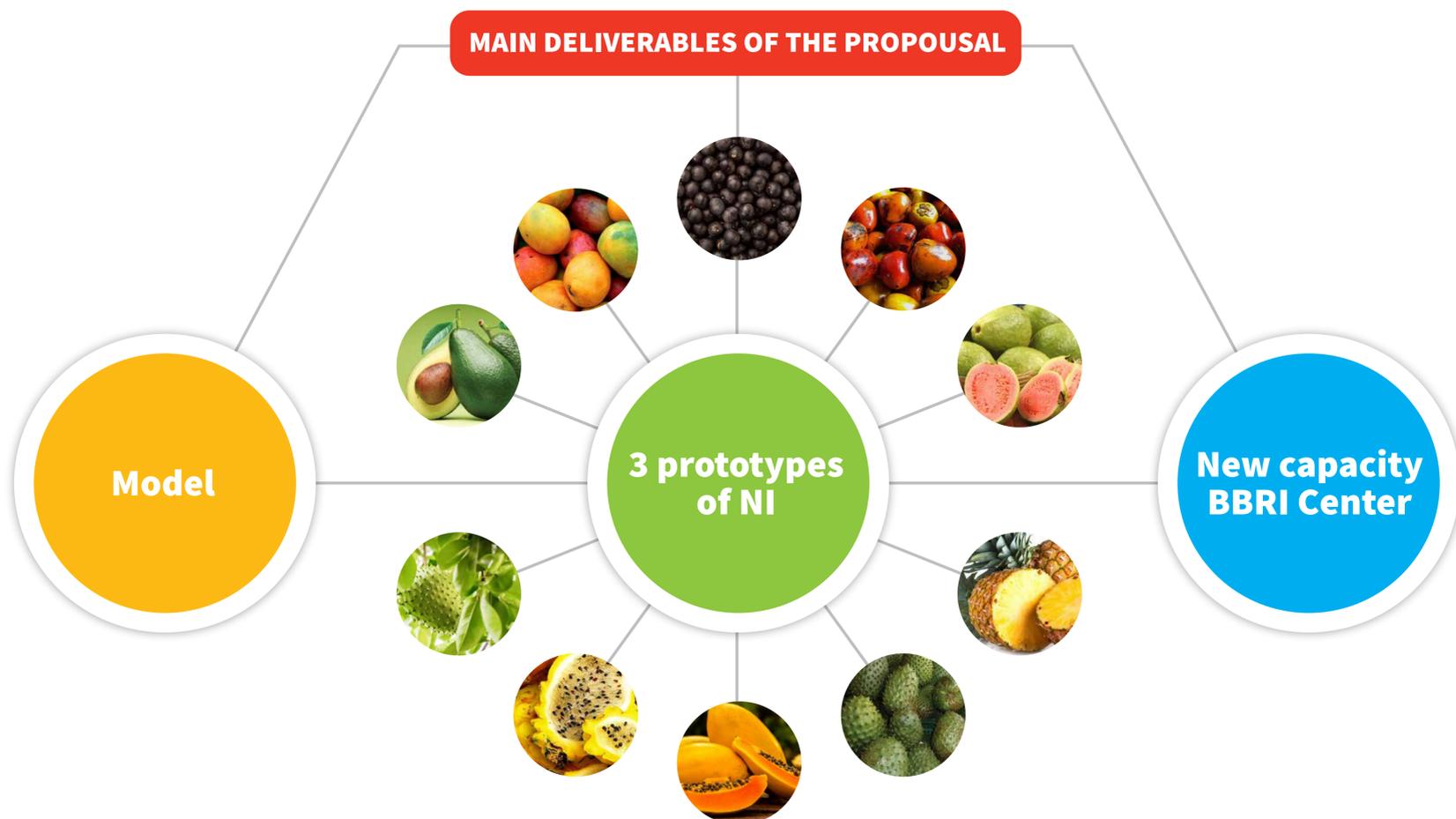
Universidad
del Valle



CORPORACION
BIOTEC



Sistema General de Regalías



BIOACTIVE COMPOUNDS FROM FRUITS DIVERSITY



Soursop leaf acetogenin-rich standardized extract

Soursop (*Annona muricata* L.) is a tree of the Annonaceae family, whose leaves are evergreen. The extract of soursop leaves is one of the natural ingredients prioritized by the Project because those leaves are agricultural residual biomass abundant from the local production chain. Complementarily, as per latest reports, the fruit tree has been found to produce 212 bioactive secondary metabolites. The predominant compounds are molecules of the Acetogenin family, followed by alkaloids, phenols, and other compounds. In those reports, leaves and seeds were the most studied organs of the plant, probably because they are traditionally the most used.



Pineapple peel essential oil

Pineapple (*Ananas comosus*) is a perennial plant of the Bromeliaceae family. Its fruit is a syncarp or infructescence. Pineapple peel essential oil is one of the natural ingredients prioritized by the Project because the peels are agro-industrial residual biomass abundant from the local production chain in Valle del Cauca. Complementarily, the oil is attributed with cosmetic properties such as skin emollient agent and eutrophication modulator, hair cuticle sealer, and an aromatic profile of good sensory acceptability.



Peach palm pulp and peel powder

Peach palm (*Bactris gasipaes*) belongs to the Arecaceae family. Its fruit is an ovoid-shaped drupe. It has been cultivated and consumed in Colombia as a highly nutritious food. Peach palm pulp and peel powder is one of the natural ingredients prioritized by the Project because it is a promising crop in the Colombian Pacific region. Complementarily, it is rich in macro- and micro-nutrients and oligo-elements. It has a high concentration of beta-carotene, a precursor of vitamin A. Due to its nutritional contribution, using peach palm powder can be an alternative for enriching the diets of the Colombian population, particularly in the Pacific region.

Worldwide trends of responsible production and consumption open growing demands for Natural Ingredients (NI) coming from local agrobiodiversity, within a sustainable tropical bioeconomy.

Corporación BIOTEC with allies presented a proposal to a Science, Technology, and Innovation (STI) call to Improve capacities to produce NI from residual biomass from crops and agroindustry of tropical fruits. The proposal included three main deliverables: three prototypes of selected NI, a Model of NI production for scalability and replicability and an Agenda of research and innovation, to improve the human resources capacities and the institutional viability. The expected impact in society was oriented to respond to demands from public health, food and nutrition and cosmetic industry as an added value sector, in addition to STI results and products as new processes and knowledge related to a sustainable use of local biodiversity, trained researchers, and publications.

ESP 10
WORLD CONFERENCE
HANNOVER, GERMANY 21-25 OCTOBER 2019
10 years advancing ecosystem services science, policy and practice for a sustainable future
www.esconference.org



SCAN ME