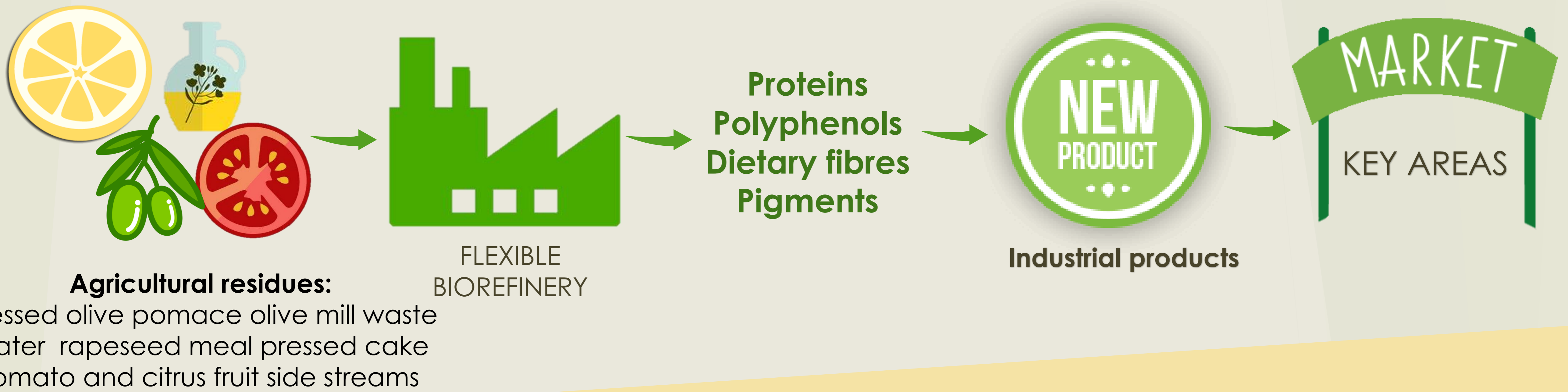


Development of novel functional proteins and bioactive ingredients from rapeseed, olive, tomato and citrus fruit side streams for applications in food, cosmetics, pet food and adhesives



GENERAL OBJECTIVE

Contribute to fulfilling the growing global demand for alternative sources of protein and phenolic product stream through development of a bio-refinery approach enabling to recover high-purity functional bioactive compounds

PROGRESS (May 2021)

- ✔ **Rapeseed:** hot and cold pressed rapeseed meal has been biorefined. 3 kg of protein concentrate (>70 % purity) and 1.5 kg of protein isolate (>90% purity) has been made.
- ✔ **Olives:** Olive pomace and olive mill wastewater have been collected. Samples have been characterised, the following compounds are targeted for extraction: oleuropein, hydroxytyrosol, tyrosol, luteolin, apigenin, and verbascoside.
- ✔ **Tomatoes:** a method for separating the seeds from the pulp and juice has been developed, carotenoids and polyphenols have been analysed. Carotenoids have been biorefined/purified at lab scale. Quantities of 10 g per lab test have been obtained. So far, purities of aprox. 20 - 25 % of total carotenoids.
- ✔ **Citrus:** fruit and side streams have been biorefined and analysed. Polyphenols of interest have been identified for consumer product purposes including naringin and hesperidin. A hesperidin product reaching market demand requirements has been produced (5 kg of dried extract).



Call: Bio Based Industries Joint Undertaking JTI-2017.
Total Budget: 3.9 M€
Duration: 36 months (May '18 – April '21)
Consortium: 16 partners from seven countries (ES, DK, UK, SI, DE, FR, EL)

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