



Exploiting the multifunctional properties of polyphenols:
from wastes to high value products

PHENOCYCLES

THE DOMAINS CONCERNED BY THE PROJECT



Human Health: synthesis of substances for photodynamic therapy (PDT) and drug delivery (DD), development of innovative phytocARRIER systems, formulation of PP loaded micro/nano-scale systems, development of new food supplements (nutraceuticals), and hypoallergenic cosmetics.



Plant Production: PP-based nanomaterials for plant protection against soil-borne pests, to increase plant resistance to stresses, impacting on plant-organisms' trophic interactions.

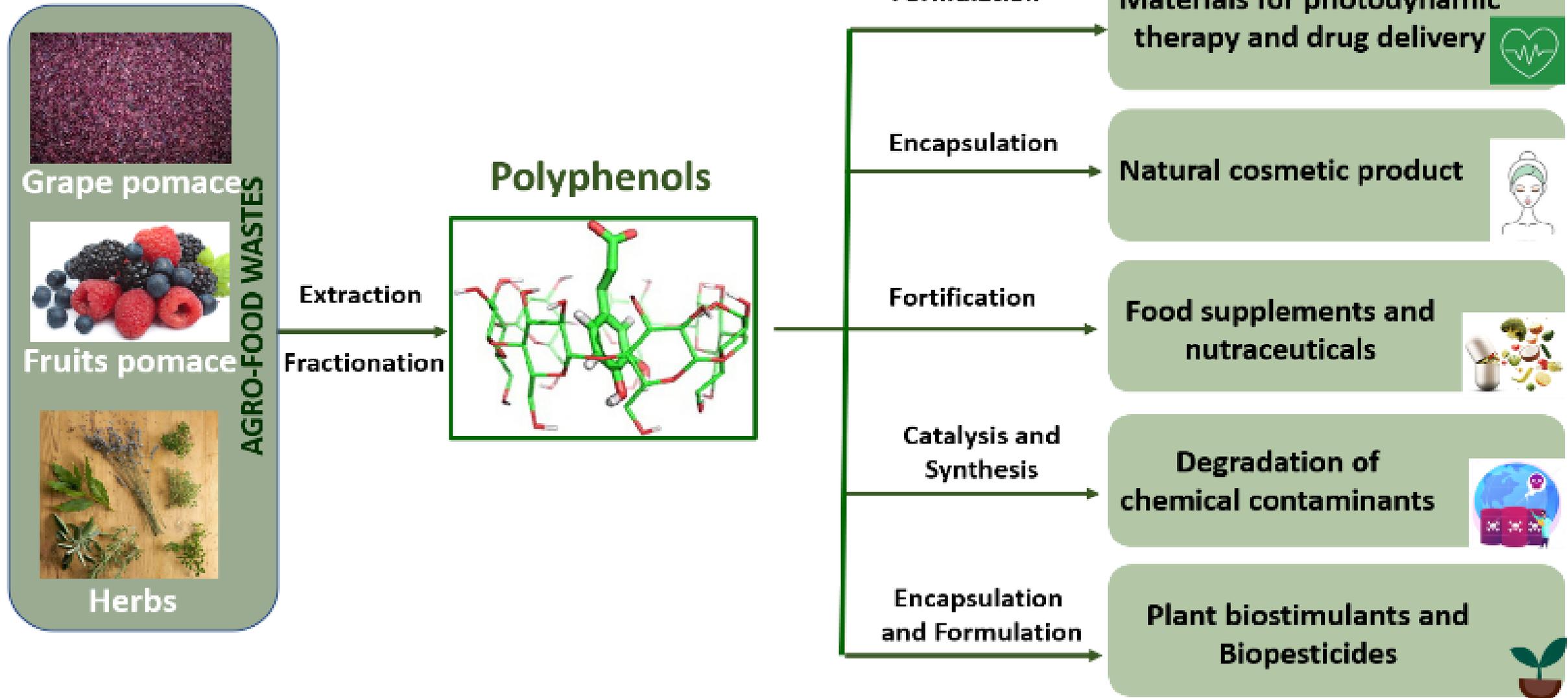


Environment Protection: use of PP as sensitizer or intermediate in the synthesis of materials for water disinfection and advanced oxidation processes (AOPs).



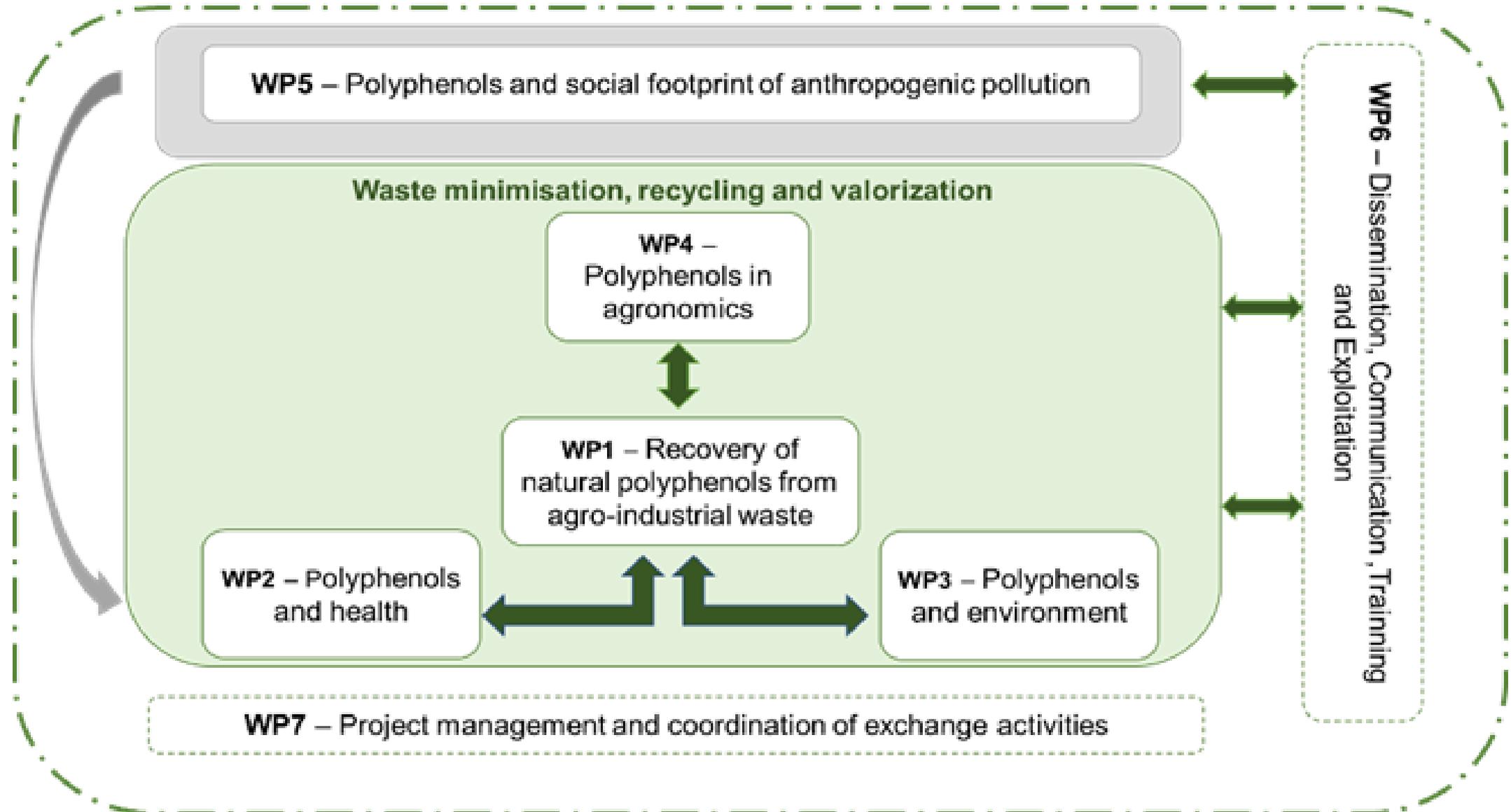
Material Sciences: synthesis of metal based oxide nanostructures useful for photocatalytic applications.

THE SCIENTIFIC IDEA AND PROJECT GOALS



THE IMPLEMENTATION OF THE PROJECT

Impact assessment



THE PARTNESHIP

- COUNCIL OF RESEARCH IN AGRICULTURE AND ECONOMICS – ITALY
 - NATIONAL RESEARCH COUNCIL – ITALY
 - UNIVERSITY OF TORINO – ITALY
 - INSTYTUT OGRODNICTWA-PIB – POLAND
 - UNIVERSITATEA DE VEST DIN TIMISOARA – ROMANIA
 - UNIVERSITAT POLITECNICA DE VALENCIA – SPAIN
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- UNIVERSIDAD NACIONAL DEL COMAHUE – ARGENTINA
 - UNIVERSIDAD NACIONAL DE LA PLATA – ARGENTINA
 - UNIVERSIDAD DE ANTIOQUIA – COLOMBIA
 - PLANT PROTECTION SCIENTIFIC RESEARCH INSTITUTE – UZBEKISTAN

EXPECTED IMPACT

- **Contribution to development and sustainability of new and lasting research collaborations**
- strengthen the institutional and research collaborations among beneficiaries and partner organisations
- lead to the set-up of collaborative research projects

Generation of knowledge transfer benefiting the participating organisations

- opportunity to build researchers' career or acquire new knowledge in different fields

Contribution to the improvement of the research and innovation potential

- enhanced collaboration and creating new synergies between EU partners and Third Countries
- improved the innovation potential for polyphenols and derived materials, with a direct impact also to industry

THANKS FOR THE ATTENTION

<http://www.phenocycles.unito.it/>



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