



Metagenomics approach to unravel the potential of lignocellulosic residues towards the discovery of novel enzymes

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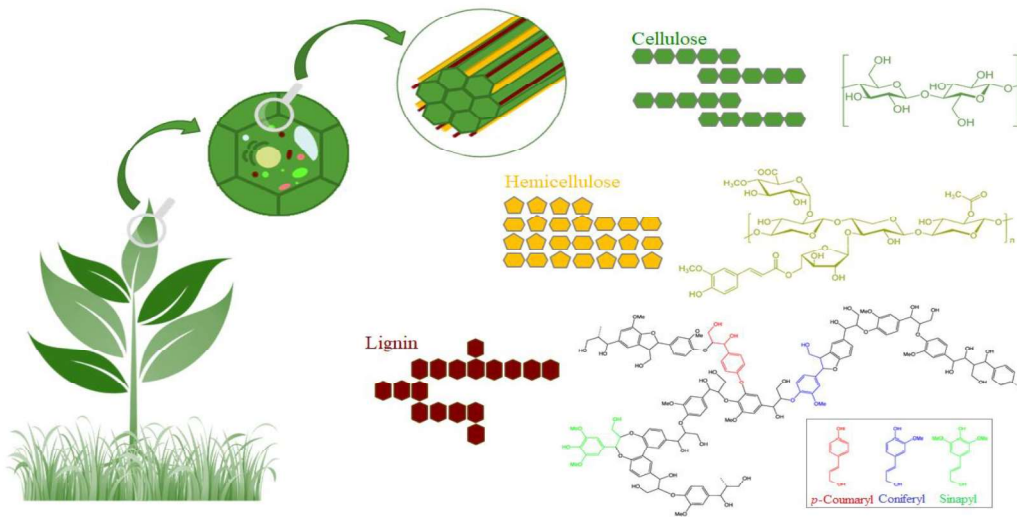
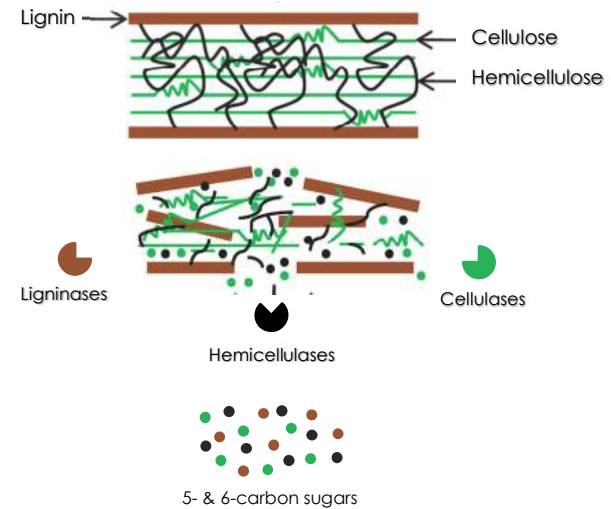
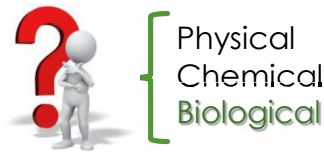
PhD in Agricultural Microbiology

Junior Researcher



Lignocellulosic residues

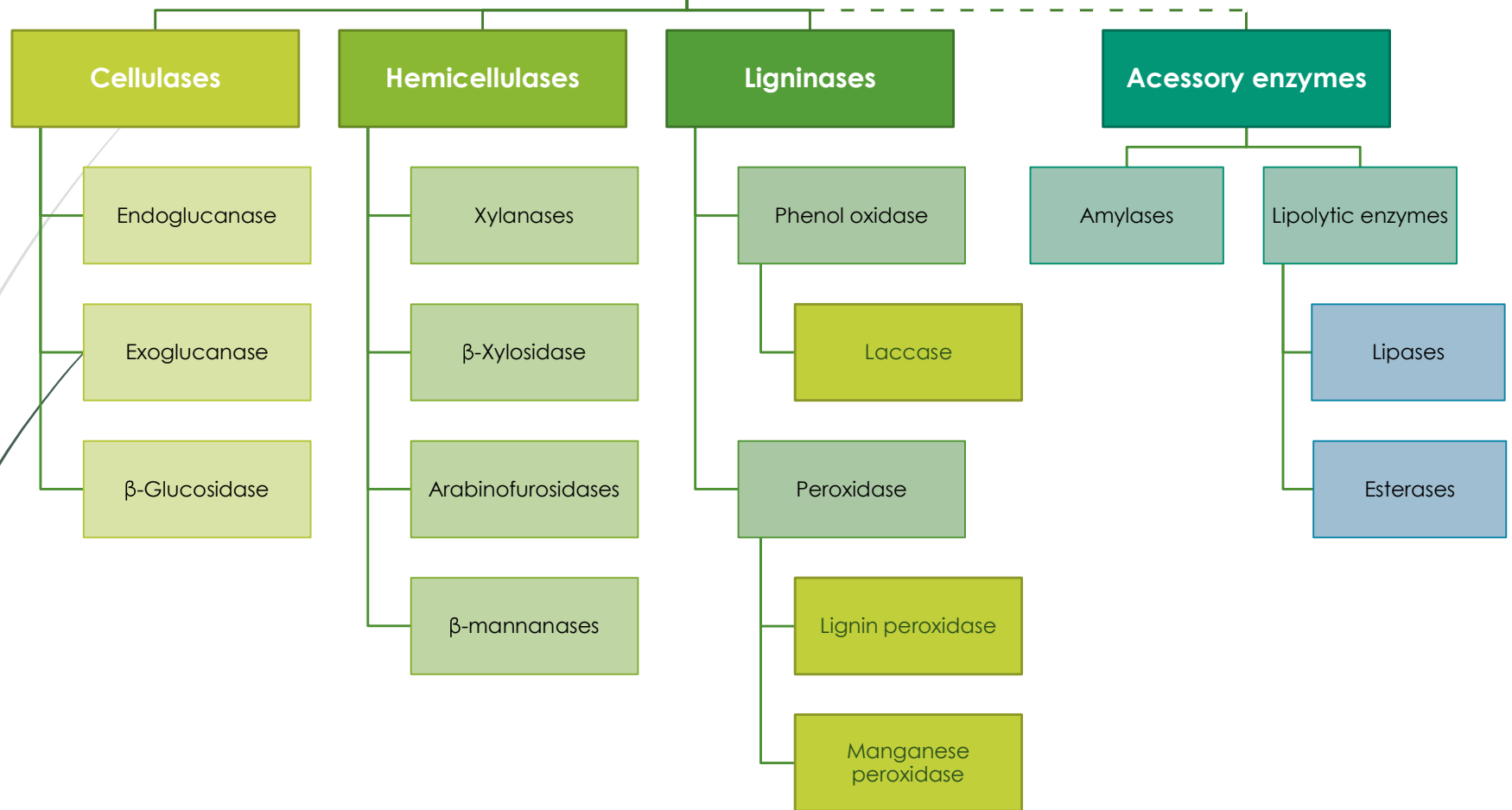
- Challenge - to replace fossil resources with the renewable ones
- Great potential to be used as low-cost and bio-renewable resource
- Hydrolysis of lignocellulosic biomass
 - Intensive pre-treatment



Biofuels Bioproducts Bioenergy

Important source of enzymes

Lignocellulolytic enzymes



Industrial applications of enzymes



High demand – new enzymes

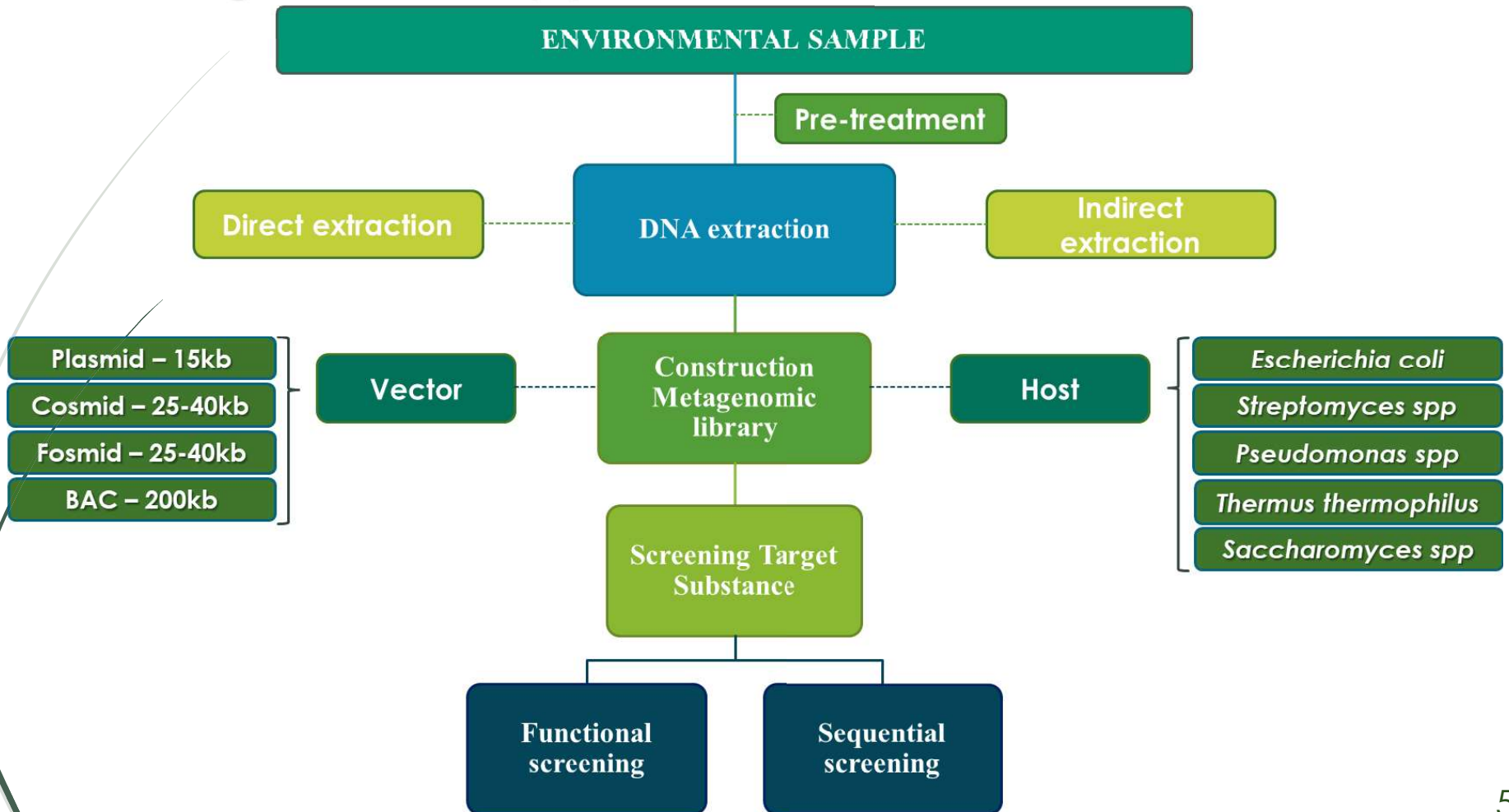
Efficiency and stability

Novel approaches

Metagenomic



Metagenomic approaches



Main goal

Use a **functional** and **sequential** metagenomic approaches to find **novel and promising enzymes** responsible for the **decomposition of lignocellulosic residues** from industrial **composting samples**



Task 1 - Collection of compost samples and physico-chemical characterisation



Agroforestry residues and municipal sludge

lipor

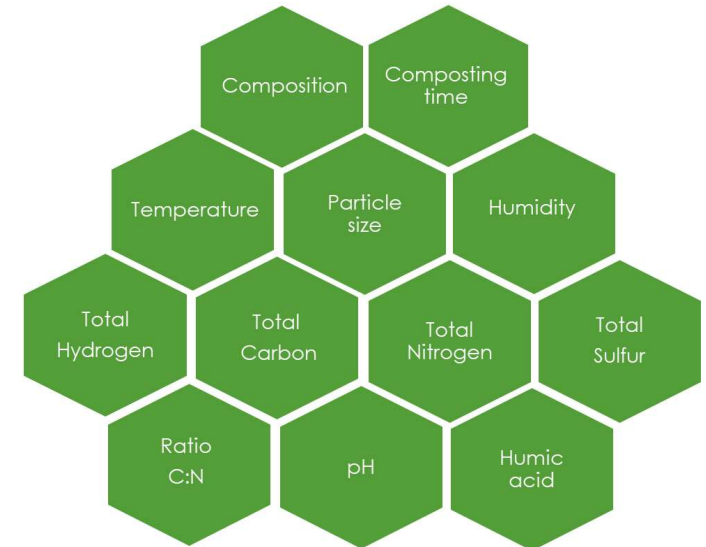


Food waste and agroforestry residues



Gintegral
Gestão ambiental, S.A.

Agroforestry residues, municipal sludge, wood and cork chips



Principal Investigators:



Professor Doctor
Lúgia Rodrigues



Doctor Sara
Silvério

Team Members:



Doctor Andréia
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Doctor Ângela
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Rodrigues



Doctor Eduardo
Gudiña



Master Joana
Sousa

Thank you!

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LIGN  ZYMES

COMPETE
2020

PORTUGAL
2020

FCT
Fundação
para a Ciência
e a Tecnologia