LIGNO•F•U•N
Lignin funnelling to biochemicals & biomaterials

Master's Thesis Opportunity in the LIGNOFUN Project

Are you interested in biotechnology, sustainability, and the circular bioeconomy? The **LIGNOFUN project**, coordinated by **RISE**, is offering an exciting **Master's thesis opportunity** on *metabolic engineering of Pseudomonas putida* for the production of **cis,cis-muconic acid (ccMA)** from lignin-derived aromatics.

Adipic acid, used in **nylon, polyurethane, and other materials**, is currently produced from petroleum, generating significant greenhouse gas emissions. LIGNOFUN aims to develop a **bio-based alternative** that transforms underutilized lignin streams into **high-value sustainable chemicals**.

The thesis project will take place at **RISE Processum AB** in Örnsköldsvik, Sweden, where students will work within the **RISE Bioeconomy Arena**, a unique innovation hub combining biotechnology and chemistry testbeds. Students will contribute to **engineering and screening Pseudomonas strains**, optimizing pathways for efficient conversion of lignin-derived aromatics to ccMA, and may also participate in **pilot-scale cultivation** depending on thesis scope.

This is a unique opportunity to gain hands-on experience in **industrial biotechnology and green chemistry**, working alongside experts in a European project that directly supports the transition to a **circular and climate-neutral bioeconomy**.

Interested students can download the full thesis description Master's thesis: Metabolic Engineering of Pseudomonas putida | RISE.

Credits: 30 or 60 ECTS

Location: Örnsköldsvik, Sweden

Start: January 2026

Deadline: 30 November 2025

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Bio-based Industries Consortium
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