

Lorenzo García Tejada

Spain ➤ Germany/The Netherlands

Low-pH Lactic Acid Fermentation from 2nd Generation Feedstock



What's your project about?

Lactic acid fermentation has long been studied and optimized in the past decades. However, it is mostly carried out at **neutral operational pH's**, which carries the **downside** of producing an stoichiometric amount of **salts as byproducts** upon **purification** of the dissociated acid. My project aims to produce a **fungal biocatalyst** able to ferment **lactic acid** at **low pH** and from **alternative feedstocks** with the final objective of developing a bioprocess for its production under said conditions.

Project Partners



RWTH University is the largest technical university in **Germany**, localized in Aachen, bordering Belgium and The Netherlands. **The Institute of Applied Microbiology (iAMB)** focuses **on the development of biocatalysts and bioprocesses** with an industrial outlook. Projects of note are **biosurfactant** production (rhamnolipids, liamocin) **organic acid** production (itaconic, malic), **plastic degradation** and **computational biotechnology**. **Lars M. Blank** is in charge of the academic supervision of the project.



**RWTH Aachen
University**



Corbion



Corbion

Corbion is a **sustainable ingredients** company dedicated to **preserving what matters**, including **food** and food production, **health**, and the **planet**. The company is specialized in **lactic acid**, lactic acid derivatives, **food preservation** solutions, **functional blends**, and **algae** ingredients, using their deep application and product knowledge to propel **nature's ingenuity** through **science**. **Harald Ruijsenaars** is a senior **fermentation specialist** in charge of the project's supervision



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What are you most excited about your project?

The scope of the project is in itself a **small biotechnological process** of its own - starting with the **production of a biocatalyst**, the **development of a bioprocess**, and the final **upscale of the production** process. It's a great overview of what **industrial biotech** is like!

What do you find the most challenging in your project?

My previous experience is mostly in **cultivation and fermentation technologies**, so the initial **molecular biology** section scares me a bit out of respect for the **unknown**. But we'll **persevere**!

What brought you to the Bioeconomy?

During my Bachelor studies, I specialized in **industrial biotechnology** since, to my eyes, it was the most **direct and tangible application** of the field. Then, during my Master's, I focused on **bioprocess design and development**, which gave me the **green tinge** that led me to look for working positions within the **Bioeconomy**.

What does the Bioeconomy mean for you?

Our society must **shift** from **harmful consumerist** ways, embracing **newer, greener solutions** to **reduce environmental impact**. In that sense, the **Bioeconomy** frames our society in a way where we are able to bring **nature** as a **main stakeholder**, making it easier to **respect** our **environment** and our **planet** - ensuring we can utilize **renewable resources** in processes with **reduced impact** to produce consumables and services that are **compatible with natural ecosystems**.

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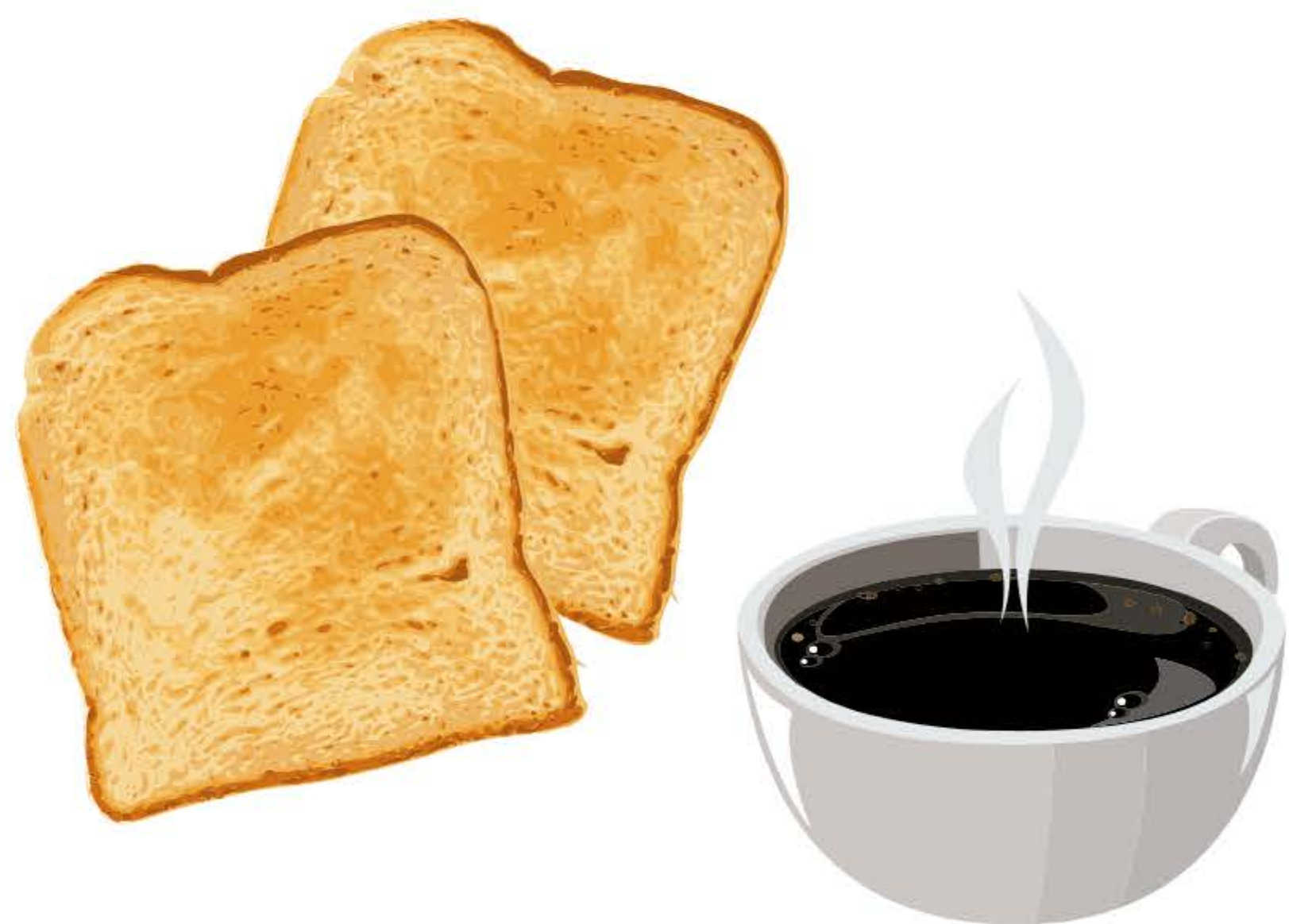
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What did little Lorenzo want to be when he'd grow up?

Poet, mathematician, dancer/actor



Something you love? And something you hate?

I love toast, I could live on that alone. I hate scalding hot coffee, people eating with their mouths open and unsorted trash.

Any hobbies outside of Science?

Puzzle and RPG games; hiking, trekking, walks in nature, specially dense forests; dancing, singing and acting - visiting Broadway is one of my dreams!



Short CV

- 2015-2019** ● B. Sc. in Biotechnology, University of Granada, **Spain**
- 2019-2021** ● M. Sc. in Biotechnology, University of Lund, **Sweden**
- 2020** ● SI-PASS Leader for Bioprocess Technology, University of Lund, **Sweden**
- 2022** ★ Camp Leader at Centro de Ecoturismo El Cantalar, Cazorla, **Spain**

