

Acetogens are employing the oldest and most efficient CO₂ fixation pathway on Earth, the reductive acetyl-CoA pathway. This pathway allows acetogens to utilize one carbon compounds such as CO₂ and CO and gaseous energy sources like H₂ to generate value-added compounds (e.g., acetic acid). The topic of this master thesis is to characterize the ability of a thermophilic acetogen, *Thermoanaerobacter kivui* (T_{opt} = 66° C) to utilize gaseous carbon sources for the production of chemicals.

What we offer

- Work with gas-fermenting, strictly anaerobic acetogens
- Carry out gas fermentations and learn how batch and continuous fermentations can be used to improve the understanding of the physiology and metabolism of these fascinating and ancient organisms and how they can be exploited in sustainable bioprocesses to reduce CO₂ emissions
- Learn how to determine key performance parameters of microbial fermentations
- Use analytical tools like HPLC, GC, and enzymatic analyzers



Your Profile

- Study in technical chemistry, biotechnology, bioengineering, biochemistry or comparable
- Interest in fermentation technology and microbial physiology
- Willingness to learn new methodology and techniques
- High degree of independence and commitment
- Very reliable and conscientious style of working
- Excellent communication skills and ability to cooperate and work in a team

What we offer

- The position is available from 12/21 and is scheduled for 6 months.
- Compensation of € 300/month
- Supervision by PhD student and Postdoc
- Integration in [Sustainable Bioprocess Solutions](#) group at TU Wien

Contact

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