



# Microbiome Engineering

Fungal infestation of plants, moulds on harvested food/feed or microalgae overgrown by bacteria, there are many reasons spoiling the fruits of your work. Did you know that there are highly effective and fully natural solutions which could easily prevent them?

## BACKGROUND

It has long been known that the microbiome plays a fundamental role in our health and tremendous advantages towards healthy plant microbiomes have been observed recently. Selected microorganisms can suppress pathogens by occupying their ecological niches. They can convey a higher resilience and better growth under conditions of i) drought, ii) non-ideal temperatures, iii) high salinity of the soil. They can promote plant growth, increase biomass yield and even influence positive characteristics e.g. the taste of such plants. This technology can not only be used to protect plants in the field, but also post-harvest fruits/vegetables and (micro)algae in bioreactors.

## TECHNOLOGY

acib provides help by screening for native microorganisms (MOs) able to protect your commercially important crops. The most promising candidates are then tested to see which can put an end to a given pathogen or provide a certain benefit *in vitro*. Then the best MOs are tested in field trials and successful ones are then integrated directly into the seeding pill in order to convey this benefit to all plant offspring. acib performs optimization for consistent effect, robust fermentation and formulations with high shelf-life to develop a new generation of bio-based plant protection products.

acib offers this technique to biologically control postharvest pathogens and thereby naturally increase the storability of fruits and vegetables. In addition, acib can also engineer the microbiome of microalgae with beneficial MOs to increase the yield and especially reliability of algae-growth in photobioreactors. In addition, acib uses microbiome tracking to identify entry points of microbial contaminations.

## OFFER

Under protection of a CDA/NDA we provide you with professional strategies for engineering the plant's microbiome of your choice. Any IP developed in such a project would fully belong to our investor/industrial partner.

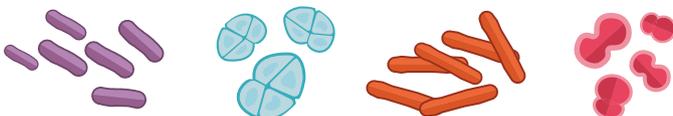


Image: Freepik.com

## EXPERTS

Prof. Dr. Gabriele Berg  
Dr. Birgit Wassermann  
Dr. Henry Müller  
Dr. Tomislav Cernava

## AVAILABLE FOR

- Investments
- Joint Research Projects
- Contract Research

## DEVELOPMENT STATUS

Technology Readiness Level 4-6  
(Technology validated in relevant environments)

## IPR

Will be generated for our  
industrial partner / investor

## KEYWORDS

- Microbiome Engineering
- Agricultural Biotechnology
- Biocontrol Agents
- Seed Coating
- Plant protection
- Post-Harvest Preservation
- Benefitting Microalgae-Growth
- Microbiome Tracking
- Probiotics

## CONTACT

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