

AIT strain collection – ecotyping, advanced screenings and application

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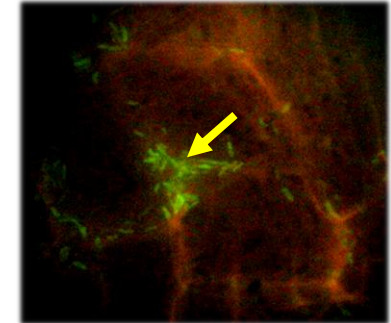
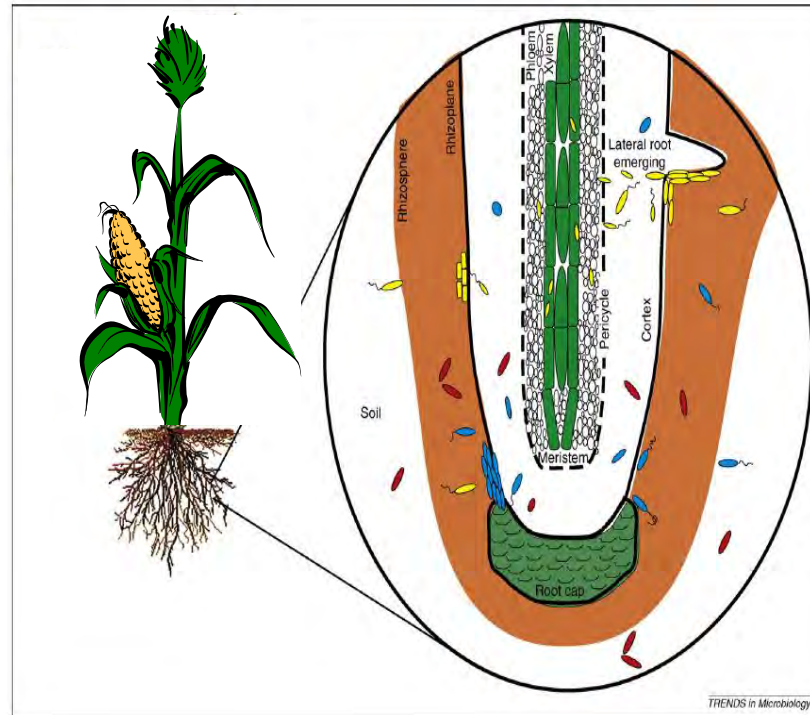
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- Austria's largest non-university research center
- Mission: Applied R&D supporting industries
- 5 Departments
 - Health & Environment
 - Safety & Security
 - Energy
 - Mobility
 - Foresight Policy Development

The plant habitat for microbial life

- Rhizosphere
- Endosphere
- Phyllosphere



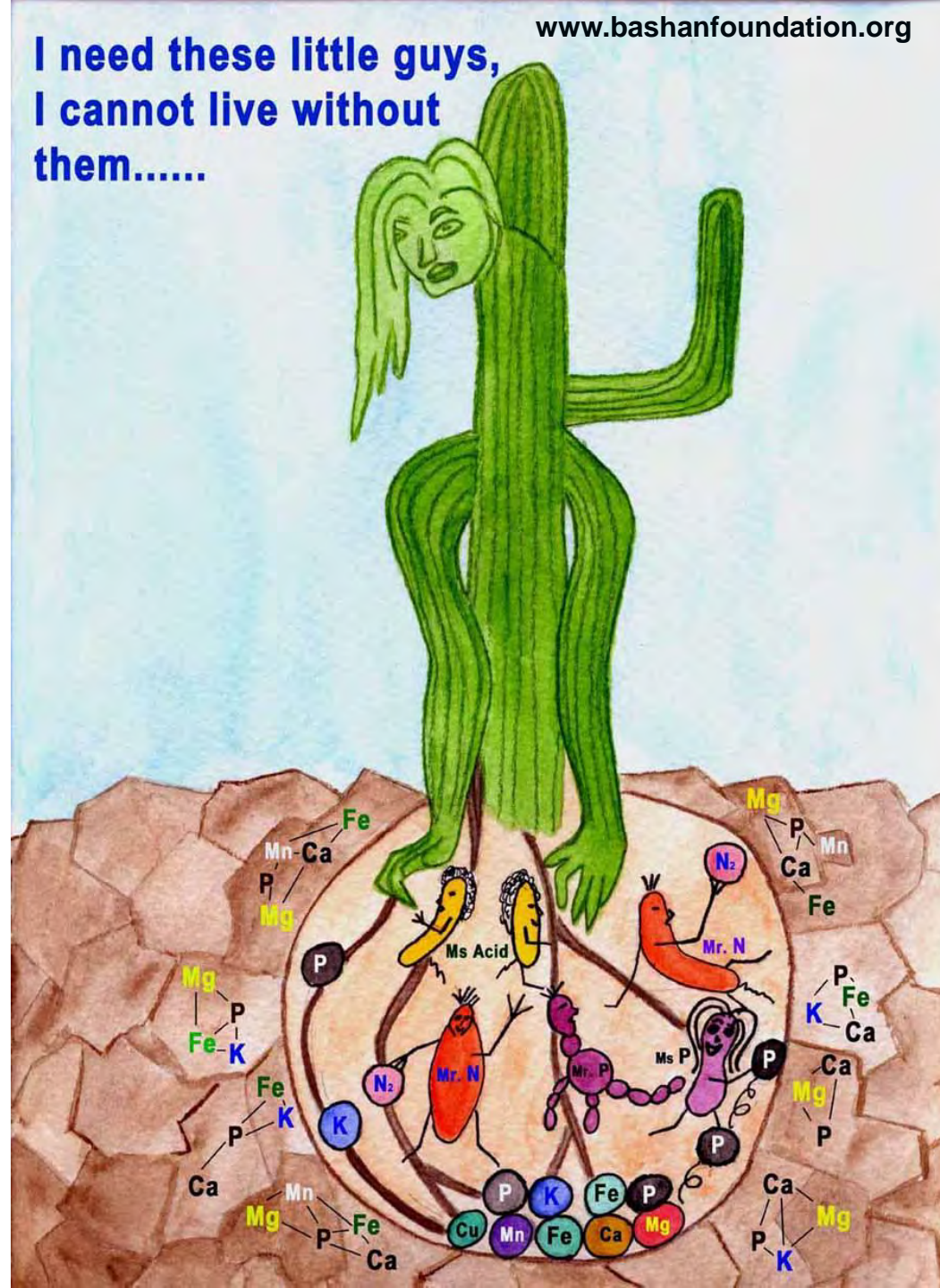
I need these little guys,
I cannot live without
them.....

Beneficial functions of the plant-associated microflora

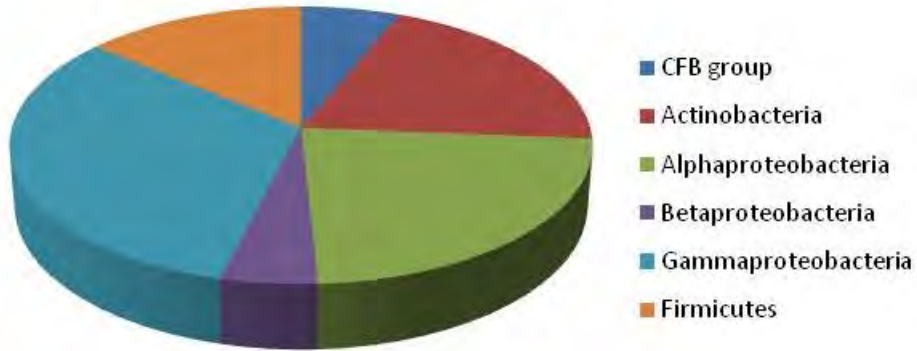
- Aquisition of nutrients
- Antagonism of phytopathogens
- Plant strengthening
- Co-metabolism
- Degradation of toxins / pollutants

Why endophytes?

- Intimate interaction with the plant
- Escape competition in the rhizosphere



AIT Endophyte Collection

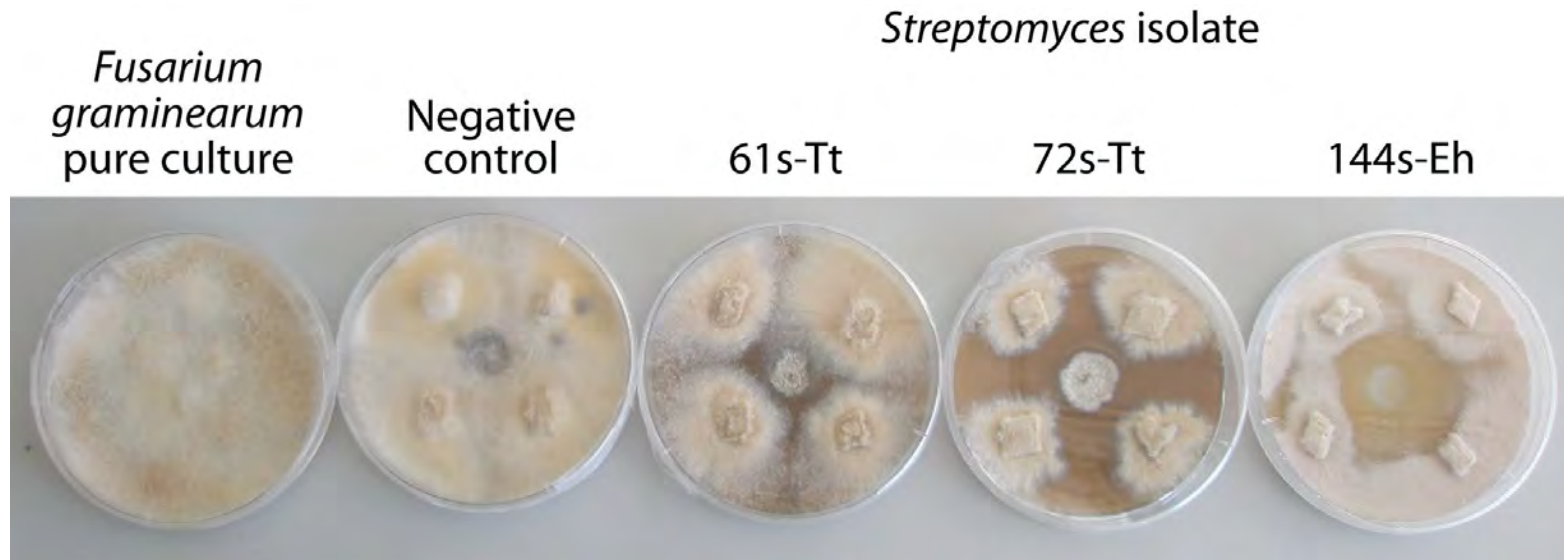


~ **2000 strains** with at least one phylogenetic marker sequenced

- Crops, wild-flowers, trees
- Seeds, roots, stems, leaves

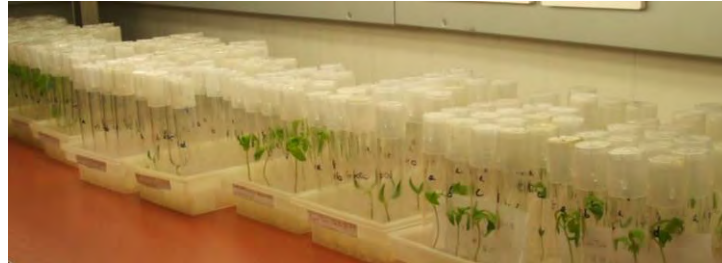
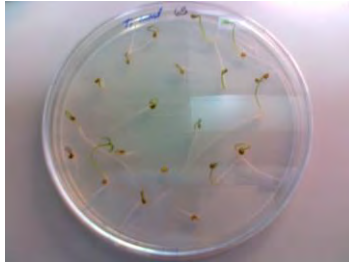


In vitro-characterization

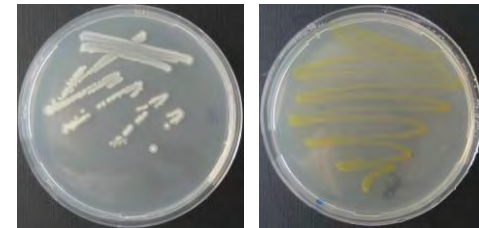


- ACC deaminase / IAA production / P-solubilization
- Antibiotic production

Direct interaction with plants



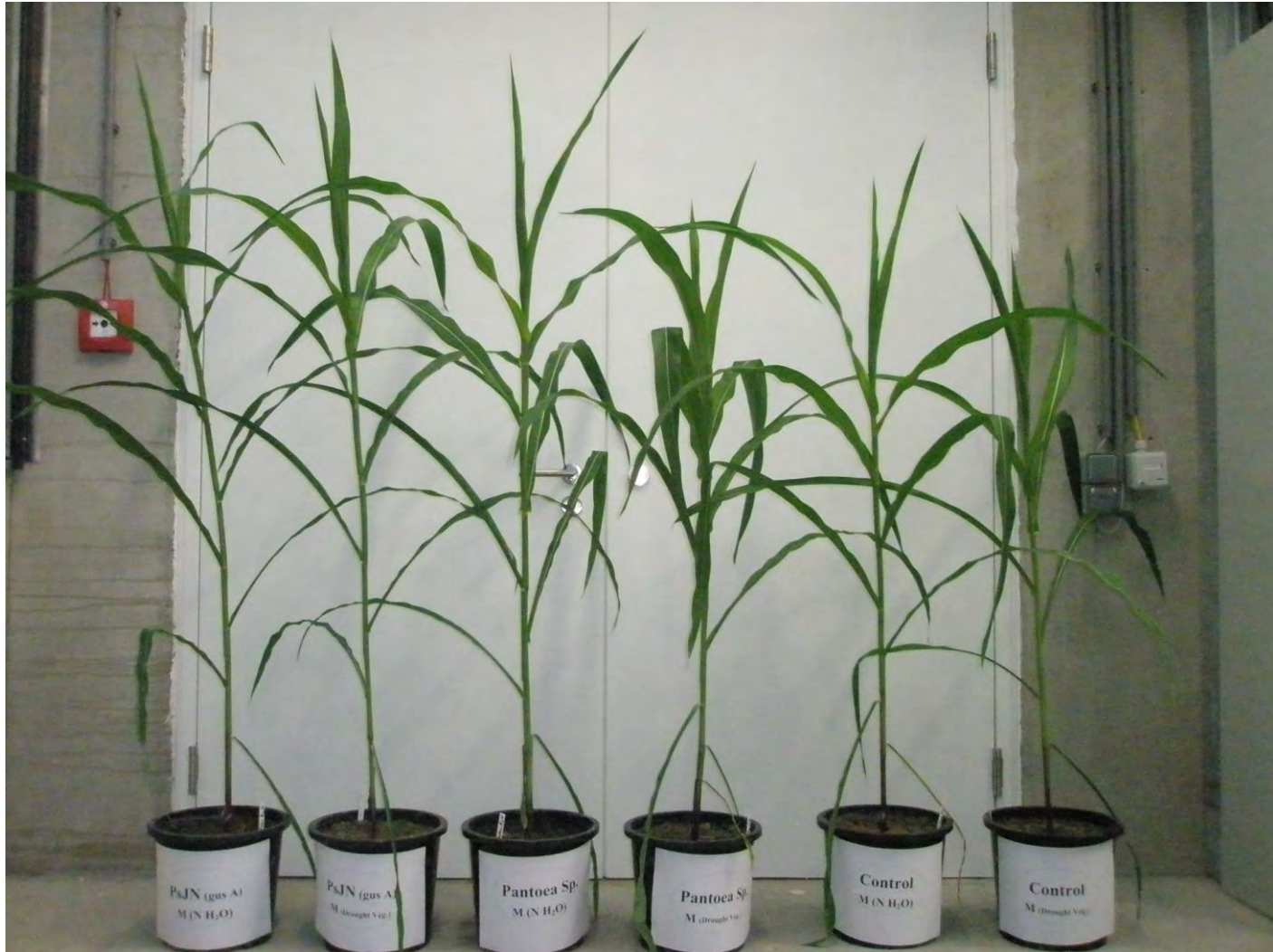
Germination assays and *in-vitro* plant experiments



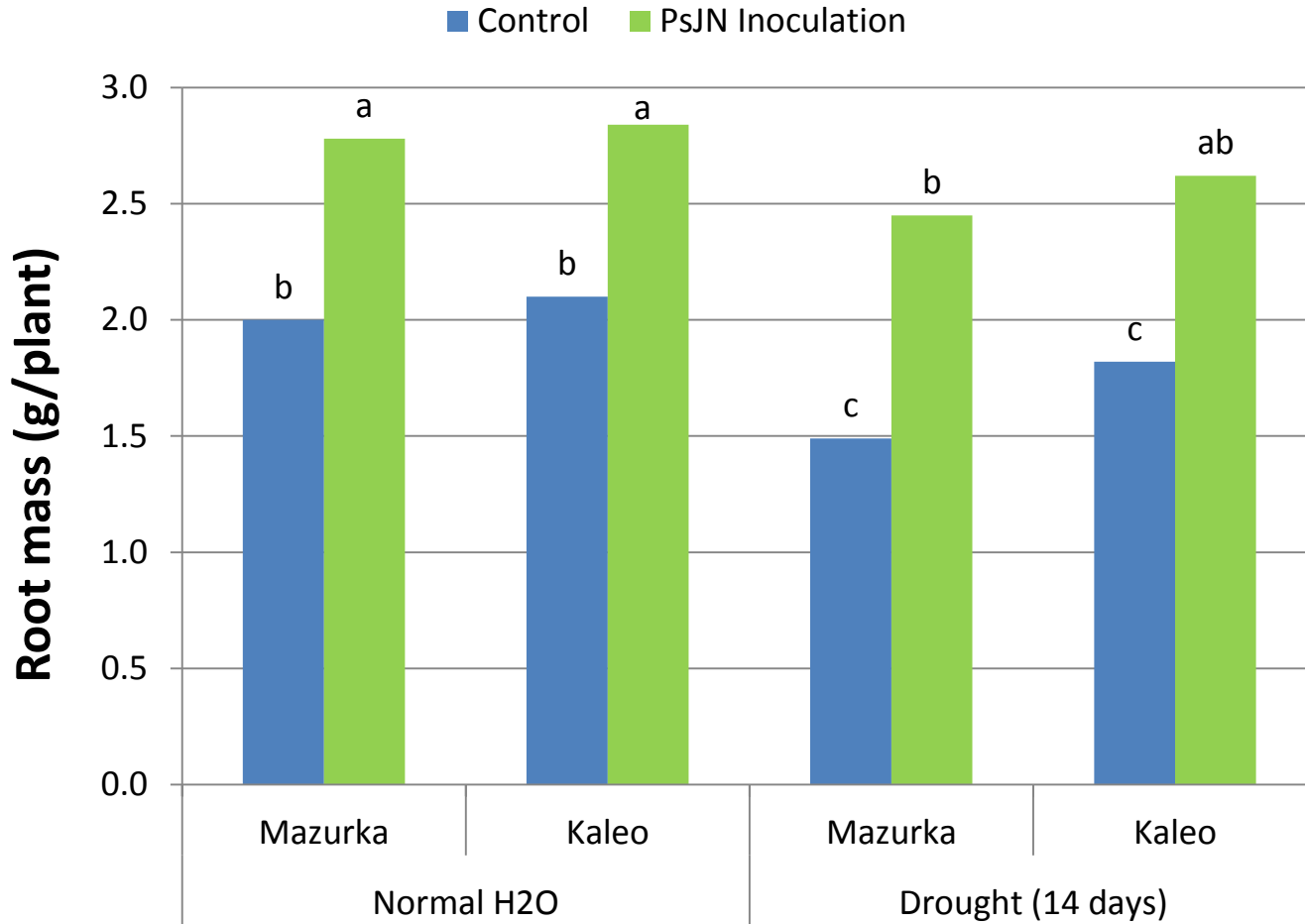
Selection of strains

Greenhouse plant experiments

Drought tolerance

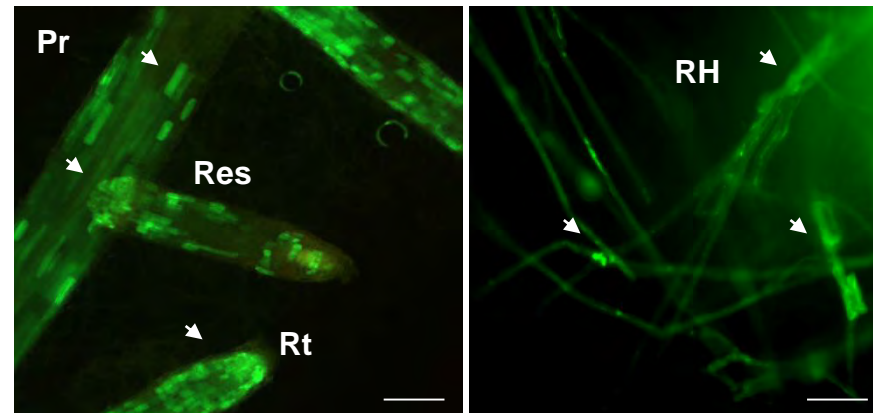


Plant agronomy

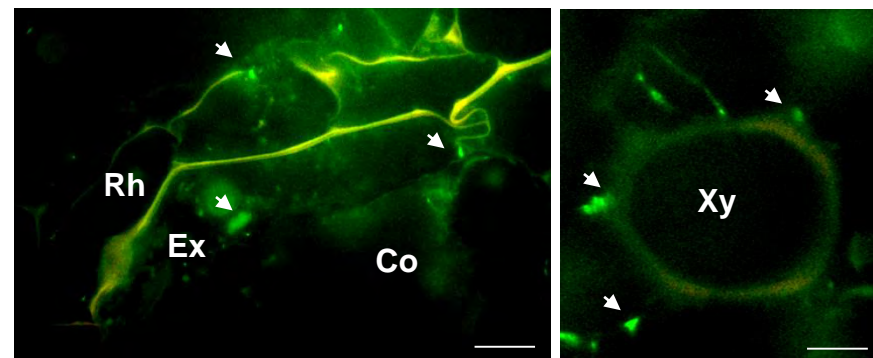


Plant colonization by endophytes

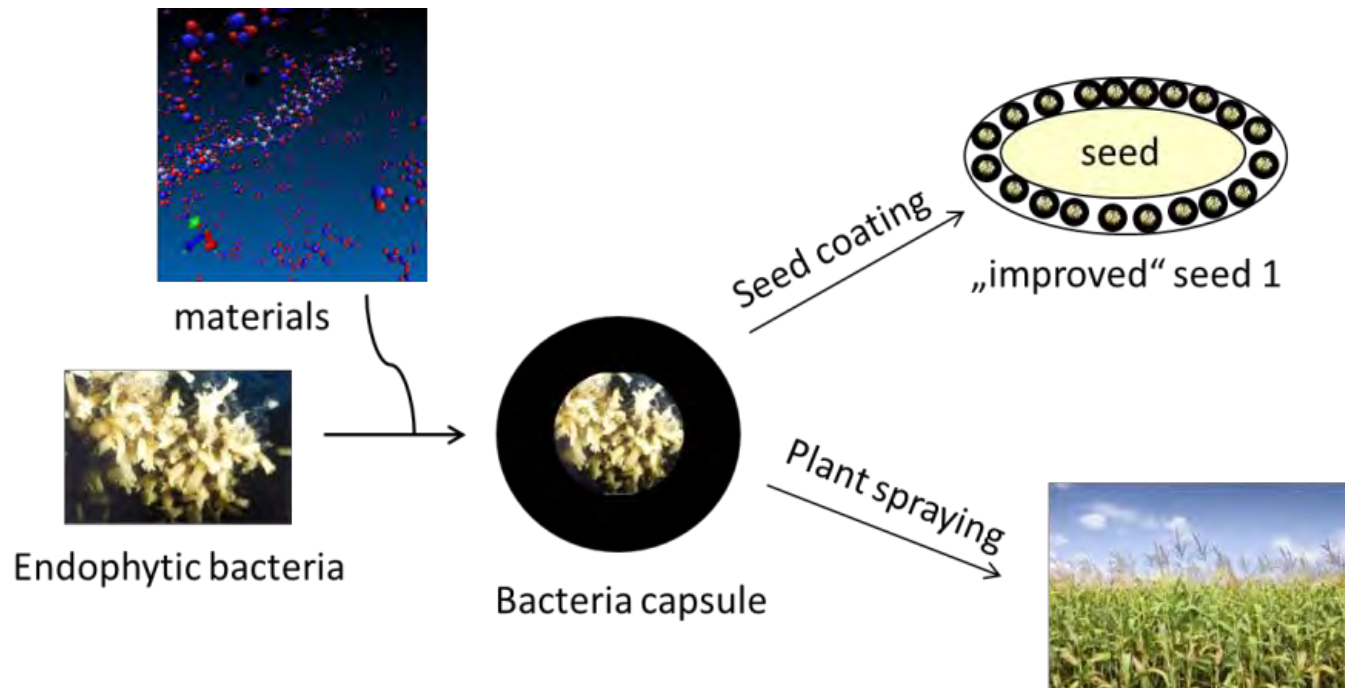
Root surfaces



Endorhiza



New and improved application techniques



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