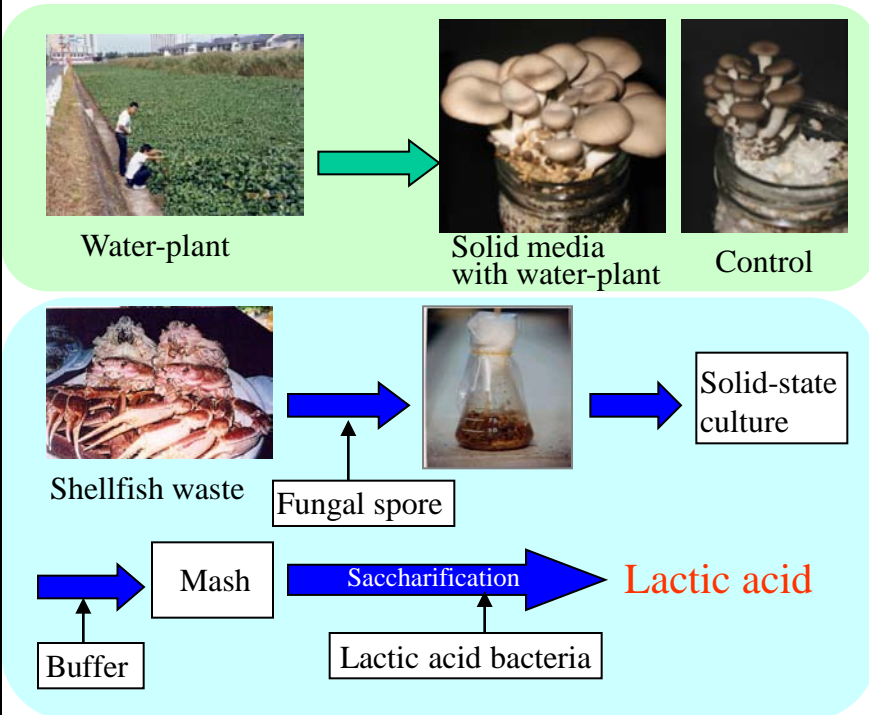


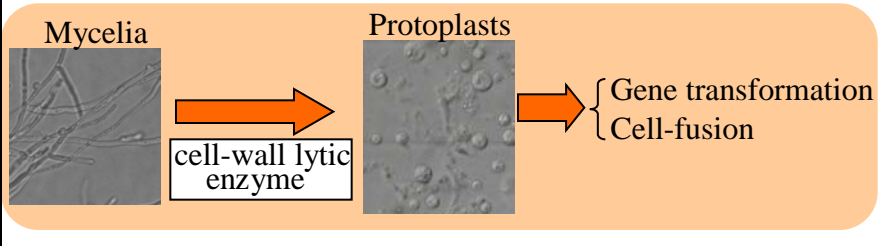
Production of useful substances by microorganisms and microbial enzymes

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1) Bioconversion of low quality biomass.



2) Development of basidiomycete cell-wall lytic enzyme.



Numerous numbers and species of microorganisms live in nature, and they are found everywhere. A large number of microorganisms are necessary for the production of bread, wine, sake, antibiotics, vaccine, vitamins, biofuels, and many other products. Our laboratory is studying microbial functions and enzymes to produce the useful substances.

1) Bioconversion of low quality biomass.

Biotechnological utilization of biomass has been an important subject for decades. But, most of low quality biomass is discarded through incineration, ocean dumping, and land filling. In this study, we construct novel process utilization low quality biomass.

2) Development of basidiomycete cell-wall lytic enzyme.

Basidiomycetes (mushrooms) are valuable not only as food but also as a microbial resource for transformation of biomass, and for improvement of polluted environments. Breeding with modern biotechnology becomes significant, which requires reproducible protoplasts. We study the cell-wall lytic enzyme from several kind microorganisms to form protoplasts.

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