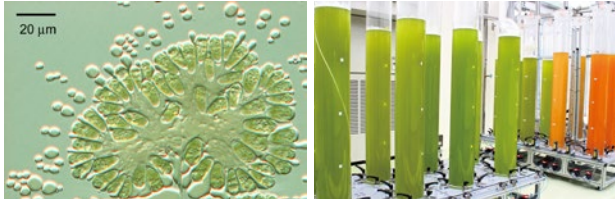


# Algal Biomass Project

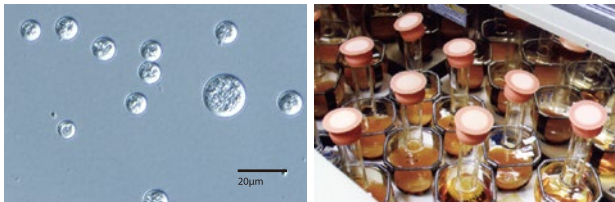
Abandoned rice fields in Tsukuba City are being used to establish a large-scale outdoor system for cultivation of hydrocarbon-producing algae. The resulting algal oil has a wide range of potential uses for biofuels and bioproducts.

## *Botryococcus braunii*



- freshwater green alga of green to red color
- forms 30–500 µm colonies
- fixes carbon dioxide
- produces hydrocarbon (20–70% dry weight)
- produced hydrocarbon is an alternative to fossil fuel

## *Aurantiochytrium*



- brackish water heterotrophic alga
- produces hydrocarbon squalene using organic matter
- contains hydrocarbon in the cell (20–30% dry weight)
- squalene can be used for fuels, cosmetics, drugs, and supplements

## Why algae?

- High productivity per unit time and per unit area
- Various types of land can be used for culturing
- No competition with food production

# Initiatives in Tsukuba International Strategic Zone

## 1. Objectives

A new industry-government-academia collaboration system is to be constructed to change Tsukuba by effectively using the preferential legal and tax measures that are available in the zone. The aim is to attain tangible results in five years from the four pioneering projects in order to solve the problem that we face in the field of Green& Life innovation.

## 2. Construction of a new industry-government-academia collaboration system to change Tsukuba

- Establishing an organization for promoting global innovation in Tsukuba to serve as a core of the collaboration system
- Creating systems for enabling researchers to use leading-edge research facilities of other organizations, producing tangible results, publicizing study resources, and supporting projects on a common platform
- Creating at least 5 new projects in 5 years

## 3. Four pioneering projects

Project 1 <sup>Life-Innovation</sup> Development and implementation of next-generation cancer treatment, BNCT

Project 2 <sup>Life-Innovation</sup> Living with Personal Care Robots

Project 3 <sup>Green-Innovation</sup> Practical use of algal biomass energy

Project 4 <sup>Green-Innovation</sup> Creating a global hub of nanotechnology, TIA-nano

For more information, please contact: [www.tsukuba-sogotokku.jp](http://www.tsukuba-sogotokku.jp)



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# Algal Biomass Project:

Creating our own resources

