



Microbes and the Future of Fuel Production



Hal May, PhD, with his microbes in his lab at the Hollings Marine Laboratory located on Charleston Harbor at Fort Johnson.

around. That was the basis of my hypothesis,” May explains.

Microbes can be found practically everywhere – in the air, ground, water and in living creatures, and they can thrive in dramatically different environments. May and his research assistants made an extensive search looking for the right microbes, and found the best candidates in a cistern behind a local beer brewery.

“Of all the different sources we’ve been using, that’s the one that worked,” May says. “Different stages of fermentation and different types of fermentation. In the end, all of that gets washed out of the tanks and goes into a cistern at the back of the building as a pretreatment before they can release it legally into the Charleston wastewater system. You would expect most of what is in there: a bunch of yeast, leftover sugars, alcohol, vitamins, a few other intermediate fermentation items. That all goes back in the cistern and becomes an even bigger, nastier brew.

“It’s not sterile, of course. They don’t want it to be sterile. They want it to consume as much waste as possible before it goes into the

