

# got biomass? get PNNL...and use it!

Pacific Northwest National Laboratory, one of the U.S. Department of Energy's (DOE's) ten national laboratories, is managed by Battelle for DOE's Office of Science. PNNL also performs research for other DOE offices as well as government agencies, universities, and industry to deliver breakthrough science and technology to meet today's key national needs.

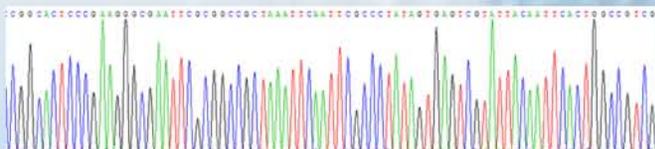
The Laboratory is well-positioned to deliver science-based solutions for alternative energy sources. Researchers are presently focused on finding ways to produce high-value bioproducts, such as chemicals for plastics, fibers and solvents, in addition to fuels and power. In fact, much work is already in process or completed in the areas of biomass conversion, including the fundamental discoveries that make it possible, and biofuel generation methods and technologies.

We believe that meeting energy challenges must be a collaborative effort between industry, government and private citizens. To that end, we continue to look for like-minded organizations working on the same problems. If you're moving in the same direction, let's talk. And let's make a difference. Together.

## DISCOVER

### FUNDAMENTAL RESEARCH

- Genome sequencing
- Fungal morphology

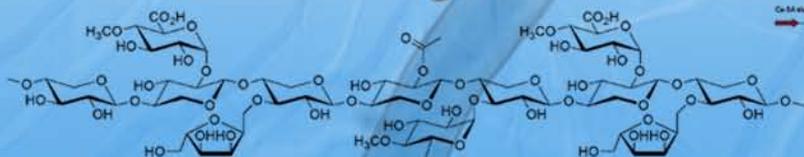
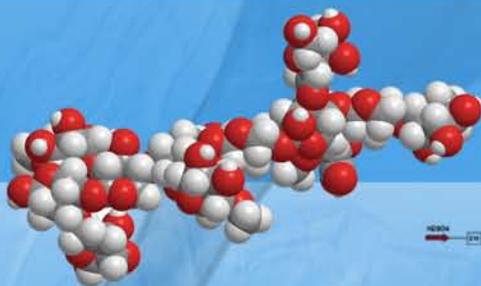


## APPLY



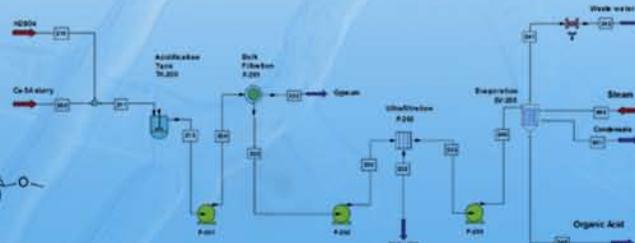
### BIOMASS CONVERSION

- Enzymes
- Chemical catalysts
- Thermochemical methods



### PROCESS DEVELOPMENT

- Corn fiber to products
- Glycerol to products
- Wet biomass, pyrolysis oil, syngas to products



## DEPLOY

### INDUSTRIAL COLLABORATORS:

- ADM
- Cargill, Incorporated
- Celunol Corp
- Dyadic International, Inc.
- Eastman Chemical Company
- Mycosynthetix, Inc.
- Novazyme
- UOP LLC



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National Laboratory  
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Contact: Mark Butcher  
(509) 375-6894  
mark.butcher@pnl.gov