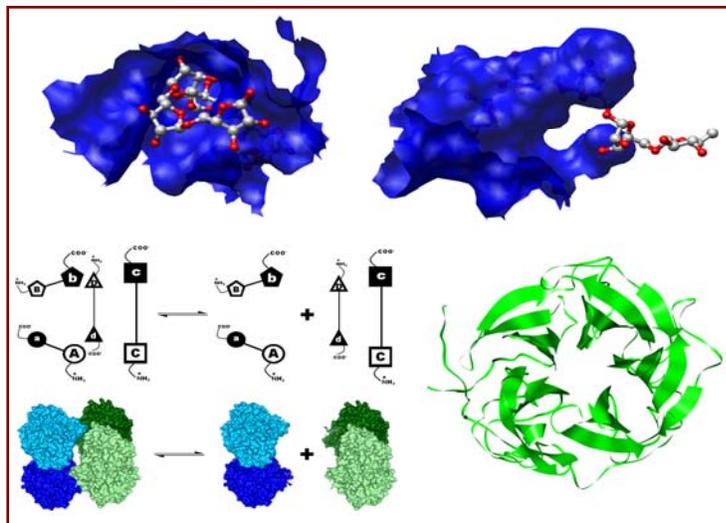


## The Most Active $\beta$ -Xylosidase

### What is this technology?

Enzyme catalyst for conversion of xylan to xylose



### The most active $\beta$ -xylosidase

- 10-fold more active than other  $\beta$ -xylosidases
- More than 1,000,000,000,000-fold faster than spontaneous hydrolysis
- Reduction of enzyme cost by at least 10-fold

### Good stability properties

- Stable at pH 4.3 and above
- Stable at 50 °C and below

### Easy and cheap to produce

- 5 grams enzyme produced per liter of *E. coli*

### Patent protection applied for

- Jordan, D.B., Li, X.-L., Dunlap, C.A., Whitehead, T.R., and Cotta, M.A. Beta-xylosidase for conversion of plant cell wall carbohydrates to simple sugars. US Patent application S/N 11/904/577 PCT/US2007/081010
- Jordan, D.B., Li, X.-L., Dunlap, C.A., Whitehead, T.R., and Cotta, M.A. Beta-xylosidase for conversion of plant cell wall carbohydrates to simple sugars. PCT/US2007/081010.

### Moving Forward

We are looking for highly active enzymes that catalyze other steps in the saccharification of biomass xylan: endoxylanase, arabinofuranosidase, glucuronidase, and galacturonidase.

### Contact Information

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[http://ars.usda.gov/main/site\\_main.htm?modecode=36-20-65-00](http://ars.usda.gov/main/site_main.htm?modecode=36-20-65-00)