

Lignases and Reductases for Biomass Conversion

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- Agriculture
- Green Technology

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- Agriculture
- Biofuels
- Energy
- Ethanol
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Lignin is one of the most abundant natural polymers constituting one-fourth to one-third of the total dry weight of physiologically mature plants, however, it is currently a barrier to the production of second generation, non-food ethanol. Lignin limits access to plant cell wall sugars that can be fermented into bioethanol, and it has a negative impact on overall conversion efficiency.

Purdue University researchers have developed digestive enzymes from termites as lignin targets that enable greater release of fermentable sugars. Utilization of these enzymes has the capacity to increase the yield and conversion efficiency of biomass to ethanol. These enzymes can also have applications in the production of value-added byproducts, as well as more sustainable plant-based fossil fuel additives.

Advantages:

- Breaks lignocellulose down into more accessible sugars for ethanol fuel production
- Increases efficiency of biomass to ethanol conversion

People:

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Intellectual Property:

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