

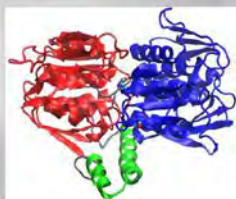
GreenWood Resources licenses BESC invention to boost biofuel yield

- GreenWood Resources has licensed a BESC technology based on the discovery of a gene in *Populus trichocarpa* that makes it easier to convert poplar trees into biofuels.
- GreenWood Resources plans to commercialize the technology to select and breed better varieties of poplar with less lignin content, which simplifies the conversion process and ultimately lowers the overall costs of biofuel production.
- GreenWood and the BioEnergy Science Center will continue to partner in field studies to validate the benefits of the novel plant.

Founded in 1998, GreenWood Resources, Inc., is an integrated global investment company focused on the development and operations of forestry assets with operations in North America, Latin America, and Europe. GreenWood's core competencies — capital investment management, forest science, forest operations and sales and marketing — address the broad skills required to produce superior, risk-adjusted return for investments into intensively-managed forestry assets. Learn more about GreenWood at www.greenwoodresources.com.



Seated: Brian Stanton, Chief Science Officer, GreenWood Resources, and ORNL's Science and Technology Partnerships director Jim Roberto signed an agreement to license BESC's invention to boost biofuel production. Standing, from left to right: Jin-Gui (Jay) Chen, Gerald Tuskan, Brian Davison, Anthony Palumbo, Wellington Muchero, Lee Gunter, and Moe Khaleel. The ORNL-BESC research team (Muchero, Chen, Gunter, and Tuskan) will continue to study the low-lignin content producing plant gene in GreenWood's commercial varieties.



The new plant protein (represented in green) is responsible for regulating lignin biosynthesis and has shown an increase in sugar release of up to 280 percent, resulting in the 250-percent boost in ethanol yield.



BESC lead inventor Wellington Muchero and his team studied natural genetic variants of poplar trees with lower lignin content that best benefits ethanol production.