New Technology Enables Site-Specific Gene Insertion
Precision BioSciences and DuPont Detail Technology Efficacy in *The Plant Journal*

RESEARCH TRIANGLE PARK, N.C. and DES MOINES, Iowa, Oct. 28, 2009 – Precision BioSciences, Inc., and DuPont announced that the Directed Nuclease Editor™ (DNE) technology developed by Precision BioSciences and implemented by DuPont business Pioneer Hi-Bred has achieved a technical milestone. *The Plant Journal* will publish a study demonstrating that Directed Nuclease Editor technology can be used to engineer the genetics of row crops and may be a useful tool for a broad array of genome engineering applications.

In the study, Pioneer scientists used Precision's Directed Nuclease Editor technology to recognize and modify a pre-determined, naturally occurring locus in the corn genome. The genetic modifications introduced by the technology were found to be stable and heritable in corn plants. Moreover, the desired genetic modifications were introduced with high enough efficiency that it was not necessary to use a dedicated selection step to identify mutated plants.

"We are very pleased to share this first-ever successful demonstration of the use of an engineered homing endonuclease to make heritable genome modifications in crop plants," said Jeff Smith, Precision's chief scientific officer. "This data proves that Precision's cutting-edge technology can greatly reduce the time and cost required to develop valuable new crops."

"Directed Nuclease Editor technology is a new tool that could expedite the development and deployment of improved traits such as drought tolerance, pest resistance and increased yield into the Pioneer product lineup," said Michael Lassner, vice president, Trait Discovery – DuPont Agricultural Biotechnology. "We are extremely satisfied with Pioneer's collaboration with Precision BioSciences."

"These experimental results validate the use of Precision's Directed Nuclease Editor technology in important agricultural crops," said Matthew Kane, Precision's chief executive officer. "This announcement further solidifies Precision's position as the technological leader in the field of engineered endonucleases and genomic molecular biology."

Precision BioSciences' mission is to utilize its engineered endonuclease technology to become the world leader in the field of genomic molecular biology. Precision's proprietary Directed Nuclease Editor™ (DNE) technology enables the production of custom genome editing enzymes that can insert, remove, modify, and regulate essentially any gene in mammalian or plant cells.

Precision BioSciences has already produced hundreds of custom endonucleases for partners and internal development that can precisely alter naturally occurring sequences within genomes. Precision has successfully partnered its DNE technology with several of

the world's largest agbiotech firms and is internally developing applications in biological production and human therapeutics.

Pioneer Hi-Bred, a DuPont business, is the world's leading source of customized solutions for farmers, livestock producers and grain and oilseed processors. With headquarters in Des Moines, Iowa, Pioneer provides access to advanced plant genetics in nearly 70 countries.

DuPont is a science-based products and services company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture and food; building and construction; communications; and transportation.

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