

Novel Agrobacterium Strains That Will Transiently Express But Not Integrate T-DNA

Optimize plant genetics with a new agrobacterium strain that achieves T-DNA transfer and gene expression without integrating into the host genome.

Researchers at Purdue University have developed a new agrobacterium strain for genetic transformation in plants. Agrobacterium is used to append a region of transfer DNA (T-DNA) of tumor-induced (Ti-)plasmid to a plant, and T-DNA is processed from virD1 and virD2 virulence proteins to achieve genetic transformation. Traditionally, this process often leads to undesired genetic alterations. Purdue researchers have optimized a process for synthesizing a new agrobacterium strain to transfer T-DNA without integrating it into the plant genome.

Advantages:

-Gene Expression Without Genome Integration

-T-DNA Transfer to Plants

Potential Applications:

-Plant Genetics

-Agrobiosciences

Technology Validation: New mutations of virD2 have been studied

Recent Publication:

Dr. Stanton Gelvin's Project Webpage

<https://www.bio.purdue.edu/People/faculty/gelvin/gelvinweb/completeproposal.html>

TRL: 2

Intellectual Property:

Technology ID

2021-GELV-69237

Category

Agriculture, Nutrition, &
AgTech/Precision Agriculture &
Smart Farming
Agriculture, Nutrition, &
AgTech/Crop Genetics &
Breeding
Biotechnology & Life
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Authors

Stanton Gelvin

Lan-Ying Lee

Further information

Raquel Peron

rperon@prf.org

View online



Provisional-Gov. Funding, 2020-10-09, United States | Utility-Gov. Funding,
2021-10-06, United States | CIP-Gov. Funding, 2024-04-10, United States