

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

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- Agriculture

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- Agbiotech
- Agriculture
- Agrobacterium transformation
- Agrobiosciences
- DNA
- DNA & RNA Tools
- Gene Expression
- Plant Genetics
- Plants
- Protein Interaction and Functions

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/completenessproposal.html>

People:

- Gelvin, Stanton B. (Project leader)
- Lee, Lan-Ying

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