

Tobacco Plant Lights Up After Scientists Insert Firefly Gene

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Description

In 1986, Univ. of California scientists use genetic engineering to insert into a tobacco plant the gene from the firefly that produces its chemical glow. The result: a tobacco plant that glows in the dark.

Keywords

Firefly, Lightning Bugs, Glow, Gene, Genes, Gene Transfer, Tobacco Plant, Tobacco Leaf, Genetic Engineering, Chemical DNA, Luciferase, Active Gene, Inactive Gene, Glow In the Dark, Bioluminescence, University of California, San Diego, California, Insects, Bugs, Plants, Molecular Biology, Biology

Citation

MLA

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APA

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Transcript

Tobacco Plant Lights Up After Scientists Insert Firefly Gene

JOHN PALMER, anchor:

Scientists in California have produced a tobacco plant that glows in the dark. Science editor Bob Bazell tells us how they did it, and why.

ROBERT BAZELL, reporting:

It is one of the best examples of how powerful the science of genetic engineering has become. A simple tobacco plant has been made to glow in the dark, because scientists were able to take the gene that creates the glow from a firefly and insert it into the plant. There is clearly not a big market for glowing tobacco plants, but the researchers at the University of California, San Diego see the experiment as a significant achievement.

DR. MARLENE DeLUCA (University of California): We feel that it's going to be a major new tool in molecular biology.

BAZELL: Fireflies glow because they produce a chemical called luciferase. The light can be a beautiful sight on a summer evening. In the laboratory scientists can make the same glow with the chemical. The researchers first obtain the gene or the piece of the chemical DNA which makes the glowing chemical in fireflies. Next, using genetic engineering, they transfer the gene into pieces of the plants. These pieces grow into whole plants which glow. Usually it is difficult to know whether a particular gene is active or inactive, but not with the glowing firefly gene.

DR. STEPHEN HOWELL (University of California): Because the gene produces a product that makes light, we can actually obtain a map of a plant that tells us where within the plant the gene is actually being turned on or being turned off.

BAZELL: The California scientists say they will try to put the glowing firefly gene into several other plants, maybe even into animals. Robert Bazell, NBC News.

