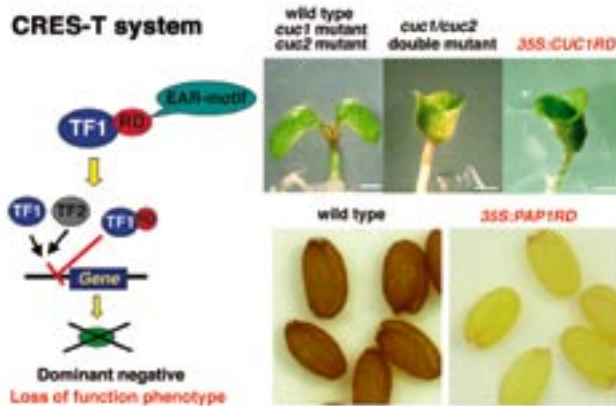# The Novel Gene Silencing Technology: CRES-T

The redundancy of genes for plant transcription factors often interferes with efforts to identify the biological functions. To overcome such redundancy we have developed a novel gene silencing system by using a dominant repressor, which was designated as CRES-T. We demonstrated feasibility and efficiency of the CRES-T system in several plant transcription factors of different families in transgenic plants. This CRES-T system is simple and effective compared existing gene silencing system and can overcome genetic redundancy. This system would be useful not only for the rapid analysis of the functions of transcription factors but also for the manipulation of plant traits.
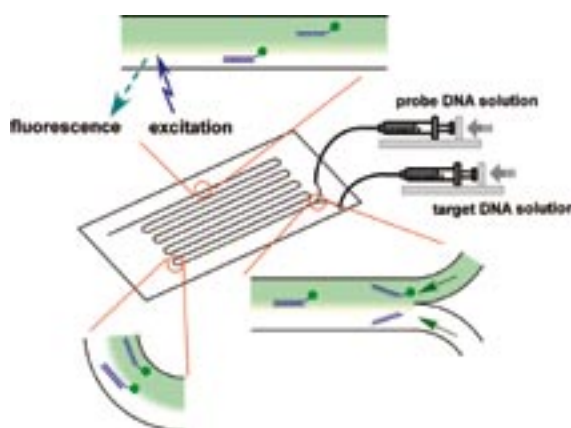
Masaru TAKAGI (Ohme)

*Gene Function
Research Center
e-mail:
m-takagi @aist.go.jp
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The novel gene silencing technology (CRES-T; left) ant its dominant negative phenotypes: cup-shaped cotyledon (right upper) and suppression of tannin accumulation on seeds (right lower).

A Novel Microfluidic Analysis Method for Simple Sequence-Selective DNA Detection

On-site detection methods for DNA have been demanded in the pathophysiology field. Such analysis requires a simple and accurate method, rather than high-throughput. This report describes a novel microfluidic analysis method and its application for simple sequence-selective DNA detection with high accuracy. A microchannel offers superior controllability of fluids. The method uses a microchannel device with a serpentine structure. This method does not require immobilization of probe or target DNA: solutions are merely injected into the microchannel and all reactions occur in the liquid phase. Such features might lower the experimental error and difference in data by operators.

Kenichi YAMASHITA

*Micro-Space Chemistry
Laboratory
e-mail:
yamashita-kenichi@aist.go.jp
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Schematic procedure of the sequence-specific DNA detection in microfluidic device