

8<sup>th</sup> World Congress on

## PLANT GENOMICS AND PLANT SCIENCE

August 10-11, 2018 Osaka, Japan

**Establishment of the TRV delivery system using *Nicotiana benthamiana* Cas9 over-expressing plants****Jong-Pil Hong, Hye-Eun Lee, Eun Su Lee, Jinhee Kim and Do-Sun Kim**

National Institute of Horticultural and Herbal Science, South Korea

Clustered regularly interspaced palindromic repeats (CRISPRs)/CRISPR associated (Cas) is currently known as a very powerful genome editing technology, and it is also success in many plants. Here, we first made Cas9 overexpressing tobacco plants through agrobacterium-mediated transformation method. Tobacco Cas9 overexpressing plants confirmed the Cas9 expression level by RT-PCR analysis. PDS (positive control) and eIF4E genes infiltrated in tobacco plants systemically. Expression of PDS and eIF4E confirmed the time course (0, 6, 24, 48, 72 hrs) by RT-PCR analysis. We are produced the new tobacco plants using transient expressing leaf through tissue culture, and the seeds are harvested and then selected from the selective germination medium (with antibiotic). If these results are successful, the TRV (Tobacco Rattle Virus) delivery system will be able to be very efficiently in many plant species.

**Biography**

Jong-Pil Hong is conducting the research on the development of molecular marker in various vegetables. I work at the National Horticultural Science Institute in South Korea, and now I study about genome editing technology using tobacco (*Nicotiana benthamiana*) and tomato (Micro-tom) and development of vaccine protein using Chinese cabbage.

hongjp92@korea.kr

Notes: