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# A CGMMV genome-replicon vector with partial sequences of coat protein gene efficiently expresses GFP in *Nicotiana benthamiana*

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## Highlights

- A highly infectious clone of CGMMV was utilized for the designing of gene expression vectors.
- Full-genome vector resulted in ~23-45 folds expression of GFP over actin in tobacco at 10-14 dpi.
- Deletion of most of the CP sequence resulted in 233.94 fold increase in expression ay 5 dpi.
- First time showed efficient replicon vector for CGMMV that produces no disease and virus in plant
- It showed larger gene can be expressed in CGMMV vector for production of edible vaccine in cucurbit.

## Abstract

A highly infectious clone of *Cucumber green mottle mosaic virus* (CGMMV), a cucurbit-infecting tobamovirus was utilized for designing of gene expression vectors. Two versions of vector were examined for their efficacy in expressing the green fluorescent protein (GFP) in *Nicotiana benthamiana*. When the GFP gene was inserted at the stop codon of coat protein (CP) gene of the