Summary

Rice is a major food crop for the entire human race and grown in various agro-climatic zone. More then 70 diseases caused by fungi, bacteria, viruses or nematodes have been recorded, among which rice blast, caused by the fungus *Magnaporthe grisea* (Hebert), is the most devastating disease. The rice blast fungus has emerged as a model system for the study of plant– pathogen interactions. The use of fluorescent reporter protein becomes a useful tool for plant-pathogen interaction studies. DsRed isolated from *Discosoma corallimorpharian* has impressive brightness and stability against pH changes, denaturants, and photobleaching make it much more applicable then other IFP's like GFP. Hence, an attempt has been made in the present investigation for cloning and expression of DsRed in *M.grisea* . The main conclusions of the present investigation are summarized below.

Gene for DsRed was cloned into KS+ vector from its parent plasmid pTY24. Further it was subcloned into an expression vector having 35SD promoter and pCaMV terminator.

The gene cassette i.e. the DsRed gene along with the 35SD promoter and pCaMV terminator was subcloned into a binary vector pCAMBIA 1305.2. ATMT was carried out to transform *Magnaporthe grisea.* Transformants were characterized under fluorescent microscopy. Transformants were appeared red where as untransformed were not visible in red filter.

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