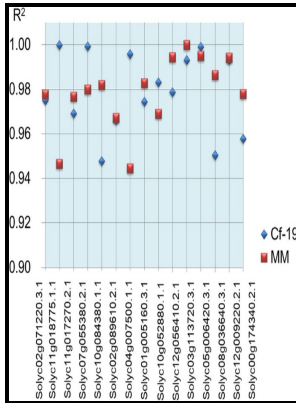


# Genetic analysis of two tomato genes for resistance to Cladosporium fulvum.

University of East Anglia - Characterization of the tomato Cf



Description: -

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## Genetic and molecular analysis of tomato Cf genes for resistance to Cladosporium fulvum

Bai H, Cao Y, Quan J, Dong L, Li Z, Zhu Y, Li D. SLAF-seq: an efficient method of large-scale de novo SNP discovery and genotyping using high-throughput sequencing.

### Frontiers

In addition, we found that 736 DEGs shared among the above three groups, suggesting the presence of a common core of DEGs in response to C. This triggers downstream defense signaling transductions associated with the Ca<sup>2+</sup> channel, as well as several pathways, including pathways involving jasmonic acid, brassinosteroid and ethylene. Sequence analysis showed that Solyic01g006550.

### Frontiers

Results from combined data analysis of parental resequencing and F<sub>2</sub> SLAF-seq. Chi-square analysis showed that the segregation ratio of the resistant and susceptible individuals of the F<sub>2</sub> population was 3:1.

## Functional analysis of Avr9/Cf

Cf genes encode extracellular membrane-anchored glycoproteins comprised predominantly of 24 amino acid leucine-rich repeats LRRs. Studies have unraveled the distinct recognition mechanism between Cf genes and Avr9s such as the interaction between Cf-2 and Avr2 ; and between Cf-9 and Avr9. Leaf samples were harvested at 0—15 days of post-infection dpi for microscopic analysis.

## RFLP linkage analysis of the Cf

Gene expression levels were calculated based on the length of the gene, sequencing depth and read count mapped to this gene using the Fragments Per Kilobase of transcript sequence per Millions base pairs sequenced FPKM; method. Responses to infection depend on different gene expression levels, which require various transcription factors. One of the most efficient containments is breeding C.

## **RFLP linkage analysis of the Cf**

Database Link and Accessions The raw sequencing data of the nine samples have been submitted to the NCBI Sequence Read Archive SRA,. Genetic and molecular analysis of tomato Cf genes for resistance to *Cladosporium fulvum*.

## **Mapping and candidate gene screening of tomato *Cladosporium fulvum***

The growing condition was 16-h light and 8-h darkness at 25°C with an ambient humidity of 95%. Conflict of Interest Statement The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. DOCX 16 kb Open Access This article is distributed under the terms of the Creative Commons Attribution 4.

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