

## **1547 Characterization of an organ specific and pathogen responsive CC-NBS-LRR gene from Cotton (*Gossypium hirsutum* L.)**

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Cotton diseases represent a major challenge to cotton growth. Cloning of cotton pathogen response gene and promoter was of great importance for us to improve disease resistance. In this study, a full length CC-NBS-LRR gene (*GHNBS*) and its 5' flanking sequence have been cloned by race and tail PCR and further studied. The entire coding region is 2583bp and encodes a polypeptide of 861 amino acids with 28% maximum homology to an R gene of *Arabidopsis* deposited in the GenBank. Semi Quantitative RT-PCR showed *GHNBS* expressed in floral bud, petal, phloem, root and leaf and has a more expression pattern in root and leaf. The 5' flanking sequence of *GHNBS* contained CAAT-box, TATA-box, several pathogen, SA, MeJA and ethylene responsive elements by PLACE analysis. Different 5' promoter deletion derivatives with the coding region of the GUS gene fusions were transformed into *Arabidopsis*. Histochemical localization showed strong staining in roots, phenol of the stem and leaf vein. *GHNBS* promoter was up regulated after SA, ABA, MeJA, ethylene and Pathogen DC3000 treatments.