



# Isolation and characterization of the *Chrysanthemum* nitrate transporter CmNRT1

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**ABSTRACT.** In this study, the nitrate transporter gene *CmNRT1* was isolated from the chrysanthemum variety 'Nannongxuefeng'. The full-length cDNA contains an open reading frame of 1761 bp encoding 587 residues. Using qRT-PCR, we found that *CmNRT1* was induced by 10 mM  $\text{NO}_3^-$  in roots and shoots. Two *Arabidopsis thaliana* transgenic plants expressing *CmNRT1* were selected for functional analyses. Root  $^{15}\text{N}$  influx in wild-type and transgenic *A. thaliana* lines under 10 or 0.2 mM  $^{15}\text{NO}_3^-$  was tested. Our results indicate that *CmNRT1* encodes a constitutive component for a low-affinity transporter.

**Key words:** Chrysanthemum; Nitrogen; Nitrate transporter