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light on this fascinating chemical process.

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NtcA activates the *nblA* gene of the cyanobacterium *Synechococcus* sp.

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Non-diazotrophic cyanobacteria degrade their light-harvesting antennae, the phycobilisomes, when exposed to a variety of stress conditions, including nitrogen starvation. This phenomenon, termed chlorosis or bleaching has been shown to be dependent of the response regulator NblR in *Synechococcus* sp. PCC 7942. The expression of *nblA*, a key gene in degradation of phycobilisomes is induced during nitrogen starvation, although previous work failed to show the direct involvement of NtcA, the global regulator for nitrogen control, on *nblA* expression.

To throw some light on the molecular mechanism by which the *nblA* gene responds to nitrogen, we performed structural and functional analysis of the 5' region of *nblA* in *Synechococcus* sp. PCC 7942 and a derivative strain in which the *ntcA* gene has been inactivated. Our results indicate that *nblA* transcription can initiate at several promoters and that the most active one, *PnblA-2*, is indeed directly regulated by NtcA under nitrogen starvation conditions. We report the binding of purified NtcA to DNA fragments including the *nblA* regulatory region and discuss possible implications of the particular promoter structure found at the non-canonical NtcA regulated promoter *PnblA-2*.