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Letter to the Editor

NMR assignment of the *E. coli*-II cytolethal distending toxin CdtB subunit

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Cytolethal distending toxin (CDT) is a secreted protein produced by a number of disease-causing bacteria. CDT is encoded by three adjacent genes: *cdtA, cdtB* and *cdtC*. Although all three subunits (the holotoxin) are required for activity, several lines of evidence suggest that CdtB (29 kDa.) is the catalytic subunit. It bears structural and functional homology to mammalian type I DNase, and when conserved residues are mutated, CDT biological activity is abolished (Elwell and Dreyfus, 2000). Following CdtA- and CdtC-dependent cell surface binding and endocytosis, CdtB is delivered to the nucleus of the cell, causing DNA damage-triggering apoptosis. NMR structural and dynamics studies of free *E. coli*-II CdtB are ongoing to elucidate structure/function relationships through comparison to the available CDT holotoxin x-ray crystal structure. 2D and 3D heteronuclear NMR spectra were recorded using uniformly ^{15}N-,^{13}C-, ^{2}H-labeled protein. Nearly complete backbone $^{1}H^{N}$, ^{13}C, and ^{15}N and side-chain $^{13}C\beta$ resonances were assigned. The BMRB accession number is 6758.

Reference: Elwell and Dreyfus (2000) *Mol. Microbiol.*, **37**, 952–963.

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