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Letter to the Editor

NMR assignment of the Wilson disease associated protein N-domain

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Wilson disease protein (ATP7B) is a P-type human copper-transporting ATPase. The ATP7B N-domain (WNBD) is responsible for ATP binding and has low sequence homology to the N-domains of the other eukaryotic P-type ATPases (Lutsenko et al., 2002). We have assigned chemical shifts of the isolated WNBD, which is 165 amino acids long, in the ATP-bound form. All the accessible ^{1}H, ^{15}N and ^{13}C backbone chemical shifts and about 95% of the side chain chemical shifts have been assigned. Chemical shifts were deposited at BMRB under the Accession No. 6914. Besides calculating the structure, the chemical shift assignments were used for mapping the ATP binding site in the N-domain by comparison to the nucleotide-free form of the protein and for analysis of the ATP binding parameters of the frequent Wilson disease variant of the protein H1069Q (Dmitriev et al., 2006). Furthermore, the WNBD backbone chemical shift assignments will be useful for mapping interdomain contacts in Wilson disease protein and structure-based inhibitor design.

References: Dmitriev et al. (2006) *Proc. Natl. Acad. Sci.*, **103**, 5302–5307; Lutsenko et al. (2002) *J. Bioenerg. Biomembr.*, **34**, 351–362

Oleg Y. Dmitriev[a,*], Ruslan Tsivkovskii[b], Frits Abildgaard[c] & Svetlana Lutsenko[b]
[a]*Department of Biochemistry University of Saskatchewan, Saskatoon, SK, S7N 5E5 Canada;* [b]*Oregon Health & Science University, Portland, OR, USA;* [c]*University of Wisconsin-Madison, Madison, WI, USA*

*To whom correspondence should be addressed. E-mail: Oleg.Dmitriev@usask.ca