

## Supplementary Data

<i>Homo sapiens</i>	PRIE <b>L</b> HNIDPNF
<i>Macaca fascicularis</i>	PRMEL <b>L</b> HNIDPNF
<i>Macaca mulatta</i>	PRVEL <b>L</b> HNIDPNF
<i>Canis lupus familiaris</i>	PRMEL <b>L</b> HNIDPNF
<i>Felis catus</i>	PRKEL <b>L</b> HNIDPNF
<i>Bos taurus</i>	PRMEL <b>L</b> HNIDPNF
<i>Rattus norvegicus</i>	PRVEL <b>L</b> HNIDPDF
<i>Mus musculus</i>	PRVEL <b>L</b> HNIDQDF
<i>Gallus gallus</i>	PRVEL <b>L</b> HNIDPMF
<i>Salmo salar</i>	PRLE <b>L</b> HNIDPLY
<i>Aedes eegypti</i>	PRRVV <b>L</b> NMIDEIY

**SUPPLEMENTARY FIG. S1.** The histidine residue at position 393 of human arylsulfatase B (ARSB) is highly conserved. ARSB protein sequences from different species were aligned using BlastP. The histidine residue at position 393 of the ARSB protein from *Homo sapiens* and the corresponding residues from other species are indicated in bold and highlighted in green when conserved or in red when divergent. The following entries were used for the alignment: *Homo sapiens*, NP\_00037.2; *Macaca fascicularis*, XP\_005557290.1; *Macaca mulatta*, XP\_001108389.1; *Canis lupus familiaris*, NP\_001041598.1; *Felis catus*, NP\_001135731.1; *Bos taurus*, NP\_001094645.1; *Rattus norvegicus*, NP\_254278.1; *Mus musculus*, NP\_033842.3; *Gallus gallus*, XP\_003642960.1; *Salmo salar*, NP\_001167123.1; *Aedes aegypti*, XP\_001650409.1.