



Supplementary Figure 1: Dendrogram of functionally characterised $\Delta 6$ -desaturases from various organisms.

$\Delta 6$ and $\Delta 8$ spl stand for $\Delta 6$ -fatty acid desaturase and $\Delta 8$ -sphingolipid desaturase, respectively. The putative substrates are given in brackets (*sn*-1-MGD = acyl group at the *sn*-1 position of monogalactosyl diacylglycerol; *sn*-2-PC = acyl group at the *sn*-2 position of PC).

The abbreviations used for the organisms and the corresponding GenBank accession numbers are: Sp $\Delta 6$, *Spirulina platensis* (X87094); Ssp. $\Delta 6$, *Synechocystis sp.* (L11421); Ce $\Delta 6$, *Caenorhabditis elegans* (AF031477); Pt $\Delta 6$, *Phaeodactylum tricornutum* (AY082393); Sd $\Delta 6$, *Saprolegnia diclina* (AX576988), Pi $\Delta 6$, *Pythium irregulare* (AF419296); Ma $\Delta 6$, *Mortierella alpina* (AF110510); Mr $\Delta 6$, *Mucor rouxii* (AY392409); Ra $\Delta 6$, *Rhizopus oryzae* (AY583316); Mp $\Delta 6$, *Marchantia polymorpha* (AY583463); Pp $\Delta 6$, *Physcomitrella patens* (AJ222981); Cp $\Delta 6$, *Ceratodon purpureus* (AJ250735); Pf $\Delta 6$, *Primula farinosa* (AY234125); Eg $\Delta 6$, *Echium gentianoides* (AY055117); Bo $\Delta 6$, *Borago officinalis* (U79010); At $\Delta 8$ sph., *Arabidopsis thaliana* (AJ224161); Ha $\Delta 8$ sph., *Helianthus annuus* (X87143); Bo $\Delta 8$ sph., *Borago officinalis* (AF133728); Gg $\Delta 6$, *Gallus gallus* (XM_421053); Mm $\Delta 6$, *Mus musculus* (NM_019699); Hs $\Delta 6$, *Homo sapiens* (AF084559); Dd $\Delta 5/6$, *Danio rerio* (bifunctional desaturase, AF309556); Om $\Delta 6$, *Oncorhynchus mykiss* (AF301910); Sm $\Delta 6$, *Scophthalmus maximus* (AY546094); SpD6 *Sparus aurata* (AY055749).