

## **Description of Additional Supplementary Files**

**File name:** Supplementary data S1

**Description:** List of significantly affected proteins in *Synechocystis* PCC 6803 by reduction/oxidation through DTT/DTNB.

**File name:** Supplementary data S2

**Description:** Table of all detected peptides across LiPSMap experiments with fold-change and significance statistics; *Synechocystis* PCC 6803.

**File name:** Supplementary data S3

**Description:** Table of all detected peptides across LiPSMap experiments with fold-change and significance statistics; *Synechococcus* PCC 7942.

**File name:** Supplementary data S4

**Description:** Table of all detected peptides across LiPSMap experiments with fold-change and significance statistics; *Cupriavidus necator*.

**File name:** Supplementary data S5

**Description:** Table of all detected peptides across LiPSMap experiments with fold-change and significance statistics; *Hydrogenophaga pseudoflava*.

**File name:** Supplementary data S6

**Description:** List of all proteins affected by at least one metabolite and their KEGG orthology groups (KOGs).

**File name:** Supplementary data S7

**Description:** List of all significant peptides in LiP-SMap experiment with magnesium and ATP.

**File name:** Supplementary data S8

**Description:** Phylogenetic trees of Calvin cycle enzymes labelled with detected protein-metabolite interactions.

**File name:** Supplementary data S9

**Description:** Raw data for kinetic-, melting temperature and light scattering assays.