

## *Supplementary Material*

**Additional file 1** List of metabolites predicted to be available for Mtb inside the host and their predicted maximal uptake rates.

|    | Metabolite |             | Maximal uptake rate                        |
|----|------------|-------------|--------------------------------------------|
|    | RECON 2    | sMtb        | (mmol·gDW <sup>-1</sup> ·h <sup>-1</sup> ) |
| 1  | ala_L      | ALA         | 1                                          |
| 2  | pa_hs      |             | 1                                          |
| 3  | amp        | AMP         | 1                                          |
| 4  | arg_L      | ARG         | 1                                          |
| 5  | asn_L      | ASN         | 1                                          |
| 6  | asp_L      | ASP         | 1                                          |
| 7  | atp        | ATP         | 1                                          |
| 8  | chsterol   | CHOLESTEROL | 0                                          |
| 9  | cmp        | CMP         | 0.37                                       |
| 10 | cys_L      | CYS         | 1                                          |
| 11 | dag_hs     | DAG         | 1                                          |
| 12 | damp       | DAMP        | 0.30                                       |
| 13 | dcmp       | DCMP        | 1                                          |
| 14 | dgmp       | DGMP        | 0.28                                       |
| 15 | dtmp       | DTMP        | 0.08                                       |
| 16 | gln_L      | GLN         | 1                                          |
| 17 | glu_L      | GLU         | 1                                          |
| 18 | gly        | GLY         | 0.02                                       |
| 19 | glygn2     |             | 0.21                                       |

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|    |            |                     |      |
|----|------------|---------------------|------|
| 20 | gmp        | GMP                 | 1    |
| 21 | hdca       | HEXADECANOATE       | 0.32 |
| 22 | hdcea      | 9HEXADECENOATE      | 1    |
| 23 | his_L      | HIS                 | 1    |
| 24 | ile_L      | ILE                 | 1    |
| 25 | leu_L      | LEU                 | 1    |
| 26 | met_L      | MET                 | 0.12 |
| 27 | ocdca      | OCTADECANOATE       | 1    |
| 28 | ocdcea     | 9OCTADECENOATE      | 0.03 |
| 29 | pail_hs    | PITBA               | 0.23 |
| 30 | pchol_hs   | PHOSPHATIDYLCHOLINE | 1    |
| 31 | pe_hs      | ETHA                | 1    |
| 32 | pglyc_hs   | PG                  | 1    |
| 33 | phe_L      | PHE                 | 1    |
| 34 | pro_L      | PRO                 | 1    |
| 35 | ps_hs      | PS                  | 1    |
| 36 | ser_L      | SER                 | 0    |
| 37 | sphmyln_hs |                     | 0.05 |
| 38 | tag_hs     | TAG                 | 1    |
| 39 | thr_L      | THR                 | 1    |
| 40 | trp_L      | TRP                 | 0    |
| 41 | ttdca      | TETRADECANOATE      | 1    |
| 42 | tyr_L      | TYR                 | 1    |
| 43 | ump        | UMP                 | 1    |
| 44 | val_L      | VAL                 | 1    |
| 45 | adp        | ADP                 | 1    |
| 46 | no         | NO                  | 1    |
| 47 | co2        | CO2                 | 1    |
| 48 | glyc3p     | GL3P                | 1    |
| 49 | o2         | O2                  | 1    |

|    |       |     |   |
|----|-------|-----|---|
| 50 | lys_L | LYS | 1 |
|----|-------|-----|---|

**Additional file 2** model sMtb-RECON in xml format

**Additional file 3** Bounds for sMtb-RECON used in the simulations.