



**Figure S1: Lysine biosynthesis pathways.** DapD, tetrahydrodipicolinate acylase; DapC, acyl-amino-ketopimelate aminotransferase; DapE, acyl-ketopimelate deacylase; DapF, diaminopimelate epimerase; LysA, diaminopimelate decarboxylase; DapDH, mesodiaminopimelatedehydrogenase; DapL, 1,1-diaminopimelate aminotransferase.