

Description of Additional Supplementary Files

Supplementary Data 1. Names and concentrations of lipids used in the “defined diets” described in this experiment.

Supplementary Data 2. Defined diets fed to *M. mycooides* and JCVI-Syn3A, as well as the number of surviving replicates on each diet and their mean growth rate.

Supplementary Data 3. Lipidomic mass-spec data shown in the paper on a replicate level.