# **Description of Additional Supplementary Files**

# **Supplementary Data 1**

Alpha diversities of the microbiome data.

#### **Supplementary Data 2**

Univariate analysis of the fasting+DASH group.

# **Supplementary Data 3**

Drug data.

#### **Supplementary Data 4**

Blood pressure responsiveness.

# **Supplementary Data 5**

BMI adjusted univariate analysis.

# **Supplementary Data 6**

Comparison of clinical characteristics of BP responders and non-responders at baseline of the fasting+DASH arm.

#### **Supplementary Data 7**

Univariate analysis of the Responders in the fasting+DASH arm.

#### **Supplementary Data 8**

Univariate analysis of the DASH arm.

# **Supplementary Data 9**

Triangulation analysis.

# **Supplementary Data 10**

References for poorly characterized SCFA-producing microbes.

# **Supplementary Data 11**

Re-analysis of the Mesnage data.

# **Supplementary Data 12**

Classification of the volunteers of the Mesnage dataset according to their BP decrease after three months. A  $\geq$  5 mmHg decrease of the SBP at three months compared to baseline was considered to be significant.

# **Supplementary Data 13**

Review of the studies related investigating the relation of dietary interventions, gut microbiome and metabolic diseases, including (cardiovascular) health, MetS, diabetes, obesity.

# **Supplementary Data 14**

Mapping statistics for human contamination, IGC, refMG and mOTUsv2 using ngless and bwa.