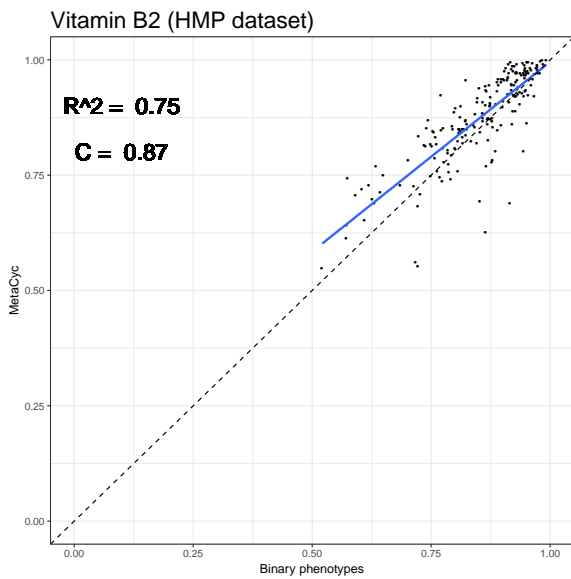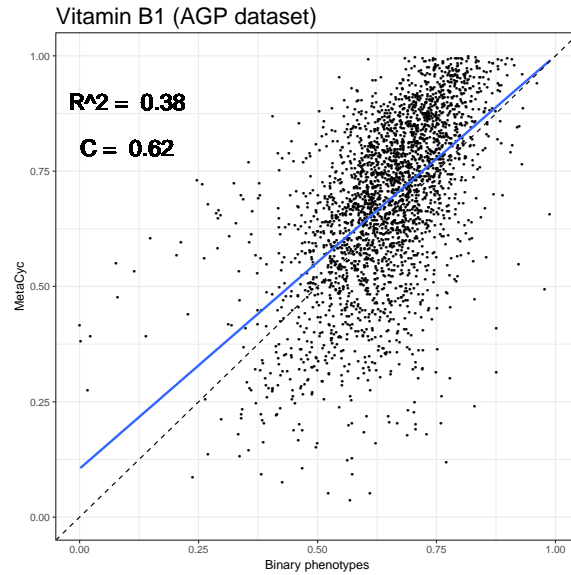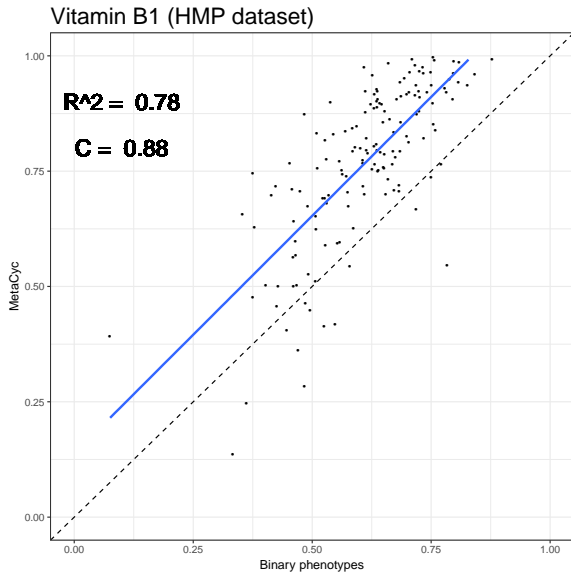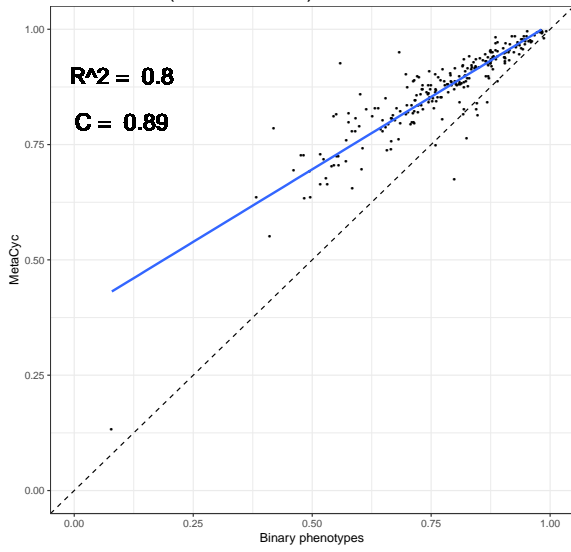**Supplementary Figure S7. Comparison of vitamin production phenotype abundances (calculated by PICRUSt2 and based on binary phenotypes from BPM) with MetaCyc pathway abundances (obtained by the standard PICRUSt2/MinPath approach) for HMP and AGP datasets.**
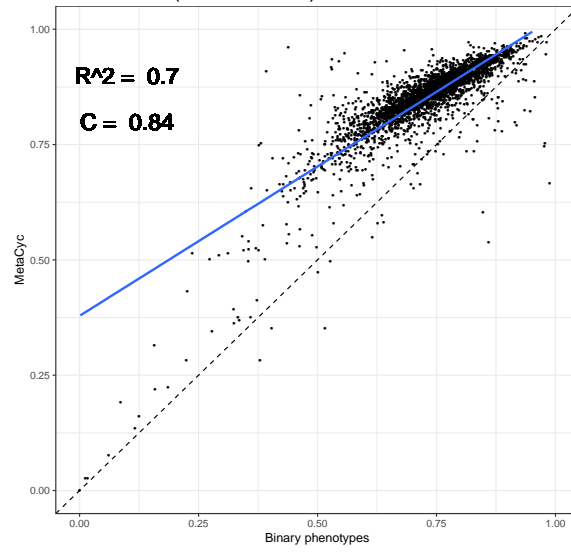
Linear regression line is shown in blue. The main diagonal (intersect=0 and slope=1) is shown as a dashed line indicating equality in predictions. Correlation coefficients "C" and coefficients of determination "R^2" are shown.
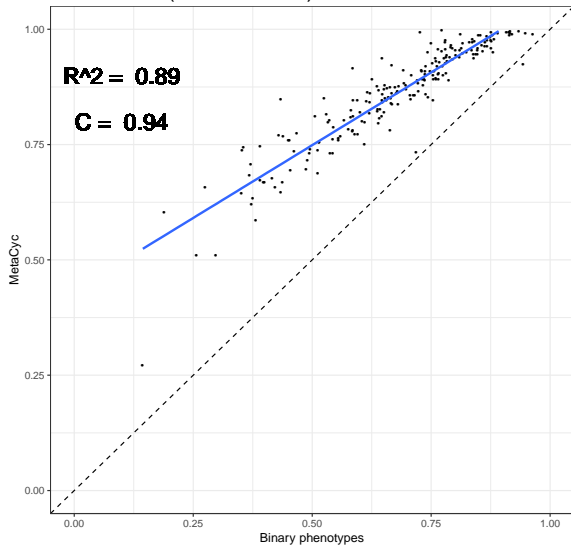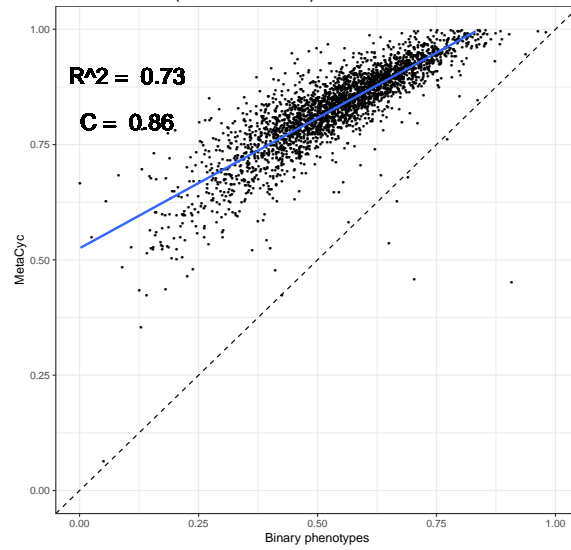
Vitamin B3 (HMP dataset)

R^2 = 0.8

C = 0.89

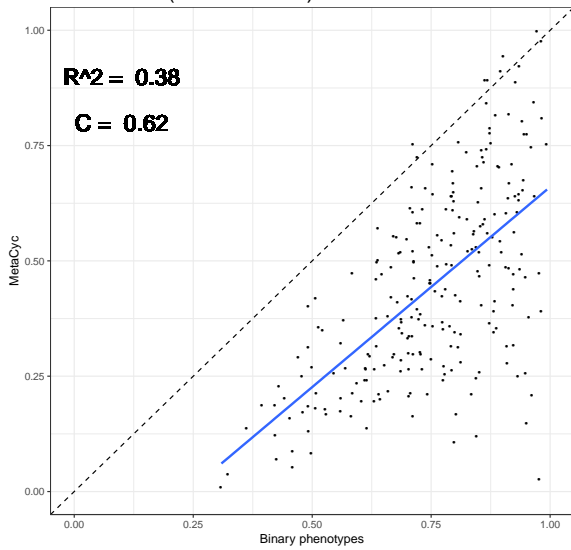Vitamin B3 (AGP dataset)

R^2 = 0.7

C = 0.84

Vitamin B5 (HMP dataset)

R^2 = 0.89

C = 0.94

Vitamin B5 (AGP dataset)

R^2 = 0.73

C = 0.86

Vitamin B6 (HMP dataset)

R^2 = 0.38

C = 0.62

Vitamin B6 (AGP dataset)

R^2 = 0.32

C = 0.57

Vitamin B7 (HMP dataset)

R^2 = 0.57

C = 0.76

MetaCyc

Binary phenotypes

Vitamin B7 (AGP dataset)

R^2 = 0.67

C = 0.82

MetaCyc

Binary phenotypes

Vitamin B9 (HMP dataset)

R^2 = 0.87

C = 0.93

MetaCyc

Binary phenotypes

Vitamin B9 (AGP dataset)

R^2 = 0.79

C = 0.89

MetaCyc

Binary phenotypes

Vitamin Q (HMP dataset)

R^2 = 0.83

C = 0.91

MetaCyc

Binary phenotypes

Vitamin Q (AGP dataset)

R^2 = 0.61

C = 0.78

MetaCyc

Binary phenotypes