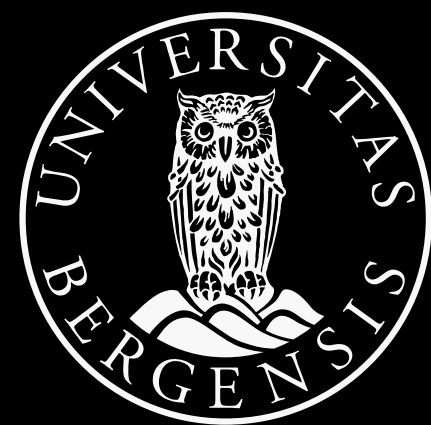


# Dietary composition is associated with one-carbon metabolites and B-vitamin status in patients with stable angina



Vegard Lysne, Anthea Van Parys, Ellisif Nygaard, Thomas Olsen, Elin Strand, Ingvild Marienborg, Johnny Laupsa-Borge, Teresa Haugsgjerd, Adrian McCann, Per Magne Ueland, Jutta Dierkes and Ottar Nygård

Contact: [vegard.lysne@uib.no](mailto:vegard.lysne@uib.no)



**AIM** Explore associations between dietary composition and plasma one-carbon metabolites and markers of B-vitamin status.

**WHY?** Plasma one-carbon metabolites are associated with disease risk. Diet is a modifiable life style factor, which may influence one-carbon metabolites.

**HOW?** Linear regression analyses of the association between macronutrient intake and plasma metabolites, adjusted for age, sex, BMI, smoking and total energy intake. Continuous associations were plotted, and uncertainty visualized with hypothetical outcome plots.

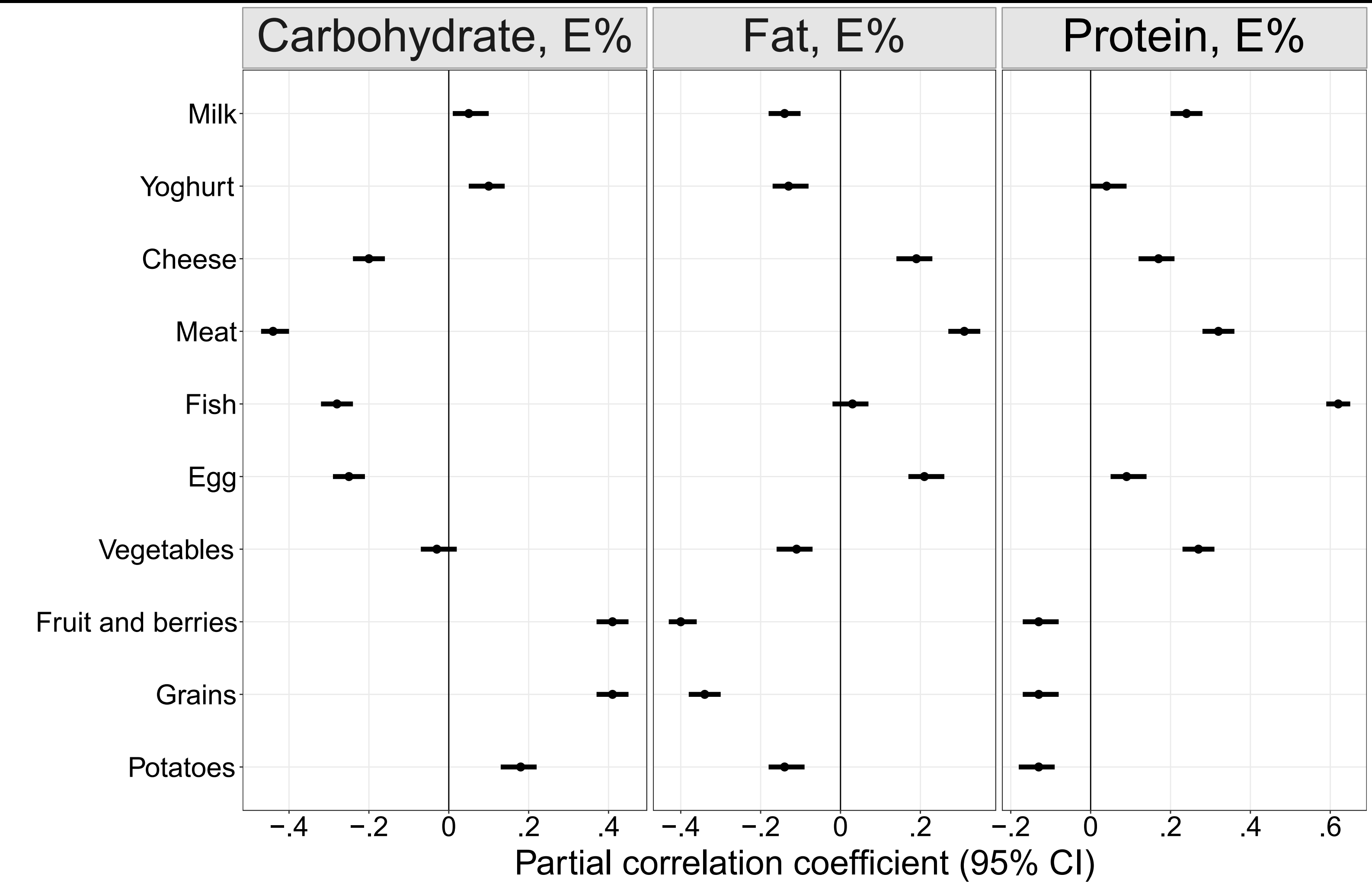
## POPULATION



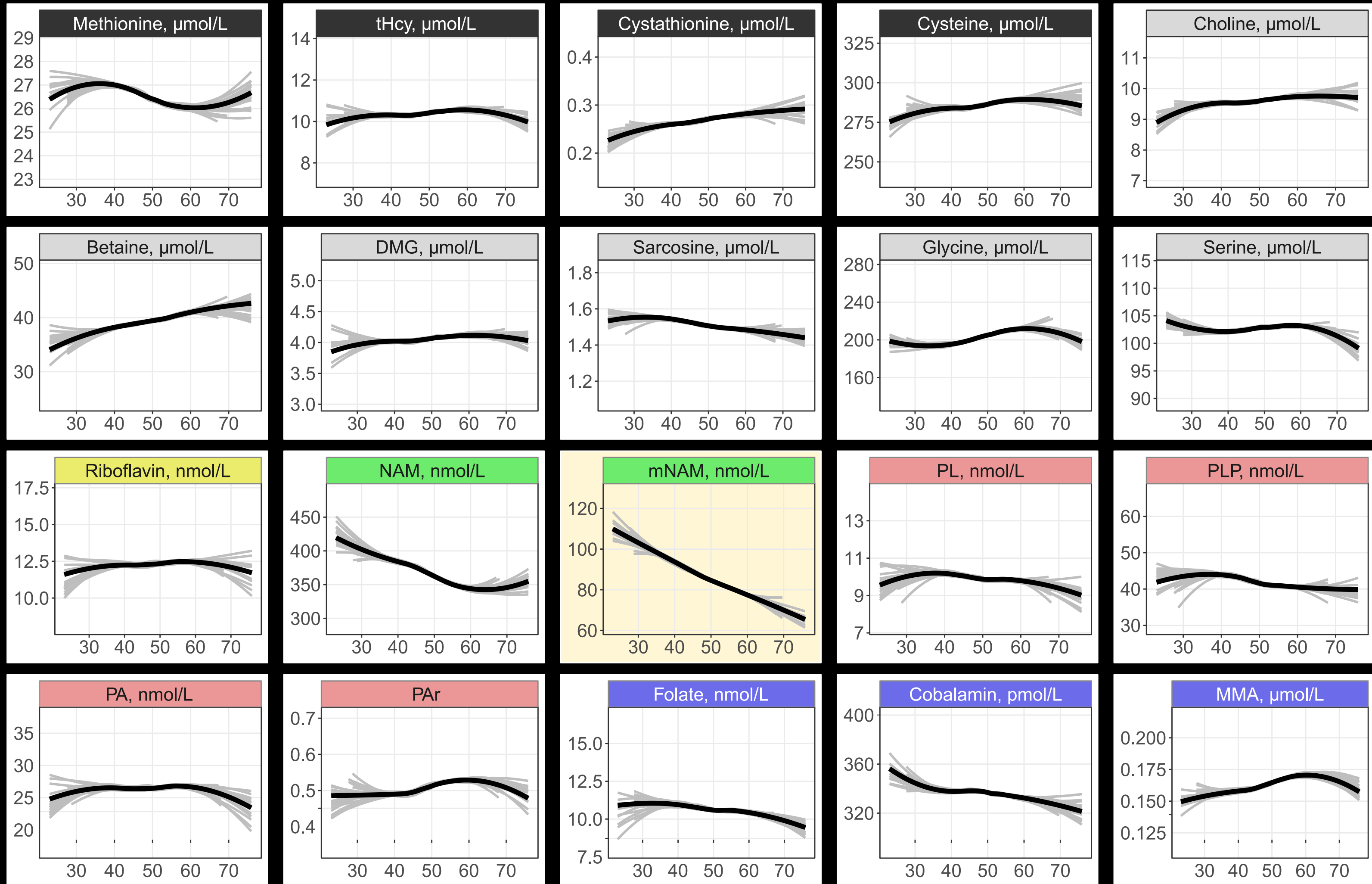
n = 1928

Age	61 (44, 85)
BMI	26 (20, 34)
Smoking	29 %
Diabetes	31%
Hypertension	47%
CRP (mg/L)	1.7 (0.2, 14.4)
eGFR	88 (59, 132)
Diet (E%):	
Carbohydrate	49 (38, 63)
Fat	31 (22, 45)
Protein	11 (7, 18)

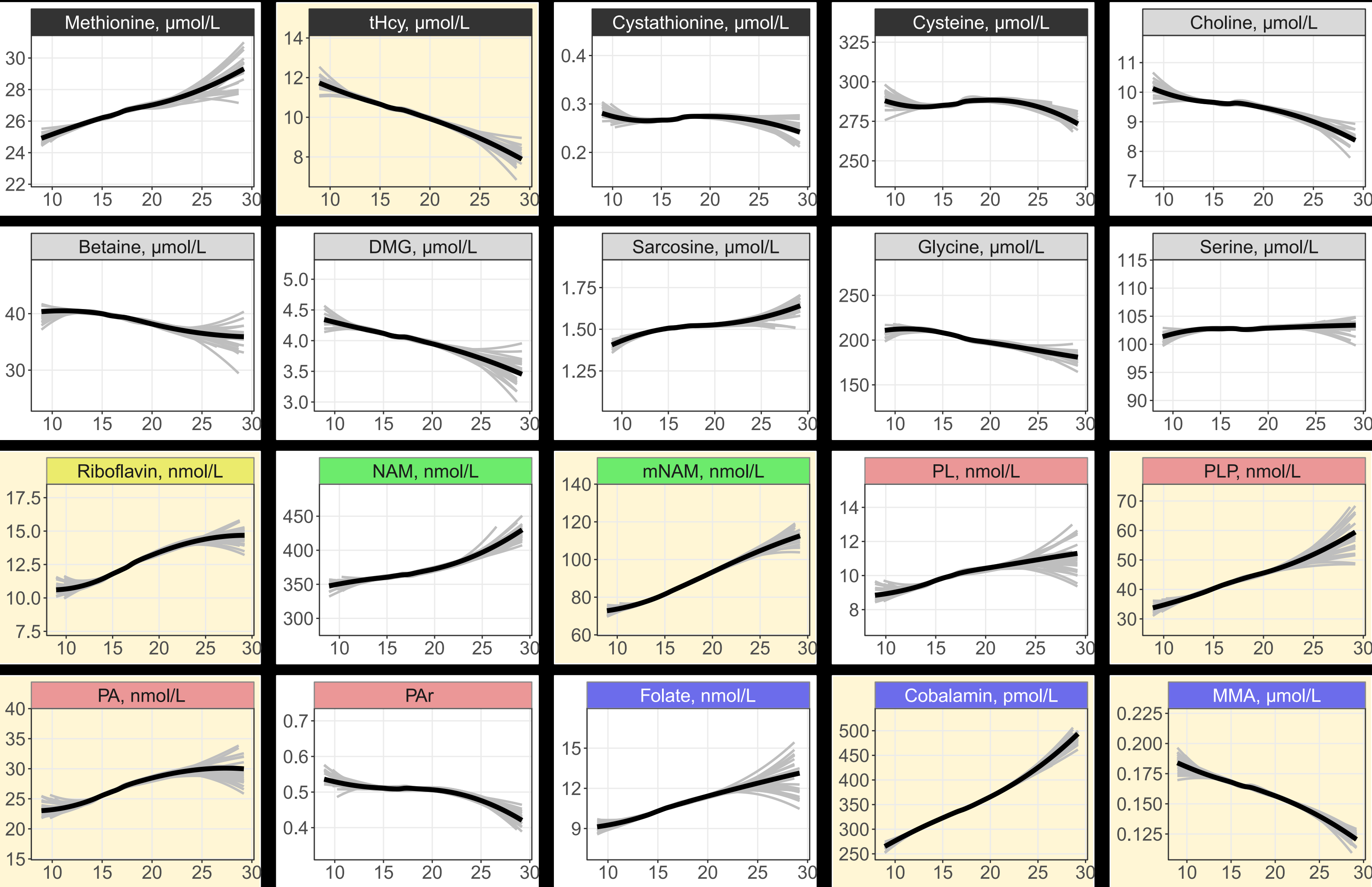
## FOOD PROFILE



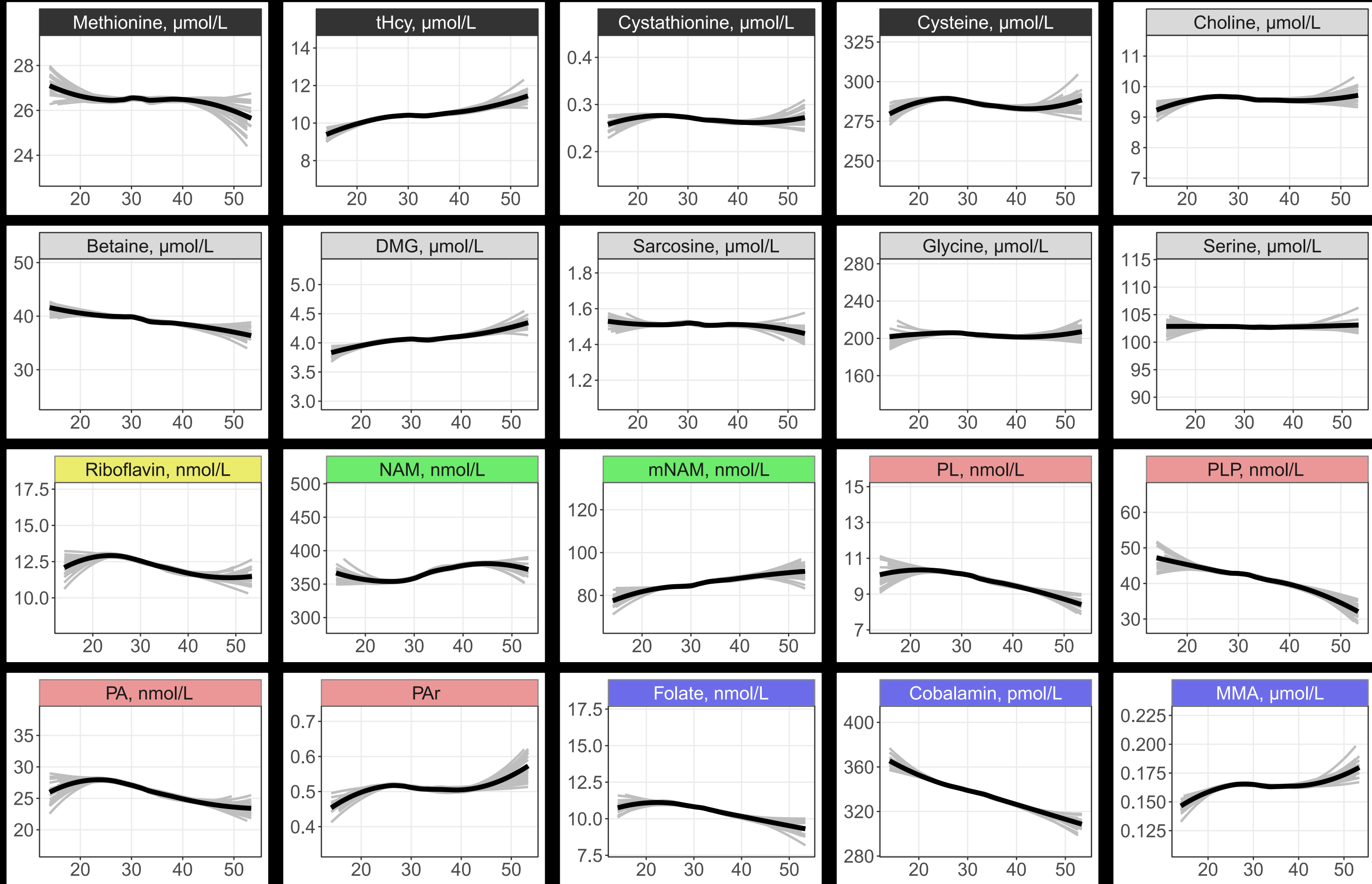
## EFFECT OF CARBOHYDRATE



## EFFECT OF PROTEIN



## EFFECT OF FAT



**FIGURE LEGEND** Continuous associations between isocaloric increase in macronutrients (E%) and concentration of biomarkers. Colors represents biomarkers of different metabolic pathways and different vitamins. The strongest associations are highlighted with yellow background, and uncertainty is visualized with hypothetical outcome plots.

**TAKE-HOME MESSAGE** Dietary composition influences the one-carbon metabolome. Clinical applications such as targeted metabolic phenotyping in relation to precision nutrition, should be further explored.