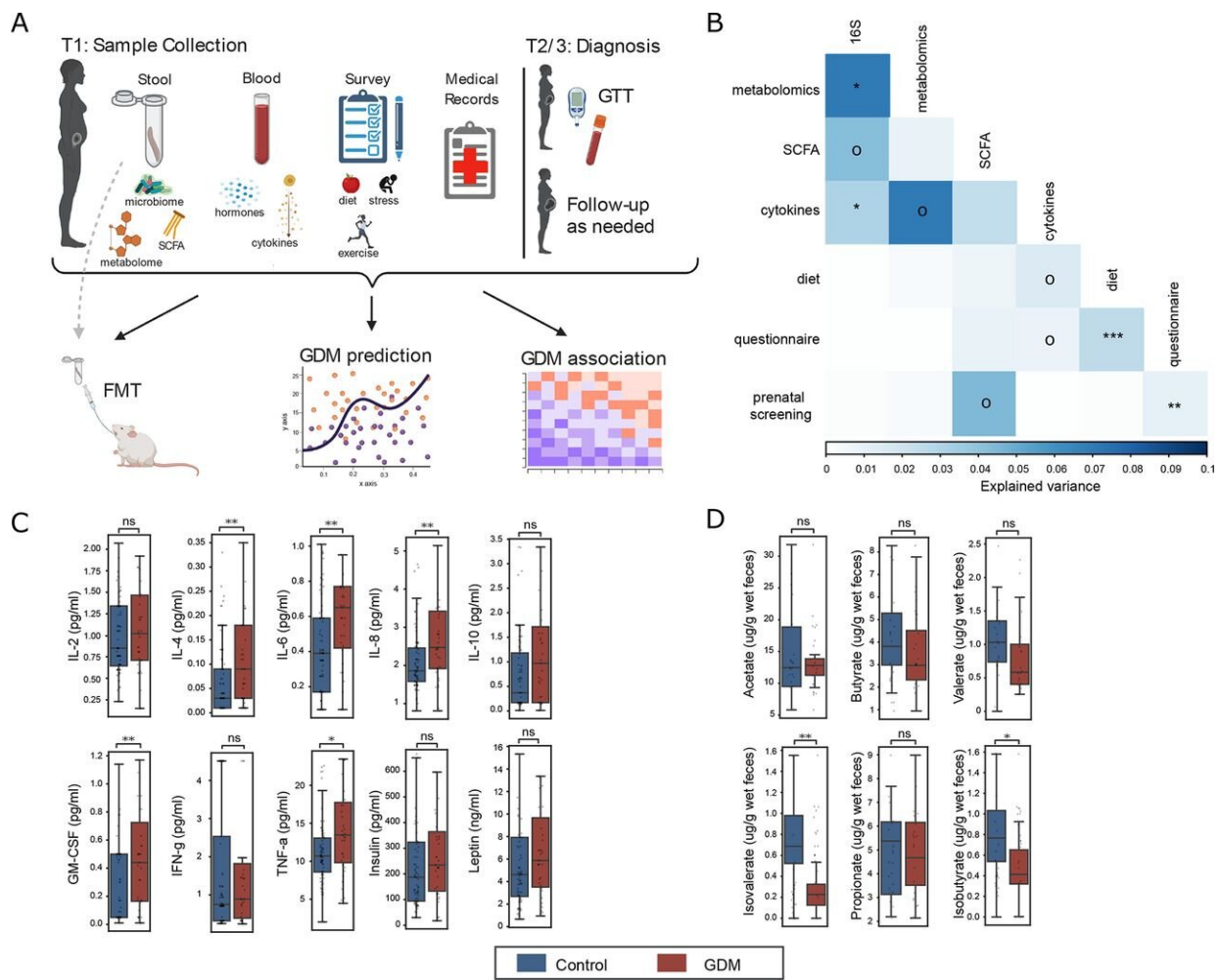


Gut microbes can help diagnose gestational diabetes as early as the first trimester of pregnancy

March 22 2023



First trimester blood and fecal biomarkers in women later diagnosed with GDM. (A) Sampling strategy and study design. Samples were collected in first trimester (T1). Stool was collected to profile gut microbiome (GDM: n=28, control:

n=236), metabolome (n=15 age/BMI-matched pairs) and SCFAs (n=20 age-matched pairs) and to validate results when transplanted into germ-free mice. Blood samples were used to profile cytokines and hormones (GDM: n=35, control: n=78). Lifestyle surveys and medical records were collected from all participants. (B) Variance explained (square of the Mantel statistic) between all pairs of data types (Mantel test). (C) Serum levels of cytokines and hormones for GDM and control women (false discovery rate (FDR)-corrected Mann-Whitney U tests). (D) Concentration of fecal short-chain fatty acids (FDR-corrected Mann-Whitney U tests). Boxplots indicate the median and IQR; whiskers show IQR \times 1.5. °P

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