



# Early matriline intervention of gut microbiota for type 2 diabetes prevention

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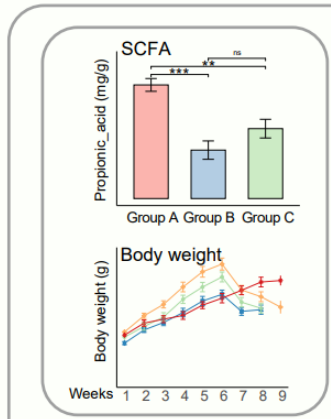
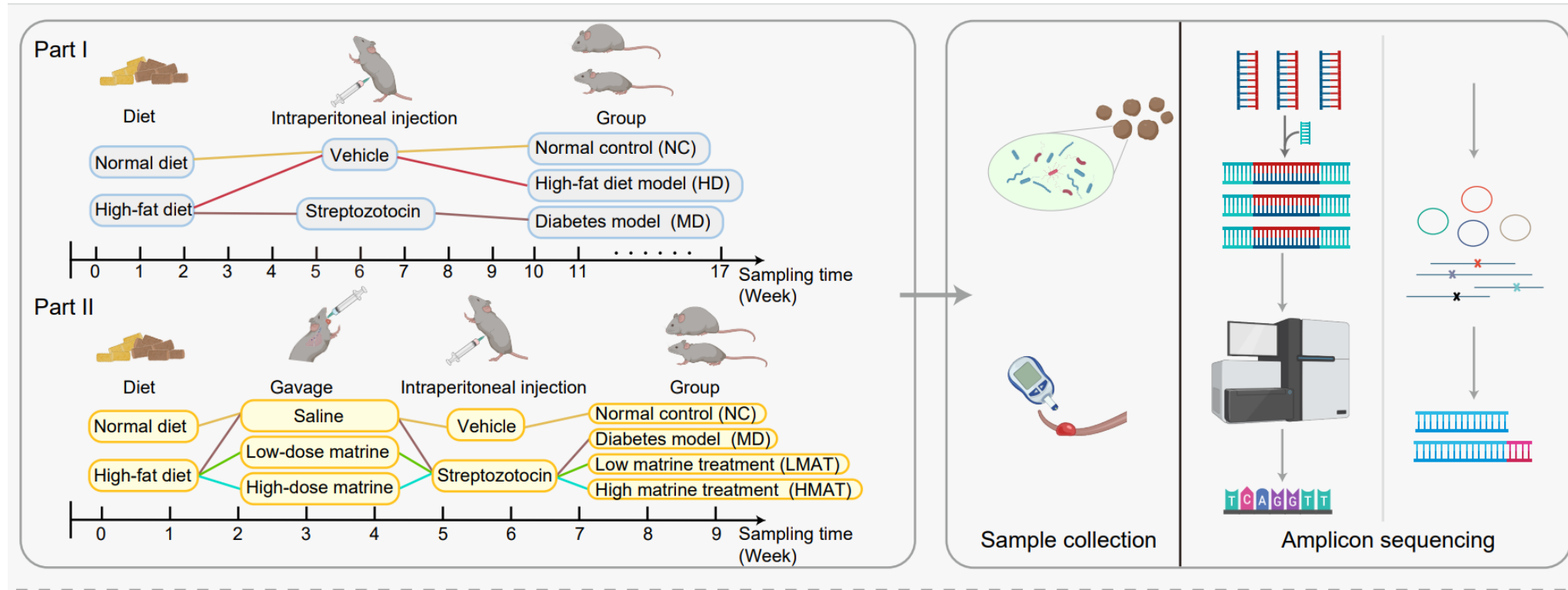
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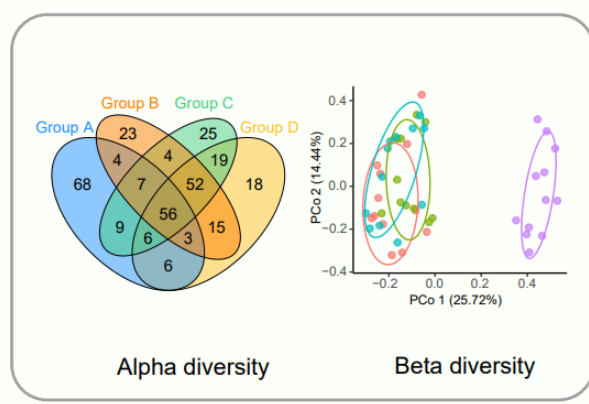
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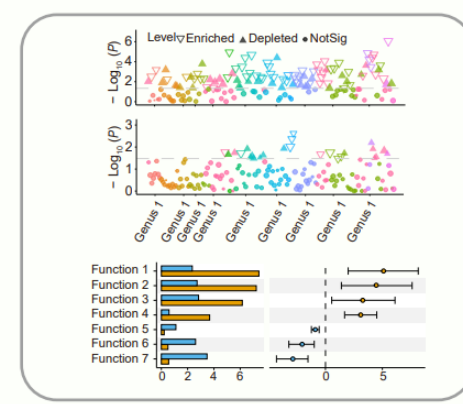
# Abstract & highlights



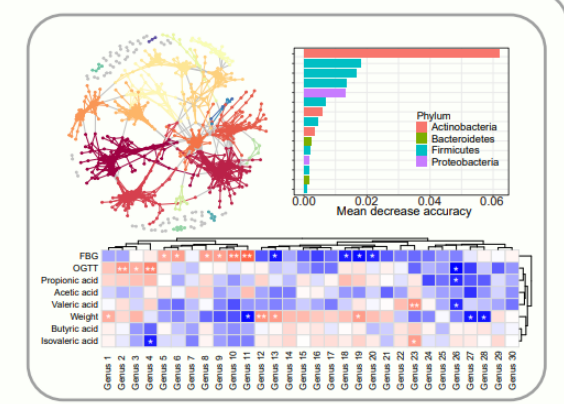
Physiological monitoring



Microbial diversity analysis

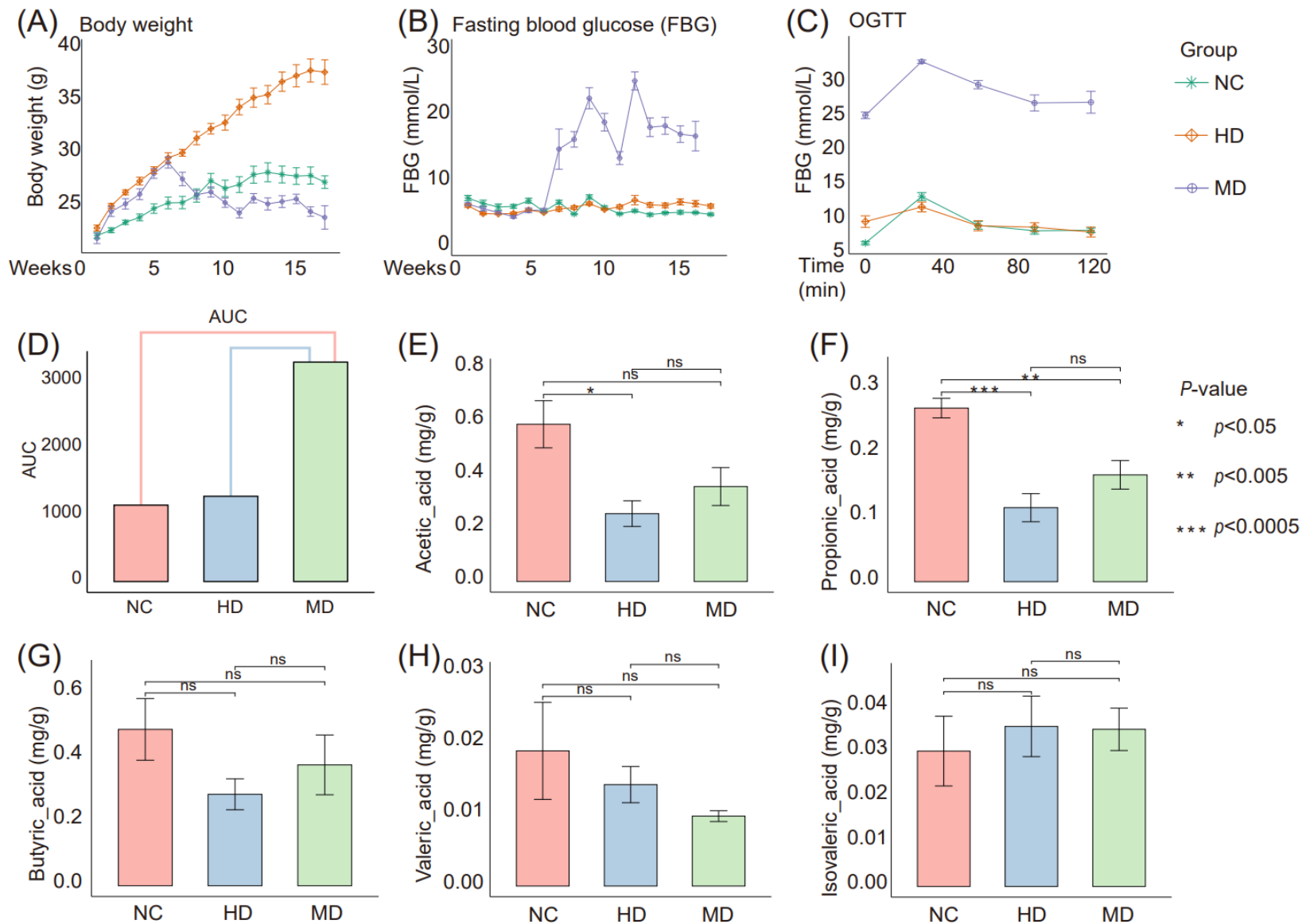


Microbial composition and functional analysis



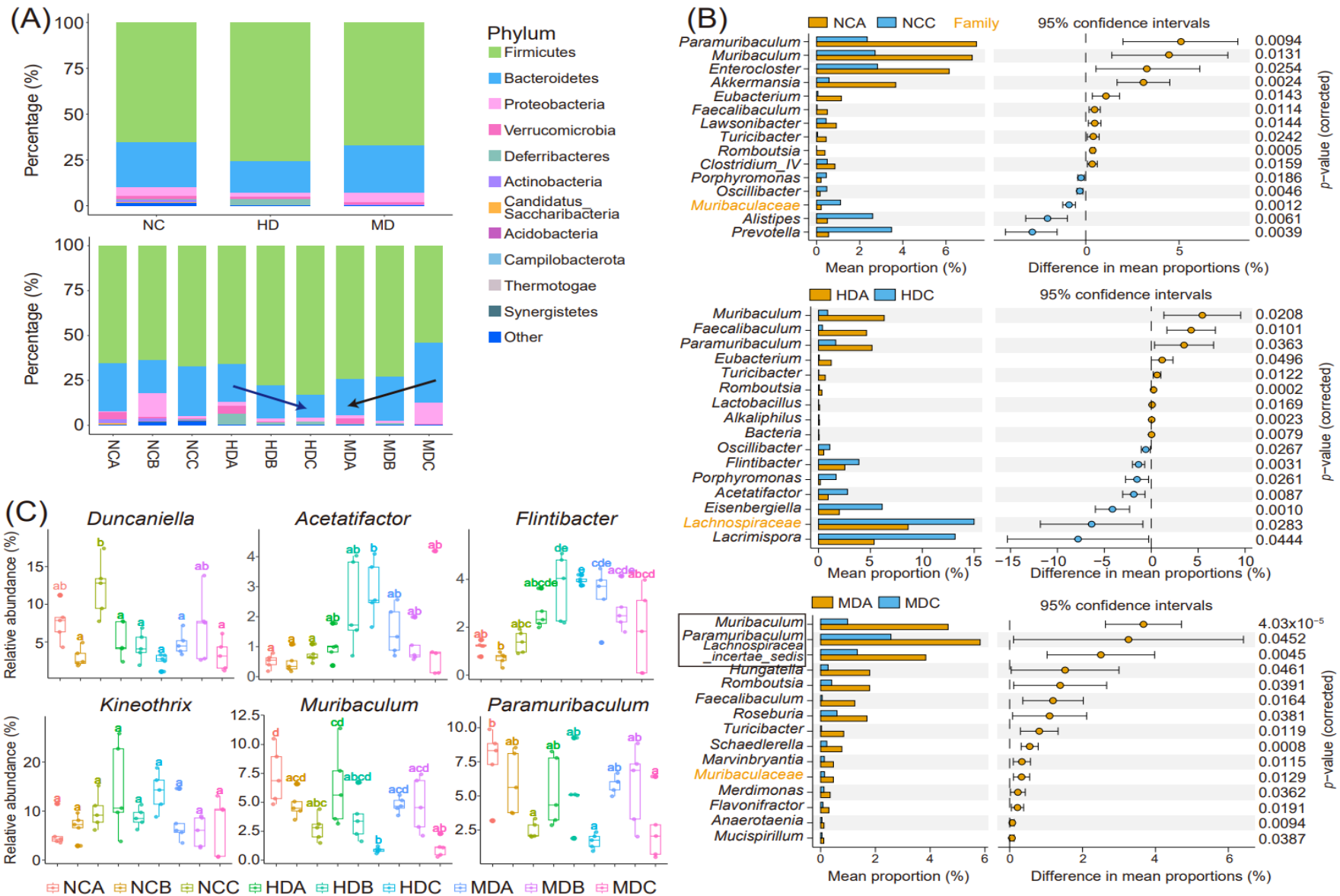
Key microbes screening

# Result 1: The gut microbiota undergoes dynamic changes over time during the development of type 2 diabetes

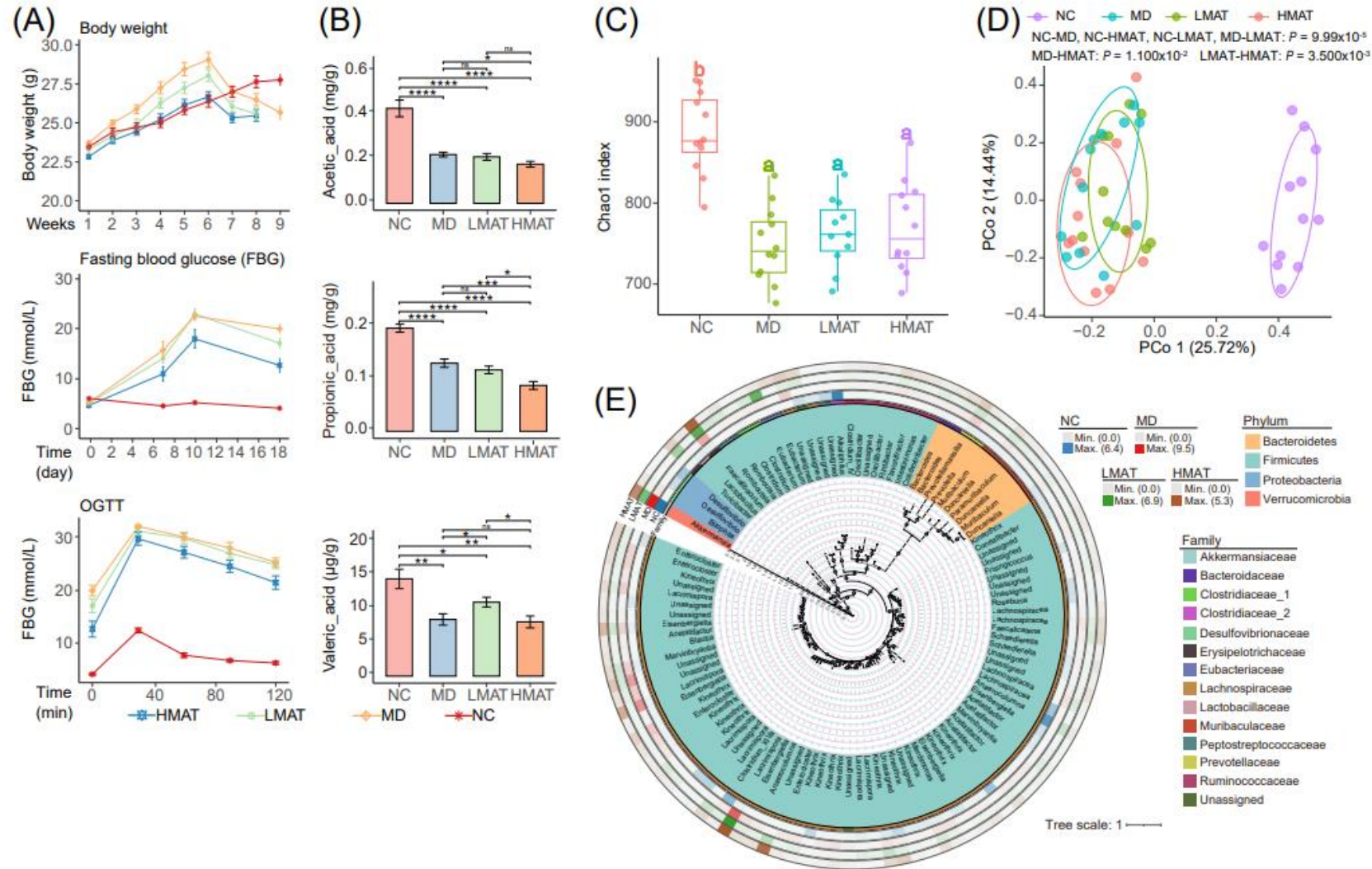




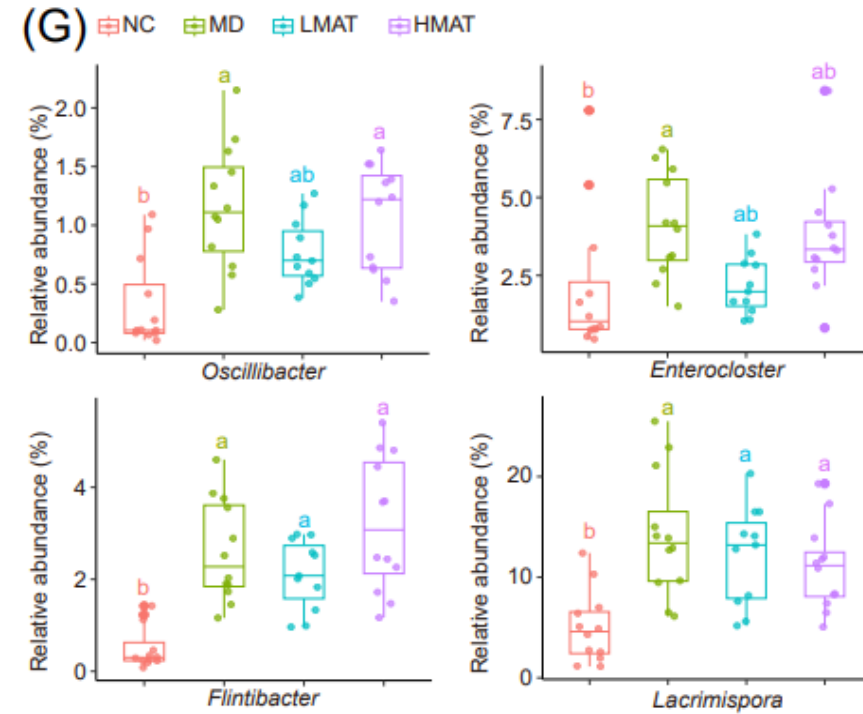
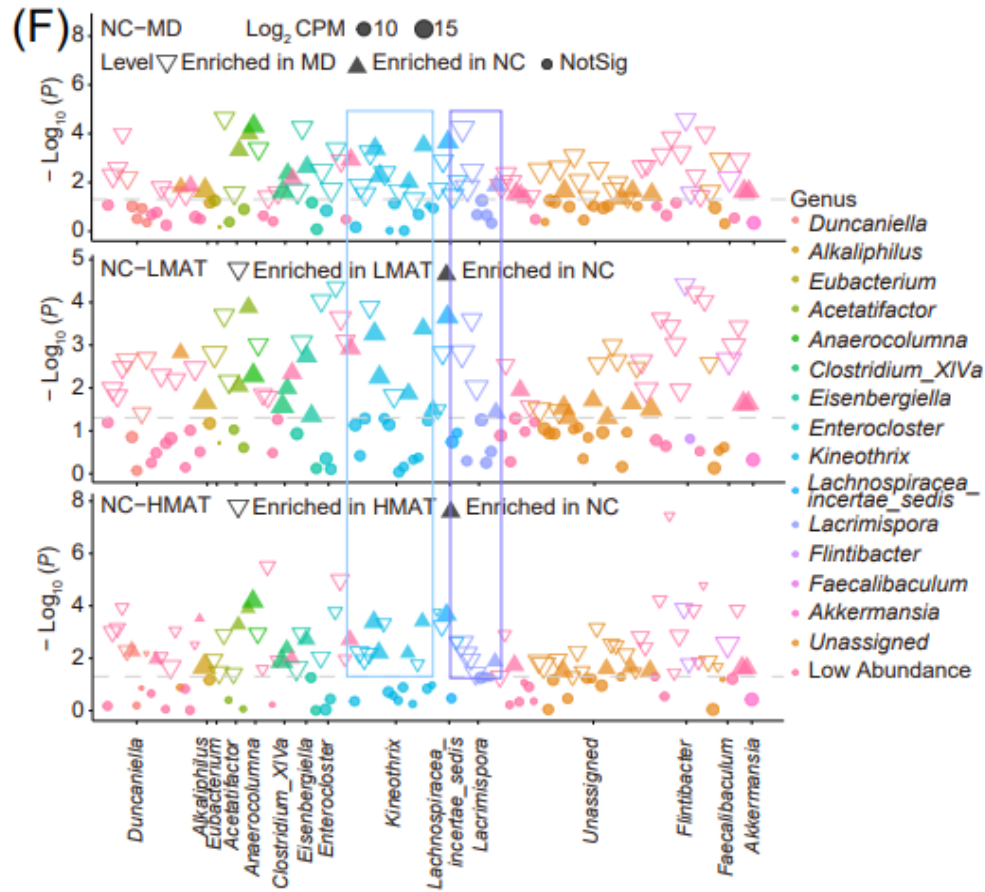
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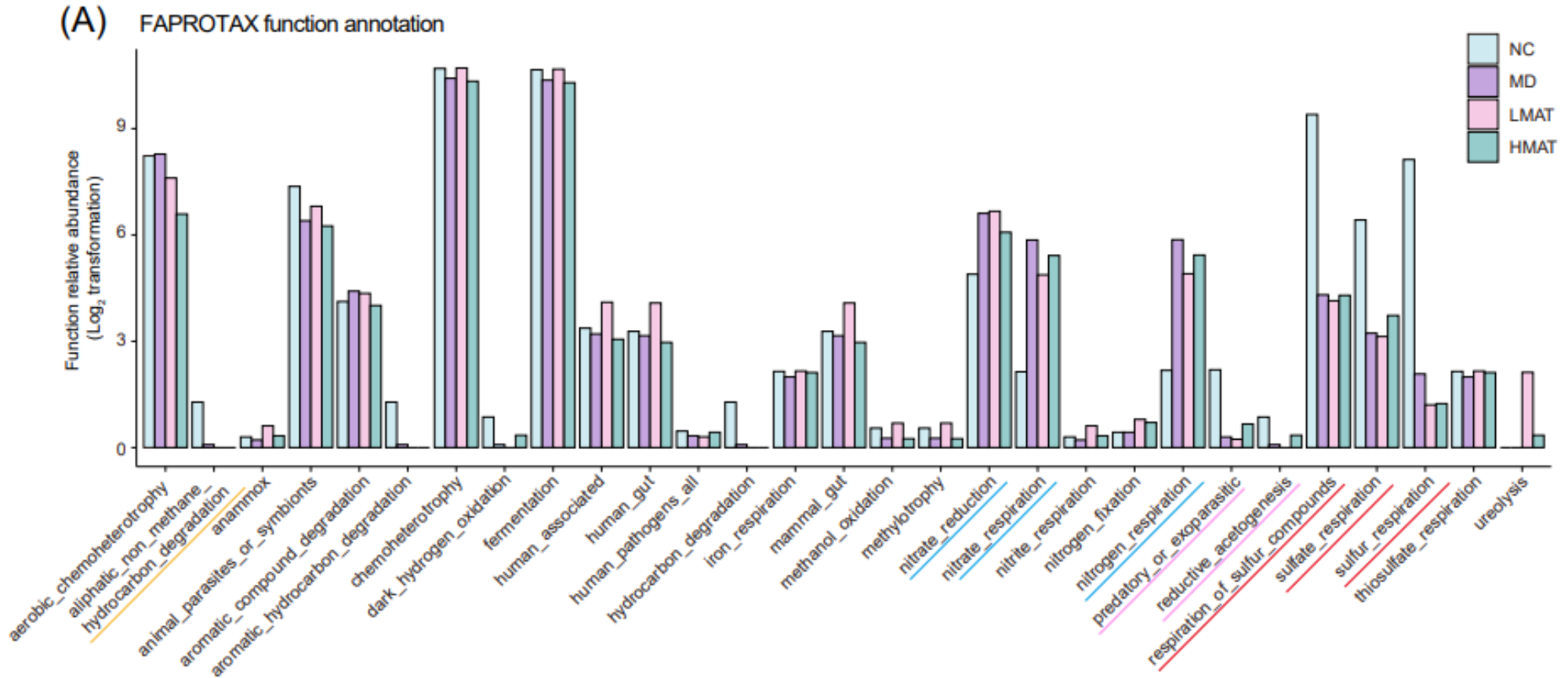
# Result 2: Matrine intervention reduced blood glucose levels, propionic acid formation, and affected the composition of gut microbiota in T2DM mice



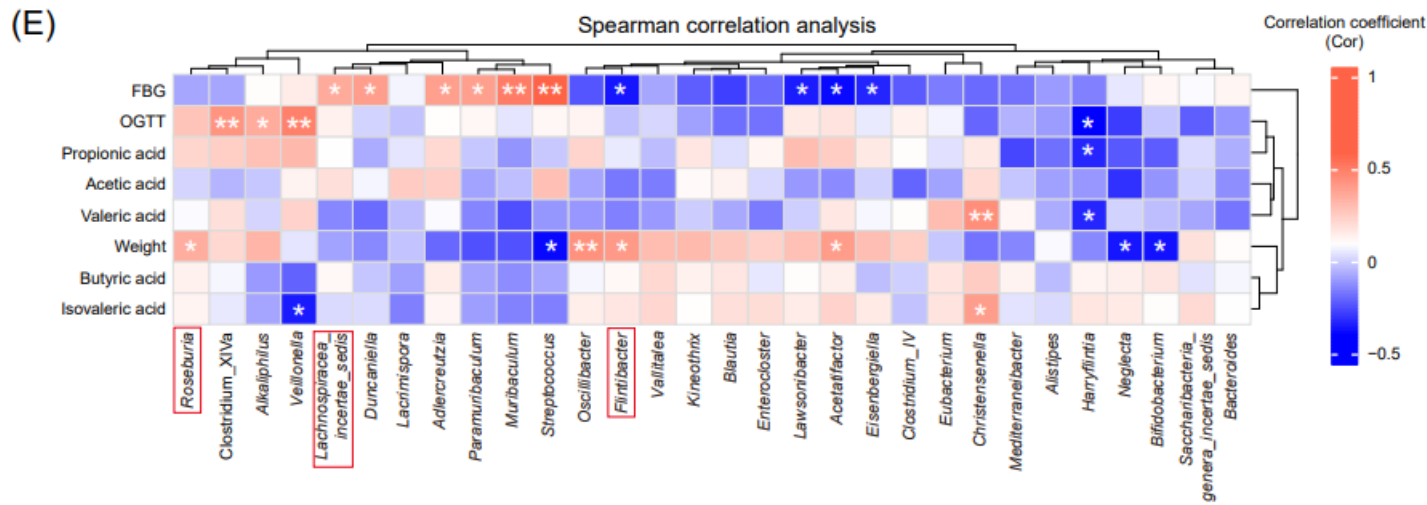
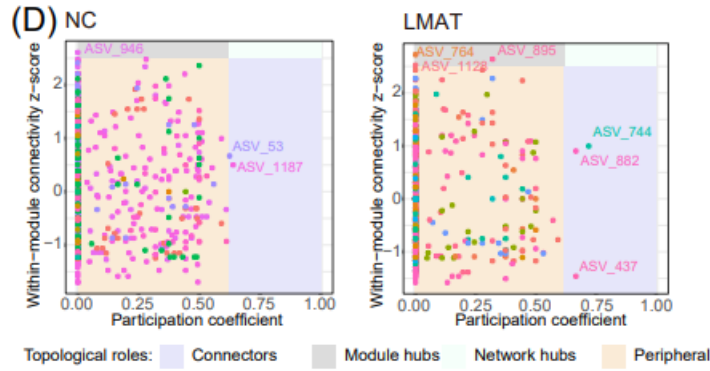
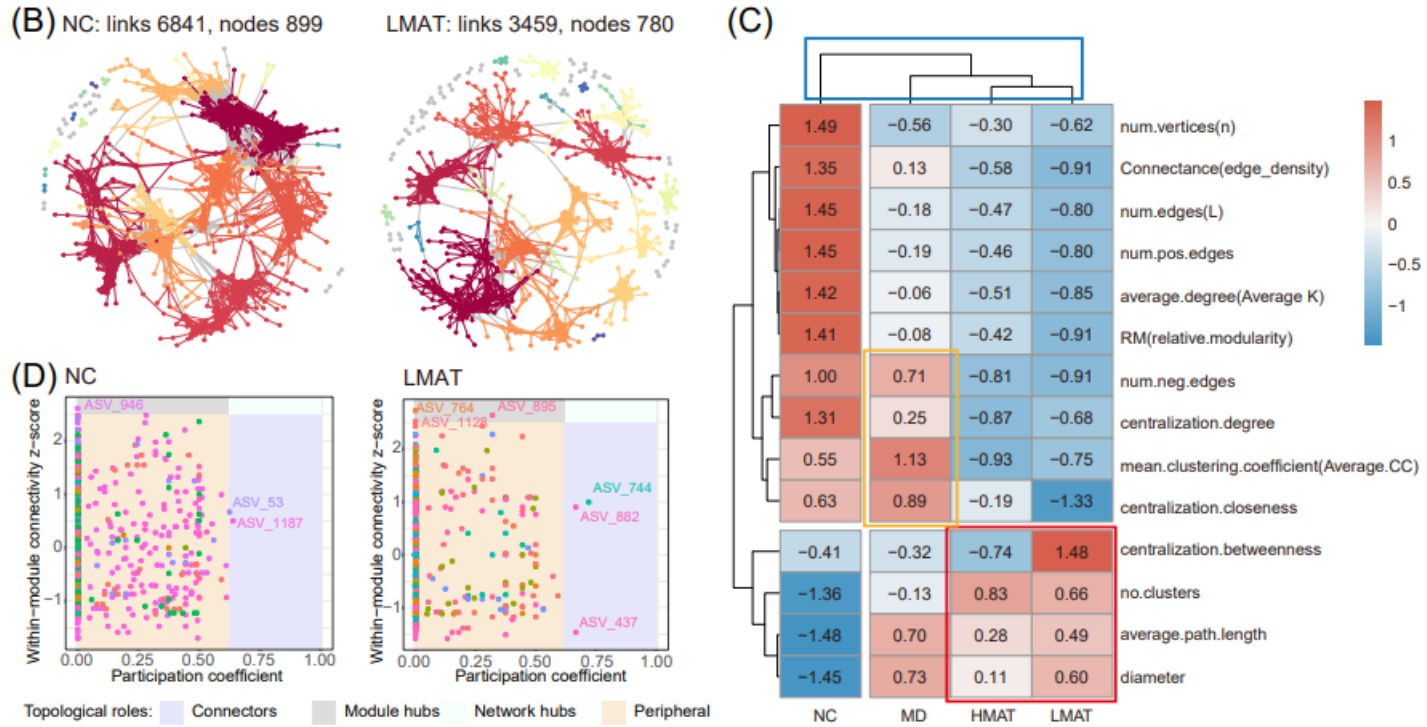
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# Result 3: The modulation of key microbiota and their functions underlie the diabetes-slowing effects of matrine treatment



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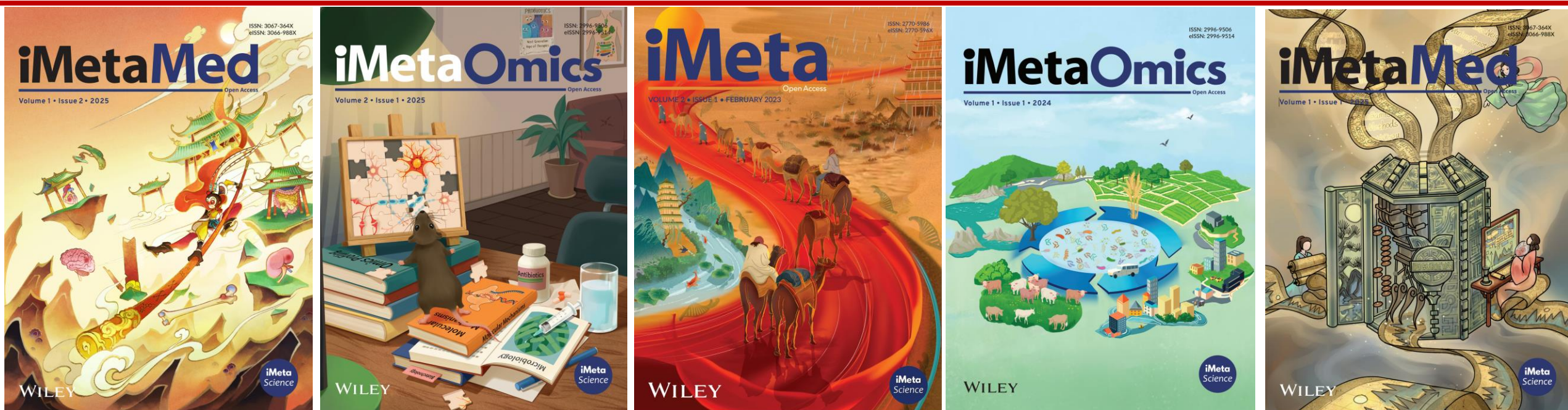
# Summary

- ❑ The gut microbiota in diabetic mice changes dynamically over time;
- ❑ Differences in microbial community composition and function can distinguish the matrine intervention group;
- ❑ *Muribaculum* and *Lachnospiraceae incertae sedis* play a critical role in the matrine intervention mice.

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