

Gender-Dimorphism Linked Distinct Gut Microbial Signature in Hepatocellular Carcinoma Patients

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Poster
NO. P-060

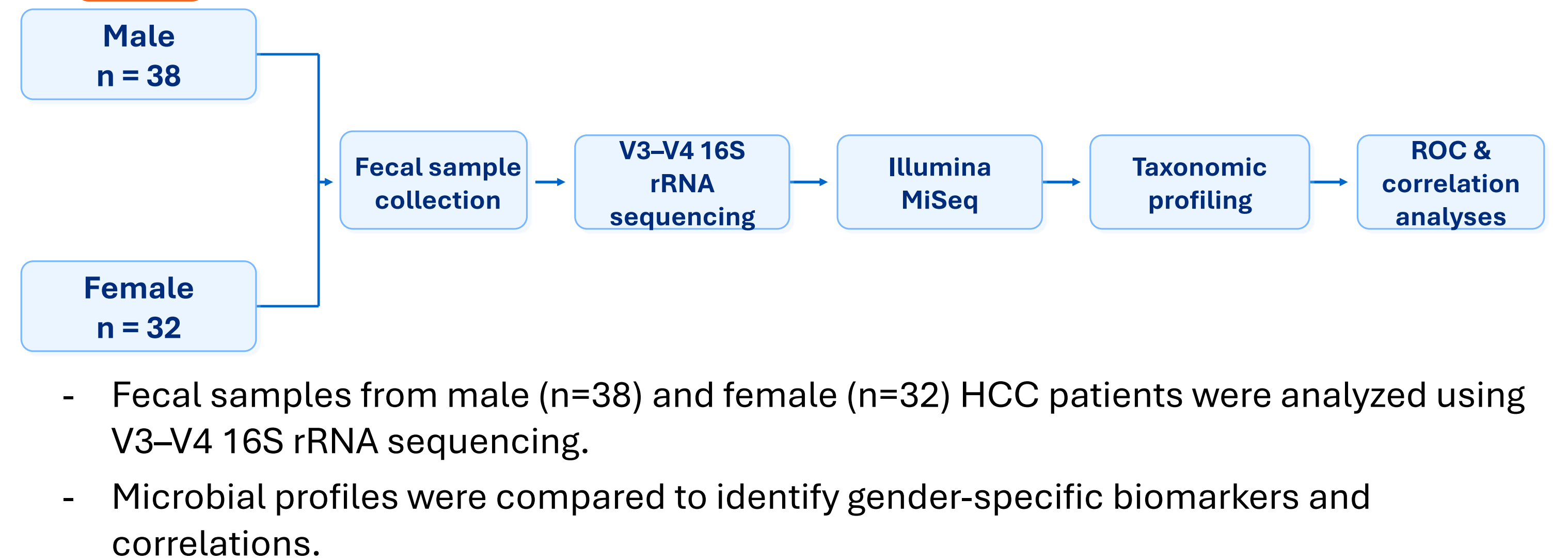
INTRODUCTION

- Hepatocellular carcinoma (HCC) commonly develops in patients with cirrhosis and is strongly influenced by the gut-liver axis.
- Gut microbial dysbiosis may contribute to HCC development and progression through multiple biological pathways.
- Increasing evidence suggests that gut microbiome composition differs between males and females, potentially contributing to sex-related differences in HCC susceptibility and clinical characteristics.
- However, gender-specific gut microbial signatures in patients with HCC remain insufficiently characterized.

AIM

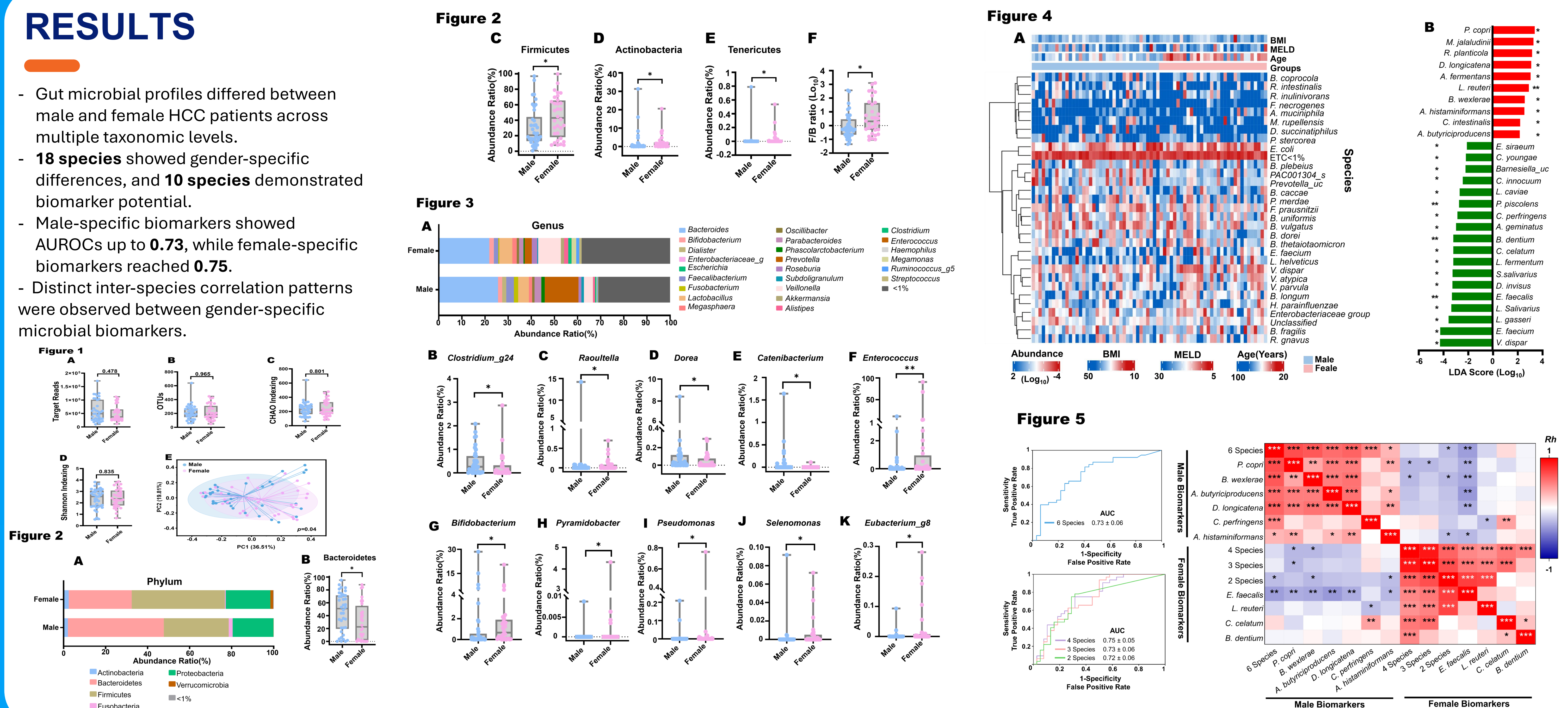
To identify **gender-specific gut microbial signatures in patients with HCC** and evaluate their potential as microbial biomarkers for differentiating male and female HCC patients.

METHOD



RESULTS

- Gut microbial profiles differed between male and female HCC patients across multiple taxonomic levels.
- **18 species** showed gender-specific differences, and **10 species** demonstrated biomarker potential.
- Male-specific biomarkers showed AUROCs up to **0.73**, while female-specific biomarkers reached **0.75**.
- Distinct inter-species correlation patterns were observed between gender-specific microbial biomarkers.



CONCLUSIONS

- HCC patients showed distinct **gender-associated gut microbial profiles**.
- Several microbial species showed potential as **gender-specific biomarkers**.
- These findings suggest that the gut microbiome may serve as an important **gender-dependent biological factor in HCC**.

REFERENCES

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