

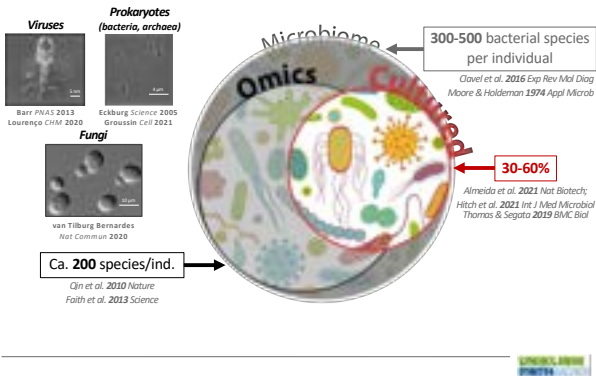
Isolating the unknown and creating synthetic communities

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What is in our guts?



2

Pillars of our work




3

Isolate collections

www.dsmz.de/miBC


Lagouvardos et al. 2016 Nat Microbiol



miBC 2.0


- 141 species in total
- 50 new taxa

Wylenski, Hitch, et al. 2020 Nat Commun



www.dsmz.de/pibac

- 110 species
- 38 new taxa




Zenner et al. 2023 mSystems

www.dsmz.de/Chibac

- 43 species
- 7 new taxa

HUMAN GUT Hitch et al. Unpublished

- 153 species
- 71 novel taxa



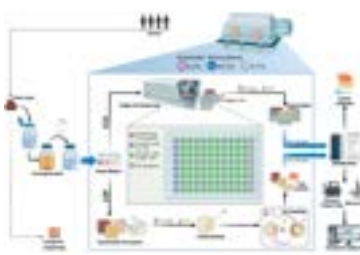

Adlercreutzia, Alistipes, Anaerobutyricum, Anaerostipes, Bacillus, Bacteroides, Bacteriella, Bifidobacterium, Bilophila, Blautia, Butyrivibrio, Clostridium, Collinsella, Coprococcus, Desulfovibrio, Dialister, Dorea, Dysosmobacter, Eisenbergiella, Eggerthella, Enterocloster, Enterococcus, Eubacterium, Escherichia, Faecalibacterium, Fusicatenibacter, Gemmiger, Hungateella, Intestinimonas, Lachnospira, Lactobacillus, Megaspheera, Odoribacter, Oribacterium, Parabacteroides, Peptoniphilus, Prevotella, Roseburia, Ruminococcus, Ruthenibacterium, Selenomonas, Staphylococcus, Streptococcus, Sutterella, etc.

■ Actinobacteria
■ Firmicutes
■ Bacteroidetes
■ Proteobacteria

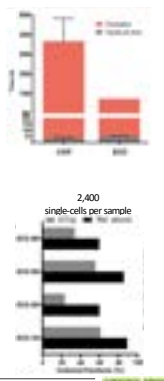
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High-throughput isolation method

Ahmad et al. 2021 Environmental Microbiology

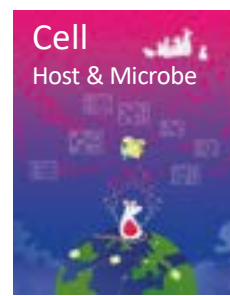


2,400
single-cells per sample


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The mouse intestinal Bacterial Collection



Ahmad, Jennings, Hitch [...] Clavel (2022) Cell Host & Microbe, in press

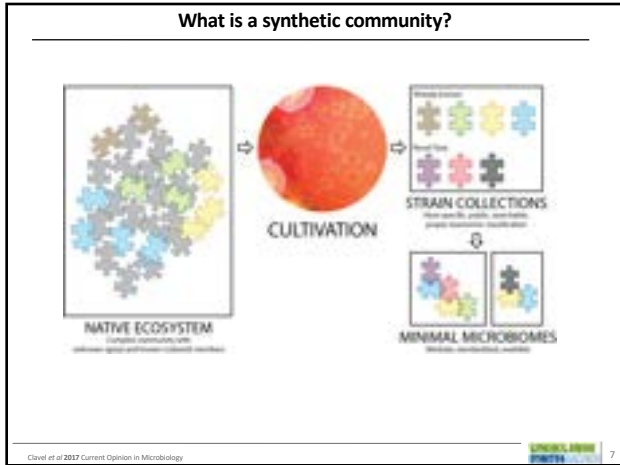


www.dsmz.de/miBC

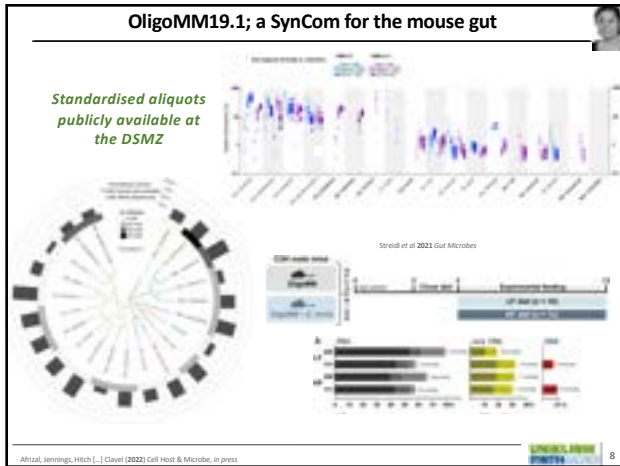
212 strains (141 species)
50 novel taxa

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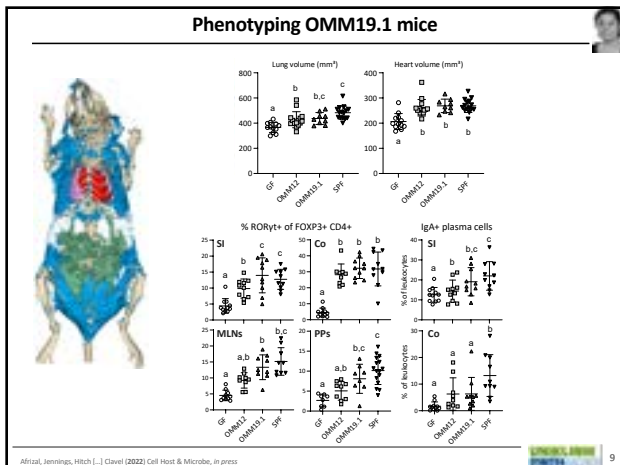
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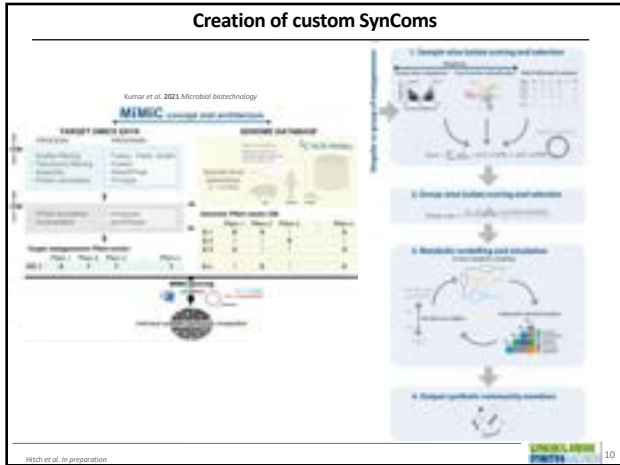
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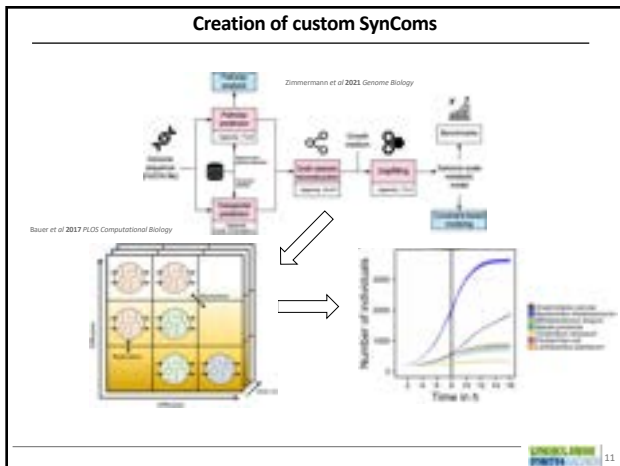
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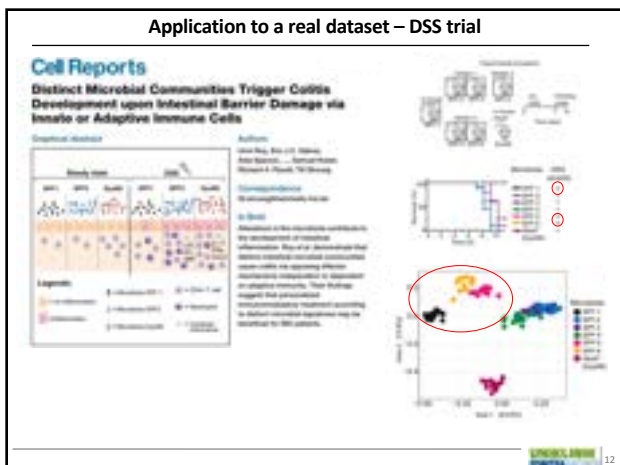
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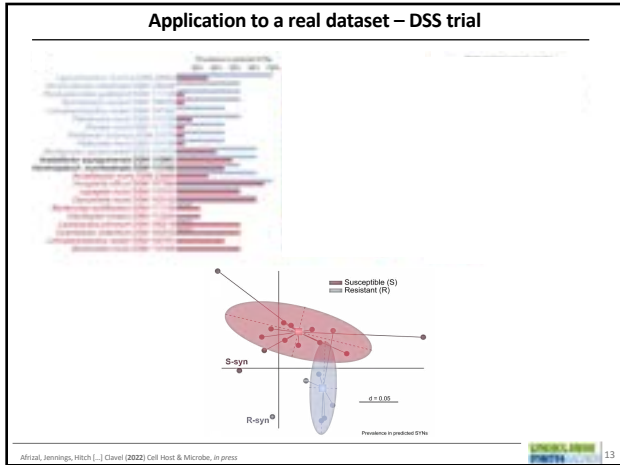
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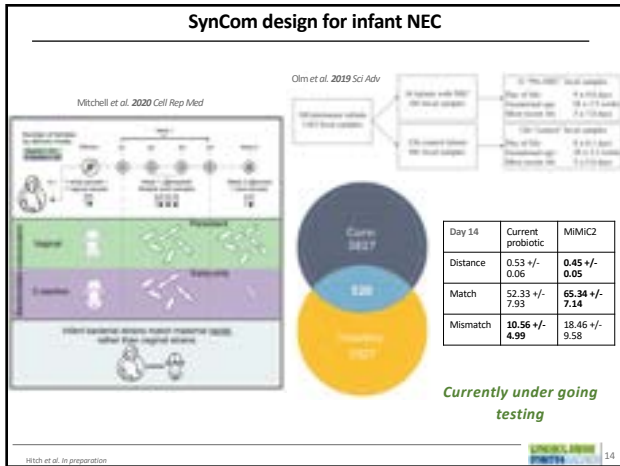
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Thank you for your attention!

@tcathitch / @clavellab

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Logos: DFG, HELMHOLTZ ZENTRUM FÜR INFektionsFORSCHUNG, CRC1382 GUT-LIVER AXIS, LIFE

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