

DTU





**DTU Health Technology  
Bioinformatics**

## **Projects**

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# Project Groups

- Group work,  $\approx 4$  per group, and present results on a poster
- Try to form diverse groups in terms of skills
- Analyse your own data!
- Supplement with existing data (e.g. MetaHIT, SRA...)
- Project data has been sequenced by BGI:
  - Data has NOT arrived...yet
  - You can start right away: run FastQC, do trimming...
- Short presentation next week...peer-groups are responsible for giving feedback/suggestions!

# Project exam

- **Poster exam**
- **Each group will prepare a poster**
- **Each group will present the poster for the examiners**
- **Each group member will be questioned individually about the course objectives and the project (~5-10min)**
- **40% final grade**

# Project previous years



# Project titles

'16

- The Effect of Chili Consumption on the Abundance of Bacteroidetes in the Human Gut
- INFLUENCE OF CAPSAICIN ON THE GUT MICROBIOME  $\beta$ -DIVERSITY
- Investigating the effect of capsaicin on Firmicute bacteria in the human gut
- The effect of capsaicin on the butyrate production pathway and taxonomical distribution in a gut environment
- The interplay between dietary intervention with chili peppers, the human gut microbiome and bacterial resistance

'15

- Effect of alcohol intake on vitamin B12 producing bacteria in the gut microbiome
- Effect of alcohol on the enrichment of acid resistant bacteria in the gut microbiome
- Investigating the effect of one night of (excessive) alcohol consumption in pushing the microbiome towards having a higher abundance of microbiome markers of T2D, peptic ulcers, cirrhosis, etc.

# Project titles

- '16
- The Effect of Chili Consumption on the Abundance of Bacteroidetes in the Human Gut
- INFLUENCE OF CHILI ON THE GUT MICROBIOME  $\beta$ -DIVERSITY
- Investigation of Firmicute bacteria in the human gut

- The effect of alcohol consumption on the gut microbiome
- The effect of alcohol consumption on the gut microbiome

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'15

- Effect of alcohol intake on vitamin B12 producing bacteria in the gut microbiome
- Effect of alcohol on the enrichment of acid resistant bacteria in the gut microbiome
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BE CREATIVE:  
add existing data/studies  
think about metabolism

# Group work

- **Form groups (~4 students per group)**
- **Discuss potential projects**
- **Do literature search**
- **Have a look at metadata (sort and organise)**
- **Fill out the project information (link on webpage)**



# Projects

- Think questions that can be answered with the data available
- Think questions that can be answered with tools learned in this course
- Additional programs etc. are encouraged BUT you will have to be able to explain how they work and what they show