Environmental metagenomics

Course outline and practical info

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About us

Organizer:

- Carlo Pecoraro, Physalia Courses
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Instructors:

- Antti Karkman, University of Helsinki
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About you

- Name
- University/Institute/Company
- Research interest(s)
- Previous experience(s) with microbial ecology, metagenomics, bioinformatics, etc.
- General hopes for this course

Course outline

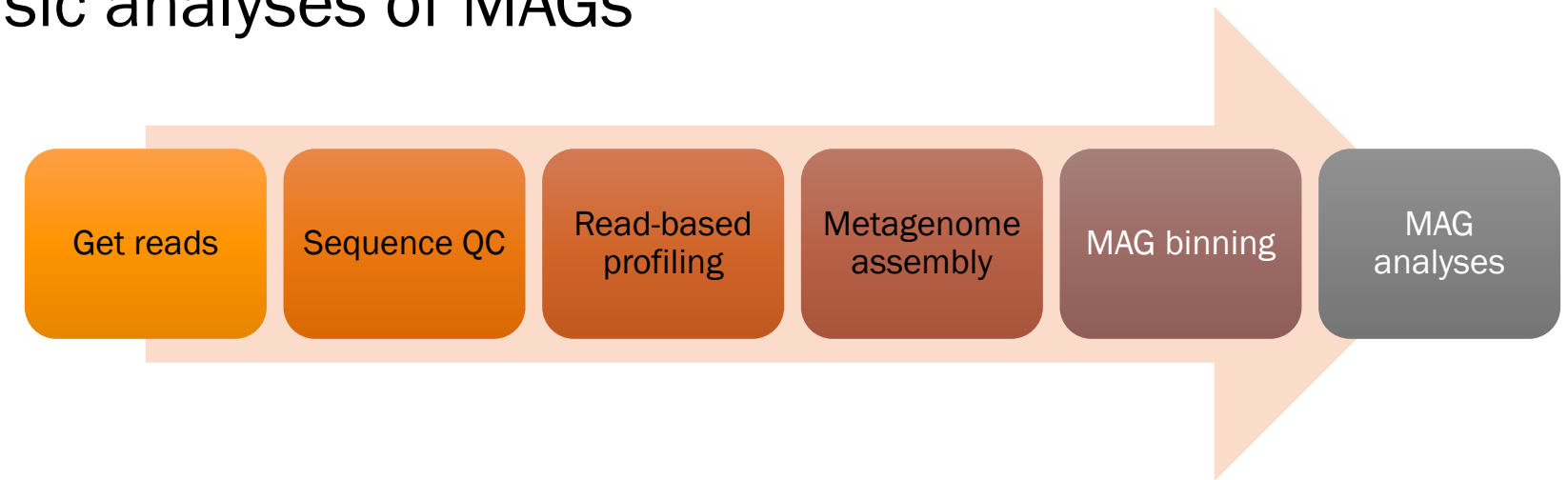
Day 1: QC and read-based taxonomic profiling

Day 2: Metagenome assembly

Day 3: Binning of MAGs

Day 4: Binning of MAGs

Day 5: Basic analyses of MAGs



Practical information: Zoom & GitHub

The course will take place in Zoom from **9 AM to 4 PM (CET)**

- Link to the Zoom room in Slack (#general)

The course page containing exercises and presentations is:
github.com/karkman/Physalia_EnvMetagenomics_2023

Please bookmark this address!

Practical information: Amazon Cloud (AWS EC2)

- See here for information on how to connect
- Remember that the IP address changes every day
- Everyone has a username, with a home and shared folders
  - List of usernames can be found in Slack (#before-start)
- We will mostly use conda for managing the software environments
  - The environments are already set up for everyone
  - Further instructions on the GitHub page

Practical information: VS Code

Course data

Tundra soils

vs.

WWTP

REAL (not toy) data

Tundra soils
Kilpisjärvi, Finnish Arctic (69°N)

Tundra soils
Kilpisjärvi, Finnish Arctic (69°N)

- Fen soils
  - 1 Nanopore sample
  - 4 Illumina NovaSeq samples
- Learn more:
  - 10.1186/s40793-022-00424-2
  - 10.1093/femsmc/xtac019