FWD AMR· RefLabCap

Activities related to WGS

Eva Litrup
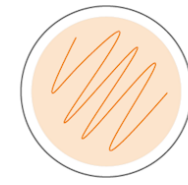
Foodborne Infections

Statens Serum Institut

FWD AMR RefLabCap Network meeting 1st December 2021

STATENS SERUM INSTITUT
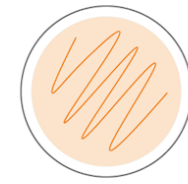
DTU

Network meeting
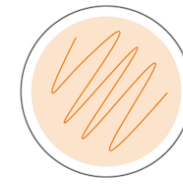
- Great talks

- Good discussions

- Significant interest

Propose new methodologies

➢ Perform Litterature review
- Bioinformatic methods
- Databases
- Relevant development initiatives

➢ Identify key AMR determinants for detection and surveillance of high risk epidemic clones

➢ Propose methodologies for AMR detection in routine WGS based surveillance

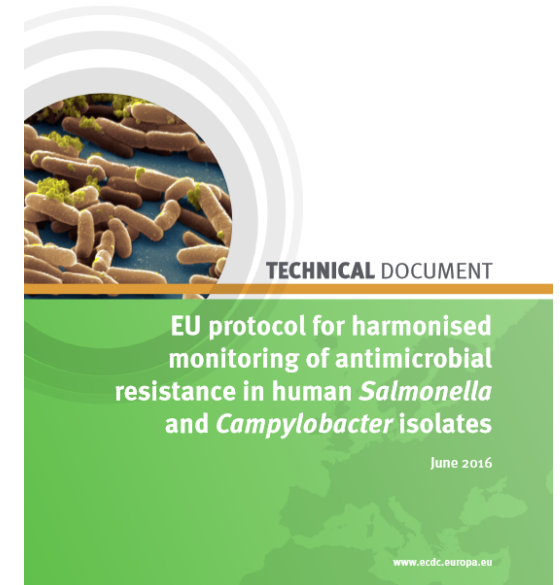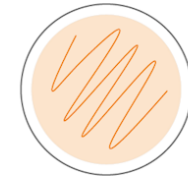➢ Consult network and achieve agreement on proposed methodologies

Review EU protocol

Revision of existing EU protocol

➢ Review excisting EU protocol
➢ Propose amendments – monitoring genetic determinants
➢ Ensure EURL methodologies are compatible
➢ Create draft revision

➢ Consultation on draft in network
➢ Create revised EU protocol

European Centre for Disease Prevention and Control. EU protocol for harmonised monitoring of antimicrobial resistance in human Salmonella and Campylobacter isolates – June 2016. Stockholm: ECDC; 2016.
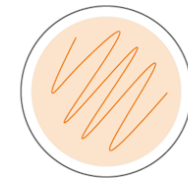
WGS based EQAs

Conduct three in vitro EQAs in the network

➢ WGS based resistome profiling

➢ High-risk clone identification

➢ The purpose is to see if the right genes are detected

➢ Method freedom – different ressources (people and money)

➢ Answer is important -> communicable, comparable

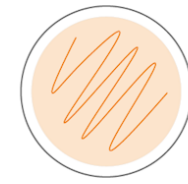➢ Ensure complementarity with ongoing ECDC EQA activities

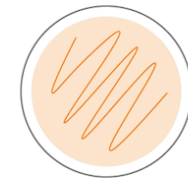# Ring-trials analysis methods

Conduct 3 in silico ring trials

➢ Extremely fast development in this field

➢ 1st round test existing methods/pipelines in labs

➢ 2nd and 3rd round executed on a common set of methods and databases

➢Evaluate pipelines based on
- Validity of results, correct gene finding is important...
- Usability
- Ease of implementation into surveillance of AMR/cluster detection

Question:

- Does your lab have a **workflow for AMR prediction** based on WGS?
    - Yes, run routinely
    - Yes, run ad hoc e.g. projects, outbreaks
    - No

Discussion meetings

- Great discussions yesterday -> -> ->

- Short presentation on subject

- Informal discussions – max 1 hour

- We welcome subjects for discussion

- First subject is databases
    - CARD
    - ResFinder
    - AMRFinder Plus
    - Etc..

Thank you all

Looking forward to collaborations and discussion