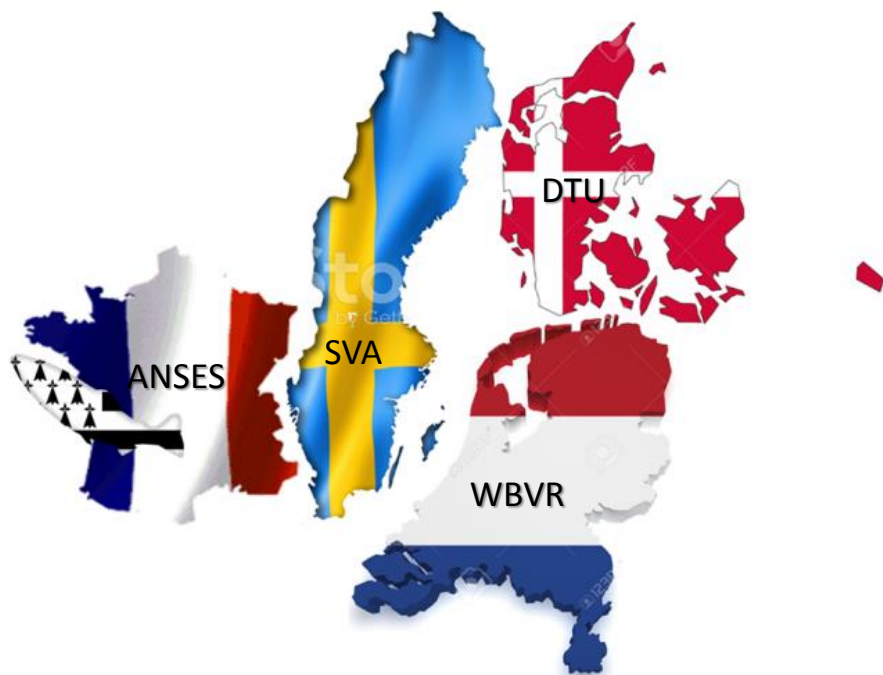


Annual Covetlab Meeting : 19/20th of June 2018

**Multinational comparative AMR retrospective study
on pathogenic *Vibrio* spp. isolated
from diseased fish and shellfish**

-

Project updated



KOM in Anses
16-17th October 17



2nd Meeting
23-24th April 18



- Anses : Sandrine Baron, Sophie Granier, Emeline Larvor, Thierry Morin
- DTU : Lone Madsen, Inger Dalsgaard, Kári Karbech Mouritsen
- SVA : Eva Jansson
- WBVR : Daniela Ceccarelli, Olga Haenen, Michal Voorbergen-Laarman, Betty van Gelderen

Context

- AMR is a major problem in human and animal health
- Aquatic environment : Key compartment

Aquaculture

- Vibriosis is a serious disease in fish farming with high economic impact
- Very few data are available about antimicrobial susceptibility of fish pathogenic *Vibrio*

⇒ lack of harmonized method

Research questions

- On the basis of four strain collections of aquatic pathogenic *Vibrio* spp., can we produce SOPs for AMR testing for isolates from fish and shellfish?
- Can we extend the outcome of this project to plan for further monitoring at a national and European levels in aquaculture?
- What is the current status of AMR in *Vibrio* spp from diseased fish and shellfish ?

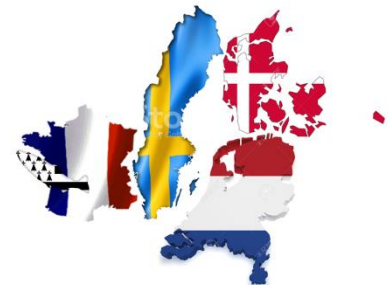
Aims of the project

1. Establish a shared collection of *Vibrio* from fish and shellfish between partners
2. Harmonize AMR testing protocols among countries



Result 1 - Shared collection of *Vibrio* from fish between partners

- ✓ 56 isolates of *Vibrio* from three partners
 - 30 *V. anguillarum* (DK=10, NL=10, SE=10)
 - 26 *V. vulnificus* (DK=10, NL=9, SE=7)
- ✓ 12 MTA signed
- ✓ The 56 isolates are stocked in the 4 labs



Result 2 - Harmonized protocols among countries

✓ Selection of antimicrobial agents:

Oxolinic acid, tetracycline, oxytetracycline, ampicillin, amoxicillin, erythromycin, trimethoprim/sulfamethoxazole, florfenicol & chloramphenicol

✓ Harmonization of methods: Incubation step

- Incubation temperature standardized at 28°C; range of temperatures initially used for each species: *V.a* (20-30°C) and *V.v* (18-35°C)
- Results read after 24h/48h incubation at 28°C: no significant changes observed, 24h is sufficient for reliable results.

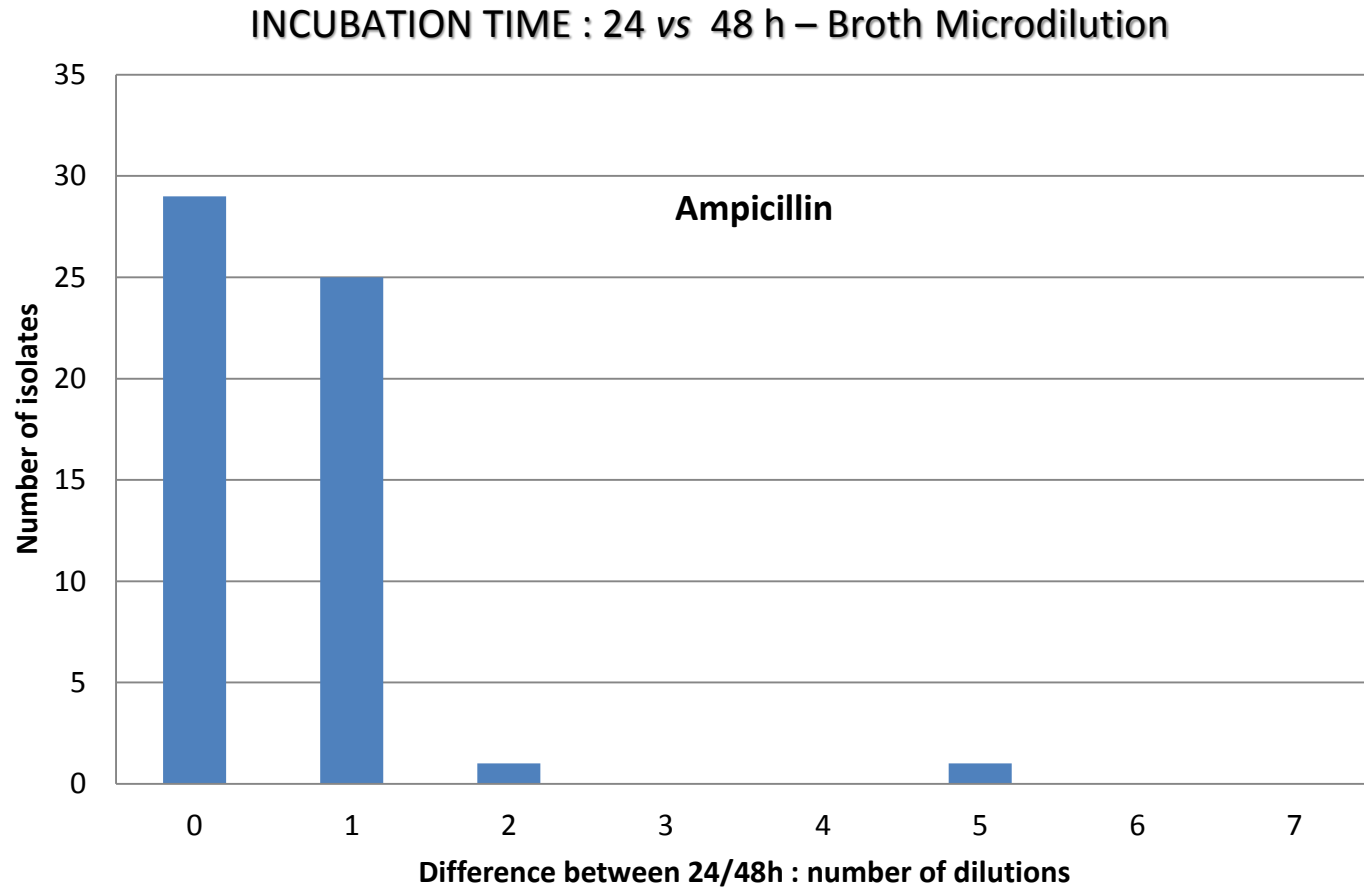
✓ Susceptibility testing performed by:

- Agar diffusion (AG): 3 partners (Anses, DTU, WBVR)
- Broth microdilution (BM): 2 partners (Anses, SVA)
 - Agreement of results obtained by BM/AG : no major/very major discrepancies were observed
 - BM: results mostly outside the range of the microplates used by both partners

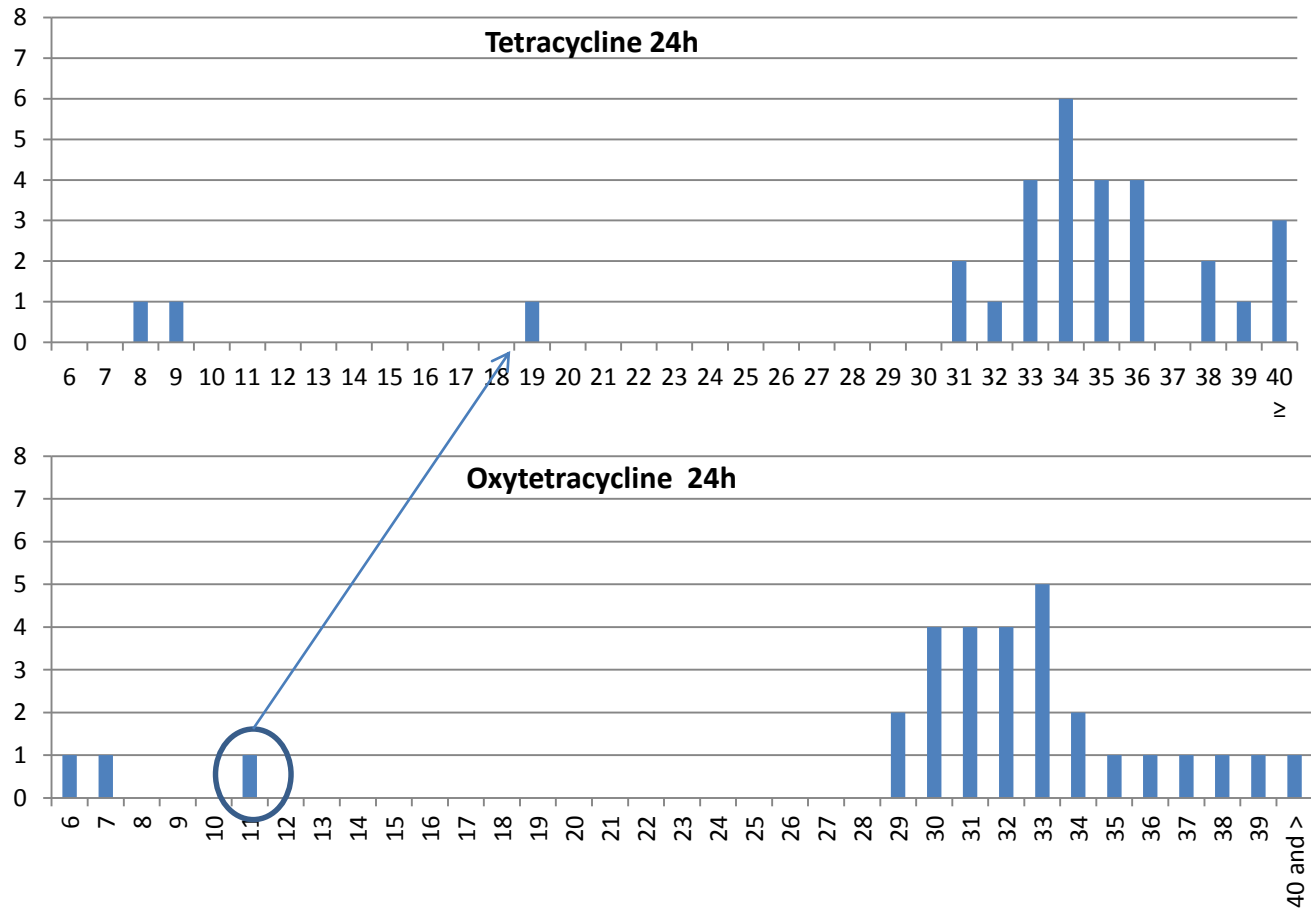
✓ 1st version of SOP is written

Result 3 – Trends in AMR

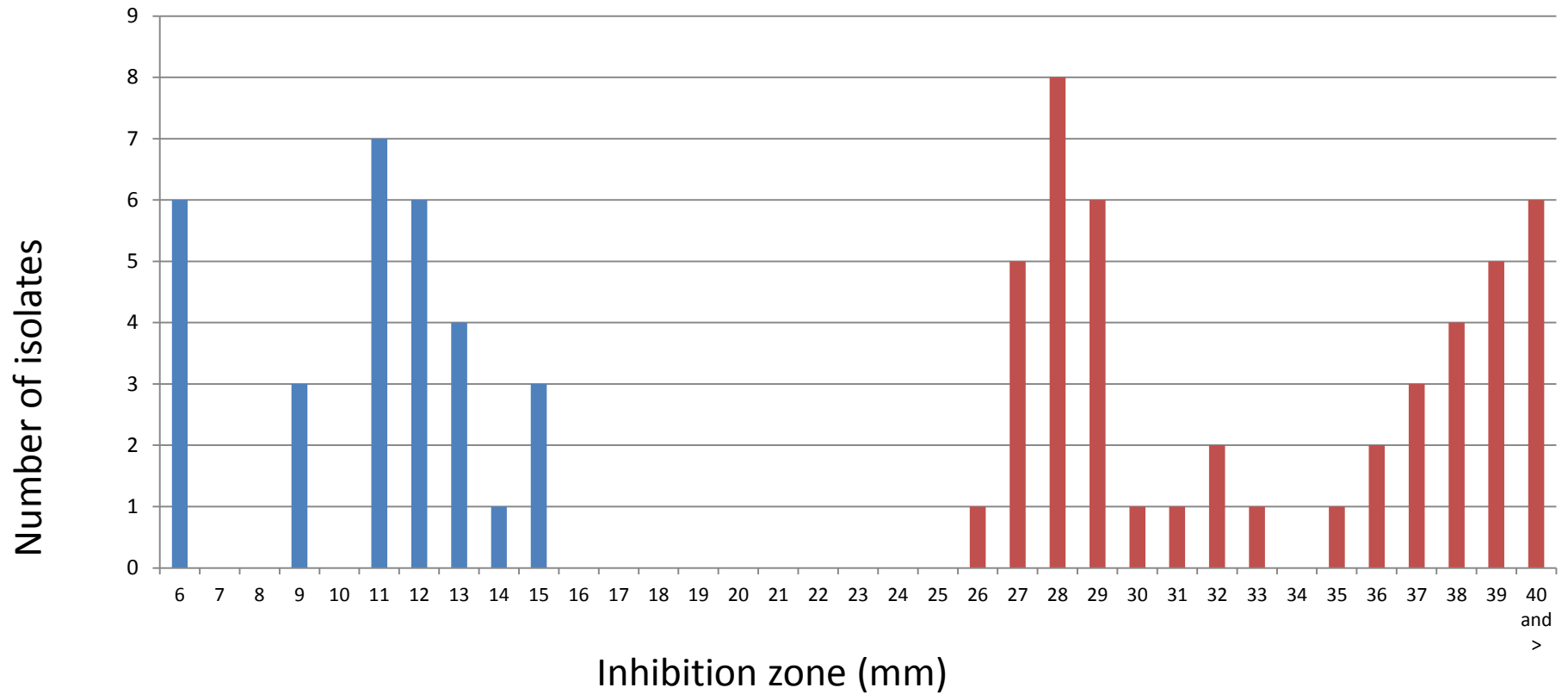
Analysis of results is running ( conference 4th June) ...



SAME ANTIMICROBIAL CLASS – 2 AGENTS TESTED
for example V. anguillarum – Agar diffusion



INHIBITION ZONE FOR AMPICILIN
OF *V. ANGUILLARUM* AND *V. VULNIFICUS*



Valorisation

- 1st results presented in Aqua2018
(poster communication)
- Answer to the JPIAMR Network Call on
Surveillance 2018:
VIBRANT « Vibrio and AMR »
36 participants from 17 countries

Next steps and perspectives

- Next steps
 - Analysis of data
 - Publication of results: article
- Perspectives:
 - Determine Ecoff value for *V. anguillarum* and *V. vulnificus* \Rightarrow increase collection size
 - Broaden to other *Vibrio* species
 - Application to Covetlab Call 2018

Thank you for your attention



Thank you for financial support

ZABIVAKA™

And ITALY and NL!!! Are not
here... Drama... ☹ ☹ ☹



Sammen skaber
vi historie



Votre force, notre
passion, allez les bleus



Send us
victorious



Tillsammans
för Sverige!

