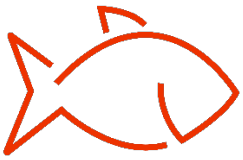
Report of the 5th Meeting of the *ad hoc* Group on Technical References for Aquatic Animals



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30-31 August 2022
Paris

World Organisation for Animal Health
Founded as OIE

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1. Opening

The ad hoc Group on Technical References for Aquatic Animals (hereafter referred to as 'the Group') met from 30 to 31 August 2022 in a hybrid format (at the WOAH Headquarters in Paris and via Zoom video platform), from 09:30 to 17:00 (Central European Time).

Dr Montserrat Arroyo welcomed the Group members and thanked them for their participation in the meeting. She acknowledged the effort made by the Group for the time invested developing the Technical Reference Document Listing Antimicrobial Agents of Veterinary Importance for Aquatic Species (hereafter referred as the Aquatic Technical Reference Document) and highlighted its relevance within the framework of the implementation of the Aquatic Animal Health Strategy.

2. Adoption of the agenda and appointment of the rapporteur

The agenda was adopted without additions or deletions. The Group was chaired by Prof. Moritz van Vuuren and Dr Siow Foong Chang acted as rapporteur. The adopted Agenda and List of Participants are presented in Appendices I and II of these minutes, respectively.

3. Summary of items agreed during and after the meeting in June 2022

Dr Mateo reminded the Group that, in the previous meeting, decisions were made about the remaining molecules classification, as "used" or "not used". The criteria for including diseases, susceptible hosts and used antimicrobial classes on the appendices, was also reminded. Basically, information should come from treatment indications of approved products used in aquaculture, or from indications from country official lists. In addition, the results of a further search performed after the last meeting for the confirmation of the last molecules was summarized. Finally, Dr Mateo mentioned to the Group that the feedback for the Aquatic Technical Reference Document reviewed by various experts was positive and the suggestions for improving it were minor.

4. Review of progress with the Aquatic Technical Reference Document

4.1. Discussion on the feedback received from the experts on the technical reference document

Feedback provided by the experts on the Aquatic Technical Reference Document was reviewed section by section. The following experts provided feedback:

- Dr Nobuyuku Takahashi, Assistant Director, Ministry of Agriculture, Forestry and Fisheries – Japan
- Dr Hamish Rodger, Consultant, VAI Consulting, Galway – Ireland
- Dr Aihua Li, Principal Investigator, Chinese Academy of Sciences – China
- Dr Victoria Alday-Sanz, Director Biosecurity, Naqua – Kingdom of Saudi Arabia
- Dr Gillian Taylor, Extra-ordinary lecturer, University of Pretoria – South Africa
- Dr Dušan Palić, University Professor, Ludwig-Maximilians-Universität München, representing the World Veterinary Association
- Rick Clayton, Contact person, Technical Secretariat, HealthforAnimals, Brussels, Belgium

Unfortunately, Dr Betty San Martin, from the new WOAH Collaborating Centre of Antimicrobial Stewardship in Aquaculture, who initially accepted to be a reviewer, could not participate for personal reasons.

4.1.1. The following modifications were agreed for the text of the Aquatic Technical Reference Document:

A sentence recognizing the use of antibiotics in mollusc aquaculture (as in ornamental fish) was added but pointing out that it was not considered in the document, as it is not within its scope.

In the section "Summary of differences between the antibiotics listed in the Aquatic Technical Reference Document and the List of Antimicrobial Agents of Veterinary Importance", an additional paragraph was added explaining that although there are antibiotic products with sarafloxacin and bicozamycin for use in aquaculture, they were considered as "not used" as, even though approved, they are not commercialized.

In the section "Summary of pathogens, diseases and antimicrobial classes included in the appendices", some bacterial pathogens causing important diseases in fish (i.e. Midichloria like organism, Pasteurella skyensis, P. atlantica, and Weissella ceti) for which there is no treatment, or treatment is not documented in products labels, were added to the examples already included in the text.

An additional reference published by the Federations of Veterinarians of Europe on fish diseases lacking treatment was added to the reference list.

4.1.2. The following modifications were agreed for the main table of the Aquatic Technical Reference Document:

A footnote with a link to the *List of Antimicrobial Agents of Veterinary Importance* was added for "Categorisation" and for "Species" that would inform the reader on the basis for sub-categorisation and the meaning of the acronyms for species, respectively.

Likewise, the explanatory legend on the acronyms PIS and CRU with respect to the multispecies list was left (as a footnote), as it would be informative to the reader. The legend is as follows: **PIS**: molecules already considered as used in finfish; ~~PIS~~: molecules not considered as used in finfish anymore; (**PIS**): molecules newly considered as used in finfish; **PIS***: molecules considered as used in finfish that were not included for any species; **CRU**: new species denomination for molecules considered as used in crustaceans

In the specific comments box for Phosphonic Acid and Derivatives, Edwardsiellosis was added among the diseases for which this class (in particular fosfomycin) is used.

In the specific comments box for second generation Quinolones (Fluroquinolones), a paragraph was included indicating that this sub-class is subject to the recommendations of the *List of Antimicrobial Agents of Veterinary Importance*.

In the specific comments box for Sulfonamides, it was emphasised that its use if for a wide range for bacterial infections.

4.1.3. The following modifications were agreed for Appendix 1 (List of major bacterial pathogens and diseases affecting aquatic species):

The pathogen species *Lactococcus petauri* was added to *L. garvieae* as causative agent of piscine lactococcosis in various fish species.

The pathogen sub-species *Photobacterium damselae* subsp. *damselae* was added to *P. damselae* sub-species *piscida* as causative agent of photobacteriosis in various fish species.

Streptococcus spp. was merged with *S. agalactiae* and *S. iniae* as causative agents of streptococcosis in various fish species.

Vibrio spp. was added to include *V. ordalii* and *V. harveyi* as examples of causative agents of atypical vibriosis in various fish species.

The pathogen *Hepatobacter penaei* was included in the Crustacea section given that authorized antibiotic products indicated for this pathogen were found. The word 'Candidatus' was added, as the taxonomic nomenclature is still to be defined.

The common name 'prawn' was added to 'shrimp' to cover the common usage in different geographical areas.

The former taxonomic names of the pathogens that have not been used for long time were not considered.

Those emergent pathogens that were not considered relevant yet were not included in the text.

4.1.4. The following modifications were agreed for Appendix 2 (Antimicrobial classes used in veterinary medicine for aquatic species infections):

- An 'X' was added in the matrix table in the following cases in the section for fish:

- Amphenicols for *Aeromonas* spp., as florfenicol products were found to be approved in Croatia and Lithuania to treat fish infections caused not only by *A. salmonicida* but also by other *Aeromonas* infections.

- Amphenicols for *Francisella* spp., as florfenicol products were found to be approved in Peru to treat tilapia infected with *F. noatunensis*.

- Phosphonic acid derivatives for *Edwarsiella piscida*, as fosfomycin products were found to be approved in Japan to treat Edwardsiellosis in perciforms.

- Quinolones 1st Generation (Fluoroquinolones) for *Aeromonas* spp., as oxolinic acid products were found to be approved in Japan to treat Cyprinids infected with *Aeromonas* spp, and flumequine products were found to be approved in Greece and Hungary to treat *Aeromonas* spp infections in fish.

- Sulfonamides + Diaminopyrimidines for *Flavobacterium columnare*, as sulfadizine + trimethoprim products were found to be approved in Greece to treat fish infections caused by *F. columnare* among other bacteria.

- Sulfonamides + Diaminopyrimidines for *Vibrio* spp., as products containing sulphamonomethoxine alone or in combination with ormetoprim were found to be approved in Japan to treat various *Vibrio* infections. Also, sulfizosole sodium products are approved in Japan to treat various *Vibrio* infections in salmonids and perciforms.

- Tetracyclines and *Aliivibrio salmonicida*, as oxytetracycline products were to be approved in South Africa to treat fish with cold water vibriosis.

- An 'X' was added in the matrix table in the following cases in the section for crustacea:

- Amphenicols for *Hepatobacter penaei*, as florfenicol products were found to be approved in Peru to treat necrotising hepatopancreatitis in shrimp.

- Amphenicols for *Vibrio* spp., as florfenicol products were found to be approved in Peru to treat infection with *V. harveyi* in shrimp.

- Tetracyclines for *Hepatobacter penaei*, as oxytetracycline products were found to be approved in Peru to treat necrotising hepatopancreatitis in shrimp.

5. Other business

Dr Mateo informed the Group that the final Aquatic Technical Reference Document will be presented to the Working Group on AMR in their next meeting (4-6 October) for validation.

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… Appendices/

Annex I. Agenda

MEETING OF THE WOAH AD HOC GROUP ON TECHNICAL REFERENCES FOR AQUATIC ANIMALS

Paris, 30-31 August 2022

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Day 1 (30 August 2022)

1. Opening remarks
2. Adoption of agenda and appointment of rapporteur and chair
3. Summary of items agreed and appointment of rapporteur and chair
4. Discussion on the feedback received from the experts on the Aquatic Technical Reference Document
    - Scope
    - Methodology used
    - Summary of differences between the Aquatic Technical Reference Document and the *List of Antimicrobial Agents of Veterinary Importance*
    - Summary of pathogens, diseases and antimicrobial classes included in the appendices
    - References
    - Main table

Day 2 (31 August 2022)

5. Discussion on the feedback received from the experts on the Aquatic Technical Reference Document (continuation)

    Points for discussion:
    - Main table
    - Appendix 1: List of major pathogens and diseases affecting aquatic species
    - Appendix 2: Antimicrobial classes used in veterinary medicine for aquatic species infections

6. Any other business

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Annex II. List of Participants

MEETING OF THE WOAH AD HOC GROUP ON TECHNICAL REFERENCES FOR AQUATIC ANIMALS

Paris, 30-31 August 2022

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MEMBERS

Dr Donald A. Prater (Chair) - virtually
Associate Commissioner for Imported Food Safety
Office of Foods and Veterinary Medicine
U.S. Food and Drug Administration
UNITED STATES OF AMERICA

Dr Gérard Moulin – in-person/virtually
Directeur de Recherches, adjoint au Directeur de l'ANMV
OIE Collaborating Centre for Veterinary Medicinal Products
Agence Nationale de Médicament Vétérinaire
Anses Fougères
Fougères
FRANCE

Prof. Moritz van Vuuren – in-person
Emeritus Professor in Microbiology
Vice-Chair: Ministerial Advisory Committee on Antimicrobial Resistance
SOUTH AFRICA

Dr Kevin William Christison – virtually
Specialist Scientist
Department of Agriculture Forestry and Fisheries
Directorate: Aquaculture Research and Development
SOUTH AFRICA

Dr David Verner-Jeffreys in-person
Principal Microbiologist
Co-Director FAO International Reference Centre for AMR (UK)
Cefas Weymouth Laboratory
Weymouth, Dorset
UNITED KINDOM

Dr Ruben Avendaño-Herrera – in-person
Full Professor, Principal Investigator and Director of the Pathology Laboratory of Aquatic Organisms and Aquaculture Biotechnology of the Faculty of Life Sciences
Universidad Andrés Bello and Interdisciplinary and Center for Aquaculture Research (INCAR)
Viña del Mar
CHILE

Dr Chang Siow Foong – in-person
Group Director Professional & Scientific Services
Animal & Veterinary Service
National Parks Board
SINGAPORE

Dr Eduardo Leaño – in-person
Senior Programme Officer
Aquatic Animal Health Programme
Network of Aquaculture Centres in Asia-Pacific
Bangkok
THAILAND

Dr F. Carl Uhland – in-person
Veterinary Epidemiologist-Veterinary Microbiologist
Foodborne Disease and Antimicrobial Resistance Surveillance Division
Centre for Food-borne, Environmental and Zoonotic Infectious Diseases
Infectious Disease Prevention and Control Branch
Public Health Agency of Canada
CANADA

Dr Nelly Isyagi – virtually
Consultant
Kampala
UGANDA

WOAH PARTICIPANTS

Dr Montserrat Arroyo – in-person
Deputy Director General

Dr Dante Mateo – in-person
Scientific Coordinator
AMR-VP

Tosca Sala – in-person
Intern
AMR-VP