OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-02-17 03:26:21

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Infection with salmonid alphavirus
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Name (including Title) of Head of Laboratory (Responsible Official):	Gaute Lenvik, Managing Director
Name (including Title and Position) of OIE Reference Expert:	Dr. Hilde Sindre, PhD, Senior Researcher
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in OIE Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Histopathology	Yes	593	0
Serum neutralisation test	Yes	41	0
Direct diagnostic tests		Nationally	Internationally
Immunohistochemistry	Yes	0	0
Cell culture isolation	Yes	9	0
Real-time RT-PCR	Yes	1508	0
RT-PCR with sequencing	Yes	361	0

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.
To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by the OIE?

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Isolated Live Isolated live field isolate SAV3	Several	Norway	53 ml	0	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
Inactivated field isolate SAV2	RT-PCR	Norway	1 ml	0	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

No

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

No

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Characterisation of SAV isolates	On-going C	Characterisation of SAV isolates	Agrifood and Biosciences Institute (AFBI)	UNITED KINGDOM
SYBIATT	2017-2021	Development of methods to change SAV virulence¶	INRA	FRANCE
SYBIATT	2017-2021	Development of methods to change SAV virulence¶	University of Cape Town	SOUTH AFRICA
miRNAs and their role in virus disease and immune response in Atlantic salmon	2016-2021	Investigate the importance of miRNAS in connection to viral salmon diseases including SAV	Ocean Sciences Centre Memorial University of New Foundland	CANADA
miRNAs and their role in virus disease and immune response in Atlantic salmon	2016-2021	Investigate the importance of miRNAS in connection to viral salmon diseases including SAV	University of Stirling	UNITED KINGDOM
miRNAs and their role in virus disease and immune response in Atlantic salmon	2016-2021	Investigate the importance of miRNAS in connection to viral salmon diseases including SAV	University of Edinburgh , The Roslin Institute	UNITED KINGDOM

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:
Data collected related to all Norwegian detections of SAV and also all PD cases

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:
An overview of the occurence of SAV is presented in the annual Fish Health report. All reported cases of SAV are also presented continuously at our web page (https://www.vetinst.no/dyr/oppdrettsfisk/pankreassykdom-pd-utbrudd-og-statistikk) including an inter-active map over outbreaks.

13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)

a) Articles published in peer-reviewed journals: 3
Teige LH, Aksnes I, Røsæg MV, Jensen I, Jørgensen J, Sindre H, Collins C, Collet B, Rimstad E, Dahle MK, Boysen P. Detection of specific Atlantic salmon antibodies against salmonid alphavirus using a bead-based immunoassay.Fish Shellfish Immunol. 2020 Nov;106:374-383. doi: 10.1016/j.fsi.2020.07.055. Epub 2020 Jul 30.PMID: 32738513

Woldemariam NT, Agafonov O, Sindre H, Høyheim B, Houston RD, Robledo D, Bron JE, Andreassen R. miRNAs Predicted to Regulate Host Anti-viral Gene Pathways in IPNV-Challenged Atlantic Salmon Fry Are Affected by Viral Load, and Associated With the Major IPN Resistance QTL Genotypes in Late Infection. Front Immunol. 2020 Sep 11;11:2113. doi: 10.3389/fimmu.2020.02113. eCollection 2020. PMID: 33013890

Thorarinsson R, Wolf JC, Inami M, Phillips L, Jones G, Macdonald AM, Rodriguez JF, Sindre H, Skjerve E, Rimstad E, Evensen Ø. Effect of a novel DNA vaccine against pancreas disease caused by salmonid alphavirus subtype 3 in Atlantic salmon (Salmo salar). Fish Shellfish Immunol. 2021 Jan;108:116-126. doi: 10.1016/j.fsi.2020.12.002. Epub 2020 Dec 4. PMID: 33285168

b) International conferences: 0

c) National conferences: 0

d) Other:
(Provide website address or link to appropriate information) 1
The Fish Health report provide an annual status and risk evaluation of the fish health situation in Norway.

https://www.vetinst.no/rapporter-og-publikasjoner/rapporter/2020/fiskehelserapporten-2019/_/attachment/download/f71650be-67cb-4eef-8e07-df20209d56e9:9f5144bf9c8fd47b42c27ea14432ba107be51777/Fiskehelserapporten_2019_web.pdf

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

No

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
NS-EN ISO/IEC 17025	Accreditation certificate.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Influenza A virus (matrix) - detection with real-time Rt-PCR (ME07_127)	Norwegian Accreditation, member of EA
flexible accrediation including all methods based on the same principle, this includes real-time RT-PCR for SAV	Norwegian Accreditation, member of EA

17. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

Yes

(See Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

20. Did your laboratory exchange information with other OIE Reference Laboratories designated for the same pathogen or disease?

Not applicable (Only OIE Reference Lab. designated for disease)

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Not applicable (Only OIE Reference Lab. designated for disease)

22. Did your laboratory collaborate with other OIE Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Not applicable (Only OIE Reference Lab. designated for disease)

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing see point 1.3

Purpose for inter-laboratory test comparisons[1]	No. participating laboratories	Region(s) of participating OIE Member Countries
The EU-RL Annual Inter-laboratory Proficiency Test 2020 focused on identification of the pathogens causing the non-exotic and exotic fish diseases listed in Council Directive 2016/88EC, including ISA. In 2015, SAV was included for the first time.	49	☒Africa ☒Americas ☒Asia and Pacific ☒Europe ☒Middle East
3rd Inter-laboratory Proficiency Test (VER-IPT) for the molecular detection of Betanodavirus.	27	☐Africa ☒Americas ☒Asia and Pacific ☒Europe ☒Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

No

25. Additional comments regarding your report: