OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-21 15:55:44

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Newcastle disease
Address of laboratory:	Südufer 10 D-17493 Greifswald Insel Riems GERMANY
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Website:	https://www.fli.de/en/institutes/institute-of-diagnostic-virology-ivd/reference-laboratories/oie-fao-and-nrl-for-nd/
Name (including Title) of Head of Laboratory (Responsible Official):	Prof Martin Beer, director
Name (including Title and Position) of OIE Reference Expert:	PD Dr. Christian Grund, 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
Hemagglutination inhibition test (HI)	yes	630	0
Direct diagnostic tests		Nationally	Internationally
virus isolation	yes	50	
RT-qPCR (M-, NP-, F-gene)	no	676	
RT-PCR (F-gene)	yes	62	
Nucleotide sequencing	yes	62	
intracerebral pathogenicity index (ICPI)	yes	9	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?

No

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?

No

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:
The laboratory is part of the national diagnostic network for notifiable animal diseases. As part of the role as national reference laboratory for Newcastle disease we verified detection of Avian Orthoavulavirus-1 (AOAV-1) from regional laboratories and characterized the detected virus with regard to patho- and genotye.

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

No

If the answer is no, please provide a brief explanation of the situation:
The laboratory maintains a personal contact to laboratories in Nigeria, Bangladesh and Egypt. No specific issue arose during the last year and thus exchange was focused on a general exchange and possible future projects.

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: 6

Bari, Fufa D.; Gelaye, Esayas; Tekola, Berhe Gebreegziabher; Harder, Timm; Beer, Martin; Grund, Christian (2021): Antigenic and Molecular Characterization of Virulent Newcastle Disease Viruses Circulating in Ethiopia Between 1976 and 2008. In: Veterinary medicine (Auckland, N.Z.) 12, S. 129–140. DOI: 10.2147/VMRR.S297281.

Landmann, Maria; Scheibner, David; Graaf, Annika; Gischke, Marcel; Koethe, Susanne; Fatola, Olanrewaju I. et al. (2021): A Semiquantitative Scoring System for Histopathological and Immunohistochemical Assessment of Lesions and Tissue Tropism in Avian Influenza. In: Viruses 13 (5). DOI: 10.3390/v13050868.

Meier, S.; Kreyenbühl, K.; Hüssy, D.; Grund, C.; Albini, S. (2021): Geflügelmedizin: Was ist Ihre Diagnose? In: Schweizer Archiv fur Tierheilkunde 163 (2), S. 153–156. DOI: 10.17236/sat00291.

Moharam, Ibrahim; Asala, Olayinka; Reiche, Sven; Hafez, Hafez; Beer, Martin; Harder, Timm; Grund, Christian (2021): Monoclonal antibodies specific for the hemagglutinin-neuraminidase protein define neutralizing epitopes specific for Newcastle disease virus genotype 2.VII from Egypt. In: Virology journal 18 (1), S. 86. DOI: 10.1186/s12985-021-01540-0.

Naguib, Mahmoud M.; Höper, Dirk; Elkady, Magdy F.; Afifi, Manal A.; Erfan, Ahmed; Abozeid, Hassanein H. et al. (2021): Comparison of genomic and antigenic properties of Newcastle Disease virus genotypes II, XXI and VII from Egypt do not point to antigenic drift as selection marker. In: Transboundary and emerging diseases. DOI: 10.1111/tbed.14121.

Osman, Nabila; Goovaerts, Danny; Sultan, Serageldeen; Salt, Jeremy; Grund, Christian (2021): Vaccine Quality Is a Key Factor to Determine Thermal Stability of Commercial Newcastle Disease (ND)Vaccines. In: Vaccines 9 (4). DOI: 10.3390/vaccines9040363.

b) International conferences: 0

c) National conferences: 1

10th Dresdner Kolloquium: Newcastle Disease – eine Standortbestimmung ("Newcastle disease- an evaluation of the current situation"). Conference chair: Christian Grund and Roland Küblbcöck.
https://dk.fli.de/de/jahr/2021/ankuendigung

d) Other:

(Provide website address or link to appropriate information) 1
https://www.fli.de/en/startpage/

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)
ISO 17025:2005	Akkreditierungsurkunde_FLI-Riems-Jena_2019.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Hemagglutination inhibition assay	DAKKS
amplification assays	DAKKS
bio assays	DAKKS

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?

Yes

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?

Yes

Purpose of the proficiency tests: [1]	Role of your Reference Laboratory (organiser/ participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
Validation of detection of NDV by molecular means	participant	32	IZS Padua, Italy
Validation of molecular pathotyping of NDV	participant	32	IZS Padua, Italy

[1] *validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.*

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?

No

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?

No

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

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: