

# WOAH Reference Laboratory Reports Activities 2022

## Activities in 2022

This report has been submitted : 17 avril 2023 10:47

### Laboratory Information

<b>Name of disease (or topic) for which you are a designated WOA Reference Laboratory:</b>	Newcastle Disease
<b>Address of laboratory:</b>	Suedufer 10
<b>Tel.:</b>	+493835171545
<b>E-mail address:</b>	christian.grund@fli.de
<b>Website:</b>	FLI.de
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Prof. Dr. Martin Beer, director
<b>Name (including Title and Position) of WOA Reference Expert:</b>	PD Dr. Christian Grund, senior researcher
<b>Which of the following defines your laboratory? Check all that apply:</b>	Governmental

### TOR1: DIAGNOSTIC METHODS

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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Hemagglutination inhibition test (HI)	yes	80	74
Direct diagnostic tests			
RT-qPCR (M-, NP-, F-gene)	No	9227	135
Nucleotide sequencing	Yes	47	4
virus isolation	Yes	117	4

intracerebral pathogenicity index (ICPI)	Yes	4	0
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## TOR2: REFERENCE MATERIAL

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

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TESTING	PRODUCED/ IMPORTED	QUANTITY SUPPLIED NATIONWIDE (ML, MG)	QUANTITY SUPPLIED AT INTERNATIONAL LEVEL (ML, MG)	NAME OF BENEFICIARY WOA?H MEMBER COUNTRIES
NDV genotype specific hyperimmune sera	HI; ELISA; Virustyping,	produced	< 10mL		

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H Members?

No

## TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOA?H Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOA?H Standards for the designated pathogen or disease?

No

## TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOA?H Members?

Yes

NAME OF WOA?H MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
BANGLADESH	2022-12-13	RT-qPCR+Sequencing	9	0
UNITED ARAB EMIRATES		RT-qPCR+Sequencing	21	0

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOA?H Member?

No

**TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

12. Did your laboratory participate in international scientific studies in collaboration with WOA Members other than the own?

No

**TOR6: EPIZOOLOGICAL DATA**

14. Did your Laboratory collect epidemiological data relevant to international disease control?

No

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

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

a) Articles published in peer-reviewed journals:

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Zhao N, Grund C, Beer M, Wang G, Harder TC. Tetraplex Fluorescent Microbead- Based Immunoassay for the Serodiagnosis of Newcastle Disease Virus and Avian Influenza Viruses in Poultry Sera. *Pathogens*. 2022 Sep 17;11(9):1059. doi: 10.3390/pathogens11091059. PMID: 36145491; PMCID: PMC9505202.

Annaheim D, Vogler BR, Sigris B, Vögtlin A, Hüsey D, Breitler C, Hartnack S, Grund C, King J, Wolfrum N, Albini S. Screening of Healthy Feral Pigeons (*Columba livia domestica*) in the City of Zurich Reveals Continuous Circulation of Pigeon Paramyxovirus-1 and a Serious Threat of Transmission to Domestic Poultry. *Microorganisms*. 2022 Aug 17;10(8):1656. doi: 10.3390/microorganisms10081656. PMID: 36014074; PMCID: PMC9412584.

Naguib MM, Höper D, Elkady MF, Afifi MA, Erfan A, Abozeid HH, Hasan WM, Arafa AS, Shahein M, Beer M, Harder TC, Grund C. 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. *Transbound Emerg Dis*. 2022 Mar;69(2):849-863. doi: 10.1111/tbed.14121. Epub 2021 Jun 25. PMID: 33955204.

b) International conferences:

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28th Annual Meeting of the National Reference Laboratories for Avian Influenza and Newcastle Disease of European Union Member States (2022 – Verona, Italy) <https://www.izsvenezie.com/reference-laboratories/avian-influenza-newcastle-disease/workshops/>

c) National conferences:

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11. Dresdner Kolloquium, Aviäre Influenza – Perspektiven zur Bekämpfung der Geflügelpest, Dresden, 14.06.2022

AVID-Tagung-Schwerpunkt Virologie; Online; 14.-15.09.2021

103. Fachgespräch über Geflügelkrankheiten 2022, Hannover, 03.-04.-11.2023

10. Riemser Diagnostiktage, Greifswald, 24.-25.11.2022

d) Other (Provide website address or link to appropriate information):

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA H Members?

No

## TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025:2005	PDF	Akkreditierungsurkunde_2022.pdf

19. 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

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

The biorisk management system of the FLI encloses several components. The fundamental part are the approved instructions for maintaining and operating laboratories and animal stables of biosafety categories S1 up to S4, specifying working principles and disposal of waste. Entering to the compound and different areas is guarded and controlled by an electronic system registering access to specific sites. Internally those procedures are harmonized by "biosecurity board" and supervised by the FLI "biosecurity officer". Externally, state officials are inspecting the laboratories and technical facilities.

## TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA H?

No

## TOR10: NETWORK WITH WOA H REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA H Reference Laboratories designated for the same pathogen or disease?

Yes

24. Are you a member of a network of WOA H Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOA Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA REF. LABS/ ORGANISING WOA 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

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

No

## **TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING**

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons <sup>1</sup>	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOA Member Countries
identification of NDV by molecular means	Organizer	37	Europe
NDV specific antibody testing	Organizer	24	Europe
Virus isolation	Organizer	12	Europe

## **TOR12: EXPERT CONSULTANTS**

28. Did your laboratory place expert consultants at the disposal of WOA?

No

29. Additional comments regarding your report: