

# OIE Reference Laboratory Reports Activities

## *Activities in 2019*

**This report has been submitted : 2020-01-15 18:02:12**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Newcastle disease
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Christian Grund
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Christian Grund
<b>Which of the following defines your laboratory? Check all that apply:</b>	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	
		Nationally	Internationally
Indirect diagnostic tests			
Hemagglutination inhibition test (HI)	yes	632	0
Direct diagnostic tests			
virus isolation	yes	43	16
RT-qPCR (M-, NP-, F-gene)	no	172	64
RT-PCR (F-gene)	yes	43	16
Nucleotide sequencing	yes	43	16
intracerebral pathogenicity index (ICPI)	yes	6	2

**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
Virus antigen	HI	produced	0	130	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Viral RNA	RT-qPCR	produced	5	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> 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?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
NIGERIA	February	0	16

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:
Study on prevalence of NDV in sector 2 and sector 3 poultry farms in Egypt

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:
see publication below

**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: 2

Moharam I, Razik AAE, Sultan H, Ghezlan M, Meseko C, Franzke K, Harder T, Beer M, Grund C. Investigation of suspected Newcastle disease (ND) outbreaks in Egypt uncovers a high virus velogenic ND virus burden in small-

scale holdings and the presence of multiple pathogens. Avian Pathol. 2019 Oct;48(5):406-415. doi: 10.1080/03079457.2019.1612852.

Kiril M. Dimitrov KM, Abolnik C, Afonso CL, Albina E, Bahl J, Berg M, Briand FX, Brown IH, Choi KS, Chvala I, Diel DG, Durr PA, Ferreira HL, Fusaro A, Gil P, Goujgoulova GV, Grund C, Hicks JT, Joannis TM, Torchetti MK, Kolosov S, Lambrecht B, Lewis NS, Liu H, Liu H, McCullough S, Miller PJ, Monne I, Muller CP, Munir M, Reischak D, Sabra M, Samal SK, Almeida RS, Shittu I, Snoeck CJ, Suarez DL, Van Borm S, Wang Z and Wong FYK. Updated unified phylogenetic classification system and revised nomenclature for Newcastle disease virus. Infect Genet Evol. 2019 Oct; 74: 103917. doi: 10.1016/j.meegid.2019.103917, PMID: PMC6876278

b) International conferences: 2

Moharam I, Ibrahim M, Razik A, Ghezlan M, Höper D, Harder T, Beer M, Grund C. Prevalence of Newcastle disease and other respiratory pathogens in farms with respiratory distress in Egypt. 21st World Veterinary Poultry Association Congress - WVPAC 2019, September 16 - 20, 2019; Bangkok, Thailand

Grund C, Moharam I, Beer M. Longitudinal study on viral evolution demonstrates conservation of antigenic sites in haemagglutinin neuraminidase (HN-) attachment protein of pigeon avulavirus -1 circulating in Germany. 21st World Veterinary Poultry Association Congress - WVPAC 2019, September 16 - 20, 2019; Bangkok, Thailand

Grund C. Diagnostic challenges due to virulent NDV in vaccinated flocks-Lessons learnt from countries with endemic Newcastle disease. EU-NRL meeting. 19.21.06.2019. Padua, Italy

c) National conferences: 1

Grund C. Relevanz anzeigepflichtiger Geflügel-Erkrankungen für Brieftauben / Relevance of notifiable poultry diseases for homing pigeons. FCI Brieftaubenkongress für Tierärzte, 15.-16.03.2019, Gelsenkirchen, Germany

d) Other:

(Provide website address or link to appropriate information) 1

Organisation of national conference on poultry diseases

<https://dk.fli.de/de/jahr/2019/ankuendigung/>

**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?

Yes

a) Technical visits: 0

b) Seminars: 0

c) Hands-on training courses: 0

d) Internships (>1 month): 1

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
d	Nigeria	1
d	Egypt	1

**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-2018.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: <sup>1</sup>	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	28	Animal and Plant Health Agency (APHA; UK)/ IZS Padua, Italy
Validation of molecular pathotyping of NDV	participant	28	Animal and Plant Health Agency (APHA; UK)/ IZS Padua, Italy

<sup>1</sup> 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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
Initiative to harmonize NDV genotype nomenclature	genotyping of NDV	Initiative to harmonize NDV genotype nomenclature genotyping of NDV Animal and Plant Health Agency (APHA, Weybridge; Southeast Poultry Research Laboratory Athens

**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 <sup>1</sup>	No. participating laboratories	Region(s) of participating OIE Member Countries
NDV Antibody testing	25	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> 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: