

# OIE Reference Laboratory Reports Activities

## *Activities in 2021*

**This report has been submitted : 2022-01-25 13:20:28**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	African swine fever
<b>Address of laboratory:</b>	Avda Puerta de Hierro s/n 28040 Madrid España
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Prof. Dr. José Manuel Sánchez-Vizcaíno. Catedrático del Departamento de Sanidad Animal de la Facultad de Veterinaria de la Universidad Complutense de Madrid
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Prof. Dr. José Manuel Sánchez-Vizcaíno. Catedrático del Departamento de Sanidad Animal de la Facultad de Veterinaria de la Universidad Complutense de Madrid
<b>Which of the following defines your laboratory? Check all that apply:</b>	Academic

***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)

No

***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?

Yes

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

Yes

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
Toma de muestras con esponjas inactivadoras	Kosowska, A., Barasona, J.A., Barroso-Arévalo S., Rivera B., Domínguez L., Sánchez-Vizcaíno J.M. A new method for sampling African swine fever virus genome and its inactivation in environmental samples. <i>Sci Rep</i> 11, 21560 (2021). <a href="https://doi.org/10.1038/s41598-021-00552-8">https://doi.org/10.1038/s41598-021-00552-8</a>
Prototipo vacunal contra la peste porcina africana (Lv17/WB/Rie1)	Barasona JA., Gallardo C., Cadenas-Fernández E., Jurado C., Rivera B., Rodríguez-Bertos A., Arias M., Sanchez-Vizcaino JM. "First Oral Vaccination of Eurasian Wild Boar Against African Swine Fever Virus Genotype II". <i>Frontiers in veterinary science</i> , 6(137):1-10. 04/2019.
ELISA indirecto (fluido oral, heces)	Giménez-Lirola L.G., Mur L., Rivera B., Mogler M., Sun Y., Lizano S., Goodell C., Harris D.L., Rowland R.R., Gallardo C., Sánchez-Vizcaíno J.M., Zimmerman J. (2016) Detection of African Swine Fever Virus Antibodies in Serum and Oral Fluid Specimens Using a Recombinant Protein 30 (p30) Dual Matrix Indirect ELISA. <i>PLoS One</i> . 9;11(9):e0161230. 9/2016. Nieto-Pelegrin E., Rivera-Arroyo B. and Sánchez-Vizcaíno J.M. (2015) First detection of antibodies against African swine fever virus in faeces samples. <i>Transbound. Emerg Dis</i> . 62(6): 594-602. doi: 10.1111/tbed.12429.
Inmunoblotting	Pastor, M.J., Laviada, M.D., Sánchez-Vizcaíno, J.M., Escribano, J.M. (1989): Detection of African swine fever virus antibodies immunoblotting assay. <i>Canadian journal of veterinary research</i> , 53 (1):105-107
ELISA indirecto	Sánchez-Vizcaíno, J.M. Martín, L., Ordás. A. (1979): Adaptation and evaluation of Enzyme-linked immunosorbent assay for the detection of African swine fever antibodies. <i>Laboratory</i> , 67 (400):311-319

**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?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
DOMINICAN (REP.)	Conferencias y prácticas de formación sobre el diagnóstico de la PPA	Conferencias presenciales y prácticas
EL SALVADOR	Guías y protocolos para el diagnóstico de la PPA	Consultas por correo electrónico
PERU	Guías y protocolos para el diagnóstico de la PPA	Consultas por correo electrónico
HONDURAS	Guías y protocolos para el diagnóstico de la PPA	Consultas por correo electrónico
PANAMA	Guías y protocolos para el diagnóstico de la PPA	Consultas por correo electrónico
GUATEMALA	Guías y protocolos para el diagnóstico de la PPA	Consultas por correo electrónico

***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
Single-cycle Replicon-based African Swine Fever Virus Subunit Vaccine” under the funding opportunity of the 2018 USDA AFRI Foundational Proposal [Program Area-A1221]	3 años	Prueba in vivo de un prototipo vacunal contra la peste porcina africana	Kansas State University	UNITED STATES OF AMERICA
Intervet International BV (MAH)/ MSD 50-2019	2 años	Prueba in vivo de un prototipo vacunal contra la peste porcina	Intervet International BV (MAH)	THE NETHERLANDS
VACDIVA: A safe DIVA vaccine for African Swine Fever control and eradication	4 años	Desarrollo de una vacuna DIVA eficaz y segura contra la peste porcina africana	Intervet International BV (MAH), Istituto Zooprofilattico Sperimentale della Sardegna (IZS), State veterinary institute Jihlava (SVI), Veterinaar Ja Toidulaboratoorium (VFL), Max Planck Institute (MPG), National Food Chain Safety Office (NFCSO), Partikas Drosibas, Dzivnieku Veselibas un vides Zinatniskais Institutsbiors (BIOR), Nacionalinis Maisto ir veterinarijos rizikos vertinimo institutas (NFVEAI), Faculdade de Medicina Veterinária (FMV), China Animal Health & epidemiology Center National Research Center for Exotic Animal Diseases (CAHEC), FGI Federal Center for Animal Health (ARRIAH), International Livestock Research Institute (ILRI)	GERMANY CHINA (PEOPLE'S REP. OF) ESTONIA HUNGARY ITALY KENYA LATVIA LITHUANIA THE NETHERLANDS PORTUGAL RUSSIA
Unravelling the effect of contact networks and socio-economic factors on the evolution, emergence and spread of infectious diseases at the wildlife-domestic interface	3 años	Comprender mejor la dinámica de transmisión de las enfermedades transfronterizas emergentes de los animales (TAD) que obstaculizan la seguridad alimentaria y limitan el desarrollo socioeconómico de las comunidades humanas	UC David, French Agricultural Research Centre for International Development (CIRAD), University of Pretoria (UP), University Eduardo Mondlane (UEM), Agricultural Research Institute of Mozambique, Maputo (IIAM)	UNITED STATES OF AMERICA

**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:
Los datos colectados se plasman en los artículos publicados que se mencionan a continuación

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:
Los datos colectados se plasman en los artículos publicados que se mencionan a continuación

**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

1.Barasona JA, Cadenas-Fernández E, Kosowska A, Barroso-Arévalo S, Rivera B, Sánchez R, Porras N, Gallardo C and Sánchez-Vizcaíno JM (2021) Safety of African Swine Fever Vaccine Candidate Lv17/WB/Rie1 in Wild Boar: Overdose and Repeated Doses. *Front. Immunol.* 12:761753. doi: 10.3389/fimmu.2021.761753

2.Kosowska A., Barasona JA., Barroso-Arevalo S., Rivera B., Dominguez L., Sanchez-Vizcaino JM. "A new method for sampling African swine fever virus genome and its inactivation in environmental samples". *Scientific reports*, 11(1):21560. 11/2021.

3.Munoz-Perez C., Jurado C., Sanchez-Vizcaino JM. "African swine fever vaccine: Turning a dream into reality". *Transboundary and Emerging Diseases*, 68(5):2657-2668. 09/2021.

4.Barroso-Arevalo S., Barasona JA., Cadenas-Fernández E., Sanchez-Vizcaino JM. "The Role of Interleukine-10 and Interferon-gamma as Potential Markers of the Evolution of African Swine Fever Virus Infection in Wild Boar". *Pathogens*, 10(6):757. 06/2021.

5.Cadenas-Fernández E., Sanchez-Vizcaino JM., van den Born E., Kosowska A., van Kilsdonk E., Fernandez-Pacheco P., Gallardo C., Arias M., Barasona JA. "High Doses of Inactivated African Swine Fever Virus Are Safe, but Do Not Confer Protection against a Virulent Challenge". *Vaccines*, 9:242. 03/2021.

6.Sanchez-Vizcaino JM., Laddomada A., Martinez-Aviles M. "African Swine Fever". *Frontiers in veterinary science*, 7:632292. 01/2021.

b) International conferences: 11

1.Sanchez-Vizcaino JM. "African Swine fever actual situation overview. Introducing VACDIVA: Main Scientific Objectives and Preliminary Results". *VACDIVA: First international workshop for the pig sector*. Lleida, Spain. 01/10/2021.

2.Sanchez-Vizcaino JM. "Recent Advances on ASFV Vaccines at VacDiva". *Current Efforts in African Swine Fever Vaccines*. Madrid, Spain. 06/05/2021.

3.Sanchez-Vizcaino JM. "Situación global de la Peste Porcina Africana (PPA)". *Curso de formación sobre el*

diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 25/10/2021.

4.Sanchez-Vizcaino JM. "Importancia de la detección temprana de la enfermedad". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 25/10/2021.

5.Sanchez-Vizcaino JM. "Cuadro clínico y lesiones observadas en la PPA". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 25/10/2021.

6.Sanchez-Vizcaino JM. "Diagnóstico diferencial con otras enfermedades hemorrágicas". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 25/10/2021.

7.Barroso-Arévalo S. "Introducción al diagnóstico de la PPA: muestras de elección y transporte al laboratorio, recepción y registro". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 26/10/2021.

8.Barroso-Arévalo S. "Técnicas de diagnóstico para la PPA. Introducción al diagnóstico molecular de la PPA". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 26/10/2021.

9.Cadenas-Fernández E. "Introducción al diagnóstico serológico de la PPA: principales técnicas". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 27/10/2021.

10.Barroso-Arévalo S, Cadenas-Fernández E. "Introducción a la secuenciación del virus de la PPA: PCR y principales herramientas para su interpretación y genotipado". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 28/10/2021.

11.Sanchez-Vizcaino JM. "Simulación de un brote de PPA en el laboratorio". Curso de formación sobre el diagnóstico de laboratorio de la peste porcina africana. Santo Domingo, República Dominicana. 29/10/2021.

c) National conferences: 8

1.Sanchez-Vizcaino JM. "El conocimiento real de la estrategia One Health por parte de la población". XII Conferencia Anual. Comunicado Ciencia en Sanidad Animal. Madrid, Spain. 25/11/2021.

2.Sanchez-Vizcaino JM. "Peste porcina africana. Enfermedades del cerdo. Módulo 4. Gestión Sanitaria". Master en Sanidad y producción porcina. Lleida-Barcelona-Zaragoza Madrid, Spain. 07/10/2021.

3.Cadenas-Fernández E., Barasona JA., Kosowska A., Barroso-Arevalo S., Rivera B., Garcia-Gomez R., Porrás-Gonzalez N., Rodríguez-Bertos A., Gallardo C., Sanchez-Vizcaino JM. "Avances en el desarrollo de una vacuna contra la peste porcina africana para jabalíes". VII VETINDOC - V PhDay Complutense. Madrid, Spain. 07/10/2021.

4.Kosowska A., Cadenas-Fernández E., Barroso-Arevalo S., Sanchez-Vizcaino JM., Barasona JA. "¿Vacuna atenuada frente al virus de la Peste Porcina Africana?". VII VETINDOC - V PhDay Complutense. Madrid, Spain. 07/10/2021.

5.Sanchez-Vizcaino JM., Escribano C., Udaondo M., Alvarez J., Corraliza JA. "Gestión e impacto de las pandemias". Epidemias, zoonosis y pandemias. Una visión holística "One Health". Cursos de verano de la Universidad Complutense. El Escorial, Spain. 08/07/2021.

6.Sanchez-Vizcaino JM. "¿Cómo se originan las pandemias? ¿Se pueden predecir?". Epidemias, zoonosis y pandemias. Una visión holística "One Health". Cursos de verano de la Universidad Complutense. El Escorial, Spain. 07/07/2021. (Oral communication)

7.Sanchez-Vizcaino JM. "Visión global de la situación de la PPA. Presentación de resultados sobre VACDIVA, una realidad muy prometedora. " Peste porcina africana: Una enfermedad global que exige soluciones globales. Madrid, Spain. 01/06/2021.

8.Sanchez-Vizcaino JM. "Peste Porcina Africana". Webinar. Peste Porcina Africana: navegando la incertidumbre. Madrid, España. 07/04/2021.

d) Other:

(Provide website address or link to appropriate information) 9

1. Sanchez-Vizcaino JM. "Working together as the answer to eradicate ASFV". pigprogress.net. Madrid, Spain. 19/03/2021. (Web interview)
2. Sanchez-Vizcaino JM. "Las vacunas ilegales ponen en peligro la erradicación de la peste porcina africana en Asia". animalshealth.es.. Madrid, Spain. 01/03/2021.
3. Sanchez-Vizcaino JM. "No estamos cambiando nuestras herramientas, las estamos mejorando con las nuevas tecnologías". Asoprovac. Madrid, Spain. 01/03/2021.
4. Sanchez-Vizcaino JM, Barroso-Arévalo S, Cadenas-Fernández E. 'Diagnóstico de laboratorio de peste porcina africana'. Online video. <https://www.sanidadanimal.info/es/ppa>
5. On line up date of ASF outbreaks around the world. <https://www.sanidadanimal.info/es/investigacion/lineas-investigacion/peste-porcina-africana#mapa>
6. Sanchez-Vizcaino JM. "Situación global de la peste porcina africana". Online video. <https://www.sanidadanimal.info/es/ppa>
7. Sanchez-Vizcaino JM. "Características de la peste porcina africana: conoce a tu enemigo". Online video. <https://www.sanidadanimal.info/es/ppa>
8. Sanchez-Vizcaino JM. "Factores de riesgo de entrada de la peste porcina africana". Online video. <https://www.sanidadanimal.info/es/ppa>
9. Sanchez-Vizcaino JM. "Importancia del laboratorio en la vigilancia y control de la peste porcina africana". Online video. <https://www.sanidadanimal.info/es/ppa>

**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: 441
- c) Hands-on training courses: 14
- d) Internships (>1 month): 0

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
b, c	República Dominicana	14
b	30 Países de América	441

**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	017025NEI103.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real-time PCR	817/LE1410 ENAC

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.
Validación de Sentinel® ASFV Antibody Rapid Test (Excelsior Bio-System Incorporation)	participante	-	Laboratorio de Referencia organizador: The Pirbright Institute

<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?

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?

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
Determinar la aptitud de un laboratorio para realizar pruebas diagnósticas específicas	39	<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?

Yes

Kind of consultancy	Location	Subject (facultative)
Formación	República Dominicana	Diagnóstico y control de la peste porcina africana

25. Additional comments regarding your report:

Nuestros expertos consultores siempre están a disposición de la OIE