

# WOAH Collaborative Centre Reports Activities 2025

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## CENTRE INFORMATION

<b>*Title of WOA Collaborating Centre</b>	Health of Marine Mammals
<b>*Address of WOA Collaborating Centre</b>	Istituto Zooprofilattico Sperimentale del Piemonte Liguria e Valle d'Aosta (IZSPLVA) Via Bologna 148, 10154, Torino-Italy; Facultad de Veterinaria, IULPGC, Campus Universitario Cardones de Arucas, 35413 Arucas, Las Palmas-Spain.
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<b>*Name Director of Institute (Responsible Official):</b>	Claudio Ghittino (IZSPLVA); Fernando Real Valcarel (IUSA)
<b>*Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):</b>	Dr. Cristina Casalone. Head of Neuroscience Department - IZSPLVA; Prof. Antonio Fernandez. Director of University Institute of Animal Health and Food Safety IUSA-ULPGC
<b>*Name of the writer:</b>	Cristina Casalone

## TOR 1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Category	Title of activity	Scope
Disease control (true)	1. Avian influenza in cetaceans 2. Cetaceans as One Health indicators 3. Emergent viral diseases in cetaceans: pathologic and molecular diagnostic	1. Approval and follow up of the National research project (funded by the Italian Ministry of Health): "Strengthening of national health surveillance for Influenza A Virus in stranded marine mammals in Italy – CetIAV" for the year 2025-2026 in order to promote Avian Influenza Virus (AIV) early detection in cetaceans stranded along the Italian coastline during the study period. 2. Control of cetacean diseases as indicators of different environmental conditions and animal and human diseases situation. 3. Histopathologic and molecular analysis of samples from stranded animals in the Canary Islands.
Epidemiology, surveillance, risk assessment, (true)	1. Phylo-geographic analysis of Brucella ceti strains in marine mammals of Italy (WGS) by WOA Reference Laboratory for Brucellosis (IZSAM, Italy) 2. Andalucía stranding network collaboration 3. Asturias stranding network collaboration 4. Cantabria's stranding network collaboration 5. Pais Vasco stranding network collaboration 6. CEMMA stranding network collaboration 7. Collaboration with Ministerio de Agricultura, Pesca y Alimentación (MAPA), Spain. 8. Serological surveillance for Avian Influenza Virus in stranded cetaceans in Italy.	1. Investigation on Brucella ceti infection in marine mammals in Italy, promoting new insights on the phylogenetic structure of Mediterranean isolates in collaboration with the WOA Reference Laboratory for Brucellosis. 2. Histopathologic and molecular analysis of samples from stranded animals in the coasts of Andalucía, Spain. 3. Histopathologic and molecular analysis of samples from stranded animals in the coasts of Asturias, Spain. 4. Histopathologic and molecular analysis of samples from stranded animals in the coasts of Cantabria, Spain. 5. Histopathologic and molecular analysis of samples from stranded animals in the coasts of Pais Vasco, Spain. 6. Histopathologic analysis of samples from stranded animals in the coasts of Galicia, Spain. 7. Investigation of fisheries interaction in northern Spain and development of a cetacean necropsy protocol. Ministerio de Agricultura, Pesca y Alimentación (MAPA), Spain. 8. Approval and follow up of the National research project: "Strengthening of national health surveillance for Influenza A Virus in stranded marine mammals in Italy – CetIAV" for the year 2025-2026 to promote serological surveillance of Avian Influenza Virus in cetaceans stranded along the Italian coastline in collaboration with the WOA

		Reference Laboratory for Avian Influenza and Newcastle disease (IZSve, Italy).
Training, capacity building (true)	<p>1. Network of WOA Collaborating Centres on Wildlife Health. 2. Vth Edition: "What is new in Marine Mammal Pathology". 3. Workshop: "Orca Health with a focus on Strandings and Rescue Strategies". 4. National training courses on live stranding response as part of the National research project "Strengthening of national health surveillance for Influenza A Virus in stranded marine mammals in Italy – CetIAV". 5. Twinning project proposal with the University of Peradeniya in Sri Lanka concerning marine mammals pathology and necropsy techniques.</p>	<p>1. Global experts from designated centres met to coordinate action, develop standards, and implement strategies (like the 2026-2030 plan) for wildlife health, aiming to prevent pandemics, manage outbreaks, and strengthen the "One Health" approach by focusing on research, training, and collaborative action at the human-animal-ecosystem interface. 2. Participation with a number of informative sessions on different marine mammal pathology subjects during 36th Conference of the European Cetacean Society (ECS). 3. Participation with a number of informative sessions on orca health focused on techniques and protocols associated with live and dead strandings including rescue approaches, welfare and necropsies, during the International Symposium on Orcas 2025. 4. In collaboration with the Cetacean strandings Emergency Response Team (C.E.R.T.) from the University of Padua, training course on live stranding response in cetaceans have been organized during the year 2025 for the regions of Sicily and Apulia, Italy. 5. A twinning project with Sri Lanka has been proposed in order to enhance health surveillance of stranded cetaceans and advance scientific understanding of the Indian Ocean's aquatic ecosystem.</p>
Zoonoses (true)	<p>1. Emerging and re-emerging zoonosis surveillance in marine mammals (i.e. brucellosis, salmonellosis, toxoplasmosis, etc) in Italy and Spain.</p>	<p>1.a. Collaboration in the surveillance and control activities performed by the Italian National Public Health Services (Istituti Zooprofilattici Sperimentali network). 1.b. Collaboration in the surveillance and control activities performed by different Zoological Parks (Loro Parque, etc.) and by the government of the Canary Islands, with which we maintain a collaboration (Instituto de Sanidad Animal y Seguridad Alimentaria)).</p>
Aquatic animal diseases (true)	<p>1. Neuroendocrine system of cetaceans. 2. Hepatocellular carcinoma in a <i>Squatina squatina</i>. 3. Post-Mortem Interval in stranded cetaceans. 4. Endolymphatic system disease" in two <i>Heterodontus francisci</i>. 5. Pathological Study of Small Odontocetes Accidentally Caught in the Bay of Biscay. 6. Gas bubbles related pathology in stranded Atlantic Short-Finned Pilot Whale (<i>Globicephala macrorhynchus</i>). 7. Morphophysiological alterations in the muscle of <i>Stenella coeruleoalba</i>. 8. Crassicaudasis in stranded cetaceans. 9. Stress-related responses in live-stranded cetaceans. 10. Neuropathological examination of cetacean's brains through histological and immunohistochemical techniques</p>	<p>1. Oral Presentation - Assessing the neuroendocrine system of cetaceans: a first structural and ultrastructural look into the Hypophysis. 20th Biennial Meeting of the Spanish Society for Neuroscience. Poster Presentation - Exploring the HPA axis of dolphins: morphological and ultrastructural characterization of the pituitary and adrenal glands. 36th Conference of the European Cetacean Society (ECS). Oral Presentation - Assessing the neuroendocrine system of Orcas: a first look into the HPA Axis. International Symposium on Orcas. 2. Poster Presentation - Carcinoma hepatocelular con metástasis esplénica en un angelote (<i>Squatina squatina</i>). XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV). 3. Poster Presentation - Revisión bibliográfica y metodológica de la determinación del intervalo post-mortem (IPM) en cetáceos varados. XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV). Poster Presentation - Bibliographic and Methodological Review of the determination of the Post-mortem Interval (PMI) in Stranded Cetaceans. 36th Conference of the European Cetacean Society (ECS). 4. Poster Presentation - Enfermedad del sistema endolinfático" en dos crías de suño cornudo (<i>Heterodontus francisci</i>). XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV). 5. Poster Presentation - Estudio patológico de pequeños odontocetos capturados accidentalmente en el Golfo de Vizcaya: Hallazgos de necropsia e histopatológicos. XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV). Poster Presentation - Pathological Assessment of By-Caught Cetaceans in the Bay of Biscay: Necropsy and Histopathological Findings. 36th Conference of the European Cetacean Society (ECS). 6. Poster Presentation - Gas bubbles related pathology in a stranded Atlantic Short-Finned Pilot Whale (<i>Globicephala macrorhynchus</i>) in Canary Islands. 36th Conference of the European Cetacean Society (ECS). 7. Poster Presentation - Morphophysiological alterations in the muscle of <i>Stenella coeruleoalba</i> associated with decreased body condition. 36th Conference of the European Cetacean Society (ECS). 8. Poster Presentation - Epidemiological and Pathological Analysis of Cranial Crassicaudasis in Stranded Cetaceans in the Canary Islands. 36th Conference of the European Cetacean Society (ECS). Poster Presentation - Crassicauda anthonyi renovascular disease (RVD) in stranded Cuvier's beaked whale in the Canary Islands. 36th Conference of</p>

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		the European Cetacean Society (ECS). 9. Oral Presentation - Stress-Related Pathophysiological Responses in Live-Stranded Cetaceans: A Current Overview. VI Edition: "What is New in Cetacean Pathology" - Workshop in 36th Conference of the European Cetacean Society (ECS). 10. Neuropathological examination of cetaceans brains sampled by the Italian IZS network during the year 2025.
Animal welfare (true)	1. Development of strategies to mitigate conflicts between artisanal fisheries and bottlenose dolphins ( <i>Tursiops truncatus</i> ) within the Pelagos Sanctuary. 2. Encouragement of Whale Watching Activities. 3. Environmentally sustainable fishing. 4. Bycaught dolphins. 5. Wildlife Health Surveillance. 6. Small Cetacean Disentanglement. 7. Stress-related responses in live-stranded cetaceans.	1. Development of an automatic device aimed at detecting the interaction between bottlenose dolphins and fishing nets as final goal of the international project "TursioNet", funded by the Pelagos Foundation. 2. Encouragement of the ecotourist whale watching activities as a model of sustainable economic development as well as of protection and conservation of the cetacean populations in the Macaronesian Area. 3. Collaboration with the government for the development of fishing methods that are friendly with the cetacean populations and the environment. 4. Collaboration with Ministerio de Agricultura, Pesca y Alimentación (MAPA). Evaluation of bycaught dolphins in the Cantabrico Sea (Spain). 5. Diagnosis of causes of death, both natural and anthropogenic, in the native wildlife of Canary Islands. Specific cooperation agreement with the government of the Canary Islands. 6. Oral Presentation - Challenges and Lessons Learned in Small Cetacean Disentanglement: The case of a short-finned pilot whale calf in Tenerife, Spain. 36th Conference of the European Cetacean Society (ECS). 7. Oral Presentation - Stress-Related Pathophysiological Responses in Live-Stranded Cetaceans: A Current Overview. VI Edition: "What is New in Cetacean Pathology" - Workshop in 36th Conference of the European Cetacean Society (ECS)
Diagnosis, biotechnology and laboratory (true)	1. Decompressive pathology in cetaceans 2. Improvement of molecular diagnostics.	1. Development of diagnostic tools for the decompressive pathology in cetaceans, as well as study of the action mechanisms of the disease. 2. Improvements in molecular diagnosis for West Nile virus, H5N1 Influenza virus and <i>Brucella ceti</i> .

## TOR 3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable Area
Collaboration with the University of Padua in the development of Best Practices for cetaceans brain tissue sampling.	Creation of an international best practice document to harmonize protocols for cetacean brain sampling and subsequent neuropathological and neurobiological analyses.	Laboratory Expertise Training and Education
Dolphin cells - Atlas of Electron Microscopy	Creation of an Atlas to better understand and identify dolphins cells through electron microscopy.	Laboratory Expertise Training and Education

3. In exercising your activities, have you identified any regulatory research needs\* relevant for WOAHP?

No

4. Did your Collaborating Centre maintain a network with other WOAHP Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of WOAHP CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Cetaceans' strandings Emergency Response Team (CERT) of the University of Padua, Italy	Padua, Italy	Europa	Collaboration with the task force to intervene in case of stranding of live animals along the whole Italian peninsula.
			Collaboration on diagnostic

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Istituti Zooprofilattici Sperimentali Italian diagnostic network (IIZZSS)	Italy	Europa	investigation performed on stranded marine mammals
Cetaceans strandings Emergency Response Team of the University of Las Palmas de Gran Canaria	Canary Islands	Europa	Response to the cases of cetacean strandings in the Canary Islands archipelago, performing the necropsy and managing the disposal of the carcass.
WOAH Wildlife Collaborating Centre Network Group	International	África América Asia y el Pacífico Europa Oriente Medio	Being part of WOA Wildlife Collaborating Centre Network Group, attending presence and online meetings and collaboration in writing the final report of the WOA Wildlife Health Framework Evaluation.

## TOR 4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOA Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of WOA CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
WOAH Avian Influenza	Spain	Europe	Development of a guide for the detection of Avian Influenza in marine mammals.
WOAH BRC	Italy	Europe	Brucella ceti typing
WOAH BSE	Italy	Europe	Neuropathological investigations and diagnostic tools
WOAH Scrapie	Italy	Europe	Neuropathological investigations and diagnostic tools
WOAH Coll. Centre Animal/ Human interface	Italy	Europe	Diagnosis of zoonotic agents
WOAH Reference Laboratory for Avian Influenza and Newcastle disease	Italy	Europe	Diagnosis of Avian Influenza Virus: biomolecular and serological examination in cetaceans stranded along the Italian coastline (as part of the project: "Strengthening of national health surveillance for Influenza A Virus in stranded marine mammals in Italy – CetIAV")
WOAH Wildlife Collaborating Centre		Africa Americas	Being part of WOA Wildlife Collaborating Centre Network Group, attending presence and online meetings and

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Network Group	International	Asia and Pacific Europe Middle East	collaboration in writing the final report of the WOA Wildlife Health Framework Evaluation.
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## TOR 6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOA?

Yes

Name of expert	Kind of consultancy	Subject
Antonio Fernández	Collaboration/Training	Investigation of fisheries interaction in northern Spain and development of a cetacean necropsy protocol. Ministerio de Agricultura, Pesca y Alimentación (MAPA), Spain.
Ignacio Molpeceres Diego	Collaboration/Training	Collaborative work with the Instituto de Desenvolvimento Sustentável Mamirauá (Host Institution) and with the National Marine Mammal Foundation (NMMF), R3 Animal, and Wildlife Conservation Trust India (Participating Institutions) to evaluate the general health status of the population of Amazon river dolphins, to collect biological and clinical data to support conservation and management strategies, to contribute to long-term monitoring programs for this endangered species, and to train and develop skills in live cetacean handling and sampling within an international team. All of these objectives were achieved through capture-release and handling of live Amazon river dolphins following established welfare protocols, clinical health assessments, collection of biological samples and data for health, pathology, and disease surveillance purposes, and satellite tagging for individual identification and population distribution monitoring.
Raquel Puig Lozano	Collaboration	IIM-CSIC: Collaboration with the project MERMACIFRA. Contribution to the elaboration of reports of cetacean bycatch in Galician waters, organization of workshops (diet, pathology and parasitic study of stomachs of stranded cetaceans in Galician waters; study of age and sexual maturity through teeth and gonad samples of stranded cetaceans), and formation of the technicians, biologist and veterinarians of the stranding networks of the north of the Iberian Peninsula. CEMMA: Collaboration in field and laboratory necropsies of stranded marine mammals (pinnipeds and cetaceans), sea turtles, and sharks of Galician waters. Rescue and maintenance of alive stranded individuals. Whale-watching studies. Divulgation and citizen science. IMM-CSIC: Instituto de Investigaciones Marinas, Centro Superior de Investigaciones Científicas, Vigo, Pontevedra, Galicia, España. CEMMA: Coordinadora para o Estudo dos Mamíferos Mariños, Nigrán, Pontevedra, Galicia, España.
Antonio Fernandez	Collaboration/Training	Collaborative work with the Spanish Ministry of Agriculture on the health surveillance of influenza viruses in cetaceans in the Canary Islands and other regions of Spain, focusing on stranded cetaceans during 2024–2025, with negative results in all cases. Execution period from January to December 2025.
Antonio Fernandez Cristina Casalone Federica Giorda	Collaboration/training	Being part of WOA Wildlife Collaborating Centre Network Group, attending presence and online meetings and collaboration in writing the final report of the WOA Wildlife Health Framework Evaluation.

## TOR 7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

No

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA, to personnel from WOA Members?

Yes

a) Technical visit : 1

b) Seminars : 0

c) Hands-on training courses: 2

d) Internships (>1 month) : 0

Type of technical training provided (a, b,	Country of origin of the expert(s) provided with
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c or d)	Content	training	No. participants from the corresponding country
A	<p>Workshop Network of WOA Collaborating Centres on Wildlife Health, Las Palmas de Gran Canaria, Spain (25–27 June 2025). The Workshop on the Network of WOA Collaborating Centres for Wildlife Health was a key event where global experts from designated centres met to coordinate action, develop standards, and implement strategies (like the 2026-2030 plan) for wildlife health, aiming to prevent pandemics, manage outbreaks, and strengthen the "One Health" approach by focusing on research, training, and collaborative action at the human-animal-ecosystem interface. This recent meeting focused on turning work plans into concrete actions, including creating Standard Operating Procedures (SOPs) for outbreaks and updating international guidelines. The purposes of the Network &amp; Workshops were: a) Coordination: to create a strong partnership among Collaborating Centres to coordinate efforts on wildlife health; b) Standardization: to develop and update international standards, guidelines, and SOPs for wildlife health management; c) Risk Management: to strengthen the risk management of diseases at the human-animal-ecosystem interface; d) Capacity Building: to provide scientific and technical training to WOA Member Countries; e) Strategy Implementation: to implement the WOA Wildlife Health Strategy (e.g., 2026-2030) and the "One Health" approach.</p>	<p>Experts from different countries of the designated WOA Collaborating Centres for Wildlife Health, representatives from National Focal Points for Wildlife, and the WOA Working Group on Wildlife Health.</p>	32
C	<p>Workshop: Vth Edition: "What is new in Marine Mammal Pathology", 36th European Cetacean Society Congress, Ponta Delgada, Azores, Portugal (14–16 April 2025). This workshop provided a dedicated forum for experts and trainees in marine mammal pathology to share and discuss new pathologies, outbreaks, diagnostic tools, etc. in the context of marine mammal pathology and conservation within the conference. The workshop aimed to use pathology as a tool for marine mammal health and conservation. Advances in marine mammal pathology, including field, laboratory diagnosis, new methodologies, and tools, were presented and discussed. The workshop consisted of case report discussions and presentations. Pathologists working in this field were invited to submit a presentation title and brief outline (less than 200 words). In the workshop, the organizers were looking for an interactive and dynamic atmosphere for exchanging knowledge. The expected outcome of the workshop was the in situ exchange of knowledge, continuing education in marine mammal pathology, and strengthening collaboration and networking among marine mammal pathologists. Previous workshops were very successful with high occupancy (with a waiting list in previous years for registration) and received excellent feedback.</p>	<p>Experts from different countries in the USA, South America, Japan, Taiwan, Australia, New Zealand, South Africa, Canada and Europe.</p>	60
C	<p>Workshop: "Orca Health with a focus on Strandings and Rescue Strategies", International Symposium on Orcas 2025, Tarifa, Cádiz, Spain (16–21 February 2025). This workshop on orca health focused on techniques and protocols associated with live and dead strandings including rescue approaches, welfare and necropsies. Orca strandings often attract significant public attention, whether they are due to illness, environmental stressors, interactions with human activities, failed foraging attempts or other reasons. Live strandings often culminate in rescue efforts. This workshop addressed, knowledge gaps in appropriate species-specific rescue techniques and in our understanding of the medicine, pathology and broader health implications for this species.</p>	<p>Experts from different countries in the USA, South America, Japan, Taiwan, Australia, New Zealand, South Africa, Canada and Europe.</p>	30

Discussions were based primarily on information that has been, or can be, obtained from strandings data. It prioritised refining species- and situation-specific protocols with respect to rescue attempts and necropsies. Participants explored case studies of single and mass strandings, with attendees encouraged to contribute data, photos and other materials. Suitable examples were incorporated into the program to enrich discussions including reviewing current findings on toxicology and environmental stressors. The goal was to foster collaboration among participants by pooling knowledge and experiences.

## TOR 8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?H?

Yes

National/International	Title of event	Co-organiser	Date	Location	No. Participants
Internationally	Workshop of the Network of WOA Collaborating Centres on Wildlife Health	WOAH	2025-06-25	Las Palmas de Gran Canaria, Spain	32
Internationally	VI Edition: "What is New in Cetacean Pathology" - Workshop in 36th Conference of the European Cetacean Society (ECS)	36th Conference of the European Cetacean Society (ECS)	2025-05-12	Ponta Delgada, Azores, Portugal	60
Internationally	Orca Health with a focus on Strandings and Rescue Strategies Workshop.	International Symposium on Orcas	2025-02-17	Tarifa, Spain	30
Nationally	Training courses on live strandings response in cetaceans	In collaboration with IZS PB and the University of Padua, Lega Navale Italiana - Sezione di Trani (BAT)	2025-07-15	Trani (BAT), Apulia, Italy	60
Nationally	Training courses on live strandings response in cetaceans	In collaboration with IZS Sicilia, the University of Padua and CNR of Capo Granitola (TP)	2025-09-24	Capo Granitola (TP), Sicily, Italy	50
Internationally	Closure event of the Tursionet project (Pelagos foundation)	Genoa Aquarium (GE) Italy	2025-12-10	Genoa Italy	40

## TOR 9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOA?H that may be useful to Members of WOA?H

a) Articles published in peer-reviewed journals:

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- Orekhova, K., Dagleish, M., Patzke, N., Sacchini, S., Giorda, F., Di Guardo, G., Testori, C., Affatati, A., Gerussi, T., Ochiai, M., & Graic, J. (2025). "Of Marine Mammal Neuroscience and Men": Needs and Perspectives in Marine Mammal Neuroscience. *The Journal of Comparative Neurology*, 533(7), e70067. <https://doi.org/10.1002/cne.70067>

- Pietrolungo G, Centellegho C, Bainsi M, Cocumelli C, Casalone C, Corazzola G, Di Francesco G, Di Nocera F, Di Renzo L, Duras M, Fossi MC, Gavaudan S, Genov T, Giorda F, Lucifora G, Pascucci I, Petrella A, Pintore A, Puleio R, Rubini S, Terracciano G, Grattarola C and Mazzariol S (2025) Assessment of marine litter interaction in cetaceans stranded along the Italian coastline and the Adriatic Sea. *Front. Mar. Sci.* 12:1713820. doi: 10.3389/fmars.2025.1713820

- Pietrolungo G, Podestà M, Belluscio D, Berio E, Canonico C, Casalone C, et al. (2025) Assessing fishery interaction on cetaceans stranded along the Italian coastline between 1986 and 2023. *PLoS One* 20(9): e0330441. <https://doi.org/10.1371/journal.pone.0330441>

- Esposito, E.; Oliviero, M.; Iaccarino, D.; Paduano, G.; Serra, F.; Levante, M.; Amoroso, M.G.; Auriemma, C.; Gallo, A.; Lucibelli, M.G.; et al. Postmortem Findings of Cetaceans Stranded Along the Campania Coast from 2016 to 2022. *Animals* 2025, 15, 1812. <https://doi.org/10.3390/ani1512>

- Colom-Rivero A, Fernández A, Marrero-Ponce L, Padrón-Ramírez D, Caballero-Hernández L, Rivero-Herrera C, Suárez-Santana CM, Sierra E. Pathological and Molecular Characterization of Avipoxvirus Infection in *Burhinus oedicnemus* in the Canary Islands. *Vet Sci.* 2025 Sep 2;12(9):849. doi: 10.3390/vetsci12090849. PMID: 41012774; PMCID: PMC12474141.

- Marrero-Ponce L, Suárez-Santana CM, Quesada-Canales Ó, Kobayashi N, Rivero-Herrera C, Caballero-Hernández L, Murakami T, Fernández A. AA-Amyloidosis in the Eurasian stone-curlew (*Burhinus oedicnemus*). *PLoS One.* 2025 Sep 2;20(9):e0331573. doi: 10.1371/journal.pone.0331573. PMID: 40892784; PMCID: PMC12404442.

- Núñez-González R, Sarmiento-Lezcano AN, Caballero MJ, Tilić E, Castro-Hernández JJ. Locality matters: Variation in the reproductive cycle and population structure of subtropical sea urchins. *PLoS One.* 2025 Aug 1;20(8):e0328273. doi: 10.1371/journal.pone.0328273. PMID: 40748941; PMCID: PMC12316312.

- Bañeras T, Jiménez-Alvarado D, Meyers EKM, Toledo-Padilla H, Hardisson A, Gonzalez-Weller D, Barker J, Mead LR, Espino-Ruano A, Castro-Alonso A, José-Caballero M, Gutiérrez Á. Characterization of metal contaminants in the Critically Endangered angelshark (*Squatina squatina*): A first ecotoxicological insight. *Mar Pollut Bull.* 2026 Jan;222(Pt 1):118602. doi: 10.1016/j.marpolbul.2025.118602. Epub 2025 Aug 20. PMID: 40840320.
- Consoli FMA, Reyes-Matute A, Rivero MA, Encinosa M, Fernandez A. Osteonecrosis in pilot whales (*Globicephala macrorhynchus*). *Res Vet Sci.* 2025 Aug;192:105705. doi: 10.1016/j.rvsc.2025.105705. Epub 2025 May 19. PMID: 40412346.
- Alonso-Almorox P, Blanco A, Fiorito C, Gómez-Villamandos JC, Rivalde MA, Almunia J, Fernández A. The orca (*Orcinus orca*) pituitary gland: an anatomical, immunohistochemical and ultrastructural analysis. *Front Neuroanat.* 2025 Jul 17;19:1626079. doi: 10.3389/fnana.2025.1626079. PMID: 40747268; PMCID: PMC12310606.
- Sanchez-Henao A, Real F, Darias-Dágfeel Y, García-Álvarez N, Diogène J, Rambla-Alegre M. Comparison of Different Solid-Phase Cleanup Methods Prior to the Detection of Ciguatoxins in Fish by Cell-Based Assay and LC-MS/MS. *J Agric Food Chem.* 2025 Jun 11;73(23):14580-14591. doi: 10.1021/acs.jafc.5c01142. Epub 2025 Jun 1. PMID: 40452308; PMCID: PMC12164330.
- Bullón-Téllez A, Sosa-Ferrera Z, Santana-Rodríguez JJ, García-Álvarez N, De la Fuente J, Arbelo M, Fernández A, López-Suárez P, Oujo C, Freire-Lopes K, Guedes-Alonso R. Environmental assessment of steroid endocrine disruptors in stranded cetaceans: A methodological approach to detection and analysis. *Environ Toxicol Pharmacol.* 2025 Jun;116:104703. doi: 10.1016/j.etap.2025.104703. Epub 2025 Apr 23. PMID: 40280379.
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## b) International conferences:

14

Name of conference/meeting: 36th ECS Annual Conference

Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025

Title: ANTHROPIC PRESSURE ON CETACEANS STRANDED ALONG THE LIGURIAN COAST: A CASE SERIES

Authors: Virginia Mattioda, Federica Giorda, Guia Consales, Camilla Testori, Simona Zoppi, Maria Goria, Maria Ines Crescio, Laura Serracca, Katia Varelo, Valerio Carta, Letizia Marsili, Matteo Bainsi, Matteo Galli, Cristina Fossi, Elena Fontanesi, Fulvio Garibaldi, Guido Pietrolungo, Sandro Mazzariol, Francesco Brunelli, Cristina Casalone and Carla Grattarola

Type of participation: Oral presentation

Name of conference/meeting: 36th ECS Annual Conference

Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025

Title: Amyloid- $\beta$  and Phosphorylated Tau Screening in Bottlenose Dolphin (*Tursiops truncatus*) and Striped Dolphin (*Stenella coeruleoalba*) Brains from Italy Reveals Distinct Immunohistochemical Patterns Correlating with Age and Co-morbidity

Authors: Camilla Testori, Ksenia Orekhova, Federica Giorda, Carla Grattarola, Virginia Mattioda, Giovanni Di Guardo, Cristiano Corona, Massimo Castagnaro, Eva Sierra, Cristina Casalone, Alessandra Favole, Cinzia Centelleghé, Sandro Mazzariol

Type of participation: Oral presentation

Name of conference/meeting: 36th ECS Annual Conference

Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025

Title: MARINE MAMMAL NEUROSCIENCE an Open Science Framework Project to Promote Best Practices

Authors: Ksenia Orekhova, Mark Dagleish, Nina Patzke, Simona Sacchini, Federica Giorda, Giovanni Di Guardo, Camilla Testori, Alice Affatati Tommaso Gerussi, Mari Ochiai, Cinzia Centelleghé, Sandro Mazzariol, Jean-Marie Graïc

Type of participation: Poster presentation

Name of conference/meeting: ACCOBAMS Online Joint Workshop on Fisheries Interaction with Vulnerable Species

Location and date: online, 28/01/2025

Title: Bottlenose dolphins and small-scale fisheries in the Pelagos Sanctuary: searching new mitigation strategies.

Authors: Camilla Testori, Federica Giorda, Michele Manghi, Guido Gnone, Fulvio Garibaldi, Davide Lelong, Eleonora Coppolella, Marie-Catherine Santoni, Marion Bouet, Cristina Casalone

Type of participation: Oral participation

Name of conference/meeting: Prion 2025

Location and date: Rio de Janeiro, 3-7 November 2025

Title: Investigating Alzheimer's Disease-like Neuropathology in Bottlenose and Striped Dolphins in Italy: The Role of Age and Viral Co-morbidities in Amyloid- $\beta$  Deposition

Authors: Alessandra Favole, Ksenia Orekhova, Camilla Testori, Marina Gallo, Federica Giorda, Carla Grattarola, Virginia Mattioda, Carta Valerio, Carlotta Tassarolo, Margherita Francesca Kraus, Giovanni Di Guardo, Massimo Castagnaro, Eva Sierra, Cinzia Centelleghé, Cristiano Corona, Sandro Mazzariol and Cristina Casalone.

Type of participation: Poster presentation

Name of conference/meeting: 36th ECS Annual Conference

Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025

*Title: Bibliographic and Methodological Review of the determination of the Post-mortem Interval (PMI) in Stranded Cetaceans.*  
*Authors: Velázquez-Wallraf A., Arbelo M., Caballero M.J., Montesdeoca E., Caballero-Hernández L., Fernández A., Castro-Alonso A.*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Gas bubbles related pathology in a stranded Atlantic Short-Finned Pilot Whale (Globicephala macrorhynchus) in Canary Islands.*  
*Authors: Reyes-Matute A, Velázquez-Wallraf A, Sierra E1, Caballero-Cansino MJ, Bernaldo de Quirós, Y, Fernández A.*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Morphophysiological alterations in the muscle of Stenella coeruleoalba associated with decreased body condition*  
*Authors: Iglesias Basanta, Andrea; Sierra, Eva; Arbelo, Manuel; Arregui-Gil, Manuel; García-Álvarez, Natalia; Iglesias-González, Claudia; Rivero, Miguel; Fernández, Antonio; Bernaldo de Quirós, Yara.*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Pathological Assessment of By-Caught Cetaceans in the Bay of Biscay: Necropsy and Histopathological Findings.*  
*Authors: Molpeceres-Diego I, Arbelo M., Sierra E., Alonso-Almorox P., Suárez-Santana C., Consoli F., Suárez Z., García-Álvarez N., Balseiro A., Claver C. and Fernández A.*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Exploring the HPA axis of dolphins: morphological and ultrastructural characterization of the pituitary and adrenal glands.*  
*Authors: Alonso Almorox, Paula., Blanco, Alfonso., Fiorito, Carla., Suárez-Santana, Cristian., Consoli, Francesco., Molpeceres de Diego, Ignacio., Arbelo, Manuel., Grandia Guzman, Raiden., Almunia, Javier., Castro, Ayoze., Sierra, Eva., Fernandez, Antonio.*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Epidemiological and Pathological Analysis of Cranial Crassicaudasis in Stranded Cetaceans in the Canary Islands*  
*Authors: Suárez-González Z., Sierra E., Arbelo M., González J.F., Castro-Alonso A., Suárez-Santana C., Rivero M., Molpeceres-Diego I., Fernández A.*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Crassicauda anthonyi renovascular disease (RVD) in stranded Cuvier's beaked whale in the Canary Islands*  
*Authors: Fernandez, Antonio; Suárez-González, Zuleima; Sierra, Eva; Bernaldo de Quirós, Yara; Felipe-Jimenez, Idaira; Suarez-Santana, Cristian; Arregui, Marina; Alonso-Almorox, Paula; Achile-Consoli, Francesco; Fernandez-Maldonado, Carolina; Colom, Ana; Cãmara, Nakita; Rivero, Miguel A; Fioritto, Carla; Molpeceres, Ignacio; Iglesias-Gonzalez, Claudia; Grandia, Raiden; Jepson, Paul; Di Guardo, Giovanni; Diaz-Santana, Pablo; Diaz-Delgado, Josue; De la Fuente, Jesús; Martin, Vidal; Carrillo, Manuel; Velazquez-Wallraf, Alicia; Puig-Lozano, Raquel; Reyes-Matute, Alonso; Castro, Ayoze; Caballero, MJ; Arbelo, Manuel*  
*Type of participation: Poster presentation*

*Name of conference/meeting: 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Challenges and Lessons Learned in Small Cetacean Disentanglement: The case of a short-finned pilot whale calf in Tenerife, Spain*  
*Authors: Nakita Cãmara; Manuel Arbelo; Antonio Fernández; Belén Caro; Mirna Piñero-Mesa; Ricardo Iglesias; Silvana Neves; Jacobo Marrero-Pérez*  
*Type of participation: Oral presentation*

*Name of conference/meeting: VI Edition: "What is New in Cetacean Pathology" - Workshop in 36th ECS Annual Conference*  
*Location and date: Ponta Delgada, Azores, Portugal 14-16 May 2025*  
*Title: Stress-Related Pathophysiological Responses in Live-Stranded Cetaceans: A Current Overview*  
*Authors: Nakita Cãmara*  
*Type of participation: Oral presentation*

c) National conferences:

9

*Name of conference/meeting: 17 TH MEETING OF THE Pelagos SCIENTIFIC AND TECHNICAL COMMITTEE*  
*Location and date: Riomaggiore (SP), Italy, 3-4 June 2025*  
*Title: Anthropic pressure on cetaceans stranded along the Ligurian coast: a case series*  
*Authors: Virginia Mattioda, Federica Giorda, Guia Consales, Camilla Testori, Simona Zoppi, Maria Goria, Maria Ines Crescio, Laura Serracca, Katia Varello, Valerio Carta, Letizia Marsili, Matteo Bains, Matteo Galli, Cristina Cristina Fossi, Elena Fontanesi, Fulvio Garibaldi, Guido Pietrolungo, Sandro Mazzariol, Francesco Brunelli, Cristina Casalone and Carla Grattarola*  
*Type of participation: Oral presentation*

*Name of conference/meeting: Orca Health with a focus on Strandings and Rescue Strategies – Workshop in International Symposium on Orcas*  
*Location and date: Tarifa, Spain 17-21 February 2025*  
*Title: Assessing the neuroendocrine system of Orcas: a first look into the HPA Axis*  
*Authors: Alonso-Almorox, Paula., Fernández, Antonio.*  
*Type of participation: Oral presentation*

*Name of conference/meeting: 20th Biennial Meeting of the Spanish Society for Neuroscience. Symposium NeuroEvoDevo – Pedro Ramón y Cajal Network: The CNS through the lens of a comparative neuroembryologist: From knowing to understanding.*

Location and date: Las Palmas, 3-5 September 2025

Title: *assessing the neuroendocrine system of cetaceans: a first structural and ultrastructural look into the hypophysis*

Authors: Paula Alonso-Almorox, Alfonso Blanco, Carla Daniela Fiorito, Eva Sierra, Manuel Arbelo, Antonio Fernández

Type of participation: Oral presentation

Name of conference/meeting: XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV)

Location and date: León, Spain, 18-20 June 2025

Title: *Carcinoma hepatocelular con metástasis esplénica en un angelote (Squatina squatina)*

Authors: Montero-Hernández G., Caballero M.J., Caballero-Hernández L., Montesdeoca-Morales, E., Velázquez-Wallraf A., Curros-Moreno, A., Suárez-Santana C.M., Castro-Alonso, A.

Type of participation: Poster presentation

Name of conference/meeting: XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV)

Location and date: León, Spain, 18-20 June 2025

Title: *Revisión bibliográfica y metodológica de la determinación del intervalo post-mortem (IPM) en cetáceos varados*

Authors: Velázquez-Wallraf A.S, Arbelo M., Caballero M.J., Montesdeoca E., Caballero-Hernández L, Fernández A., Castro-Alonso, A.

Type of participation: Poster presentation

Name of conference/meeting: XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV)

Location and date: León, Spain, 18-20 June 2025

Title: *Enfermedad del sistema endolinfático" en dos crías de suño cornudo (Heterodontus francisci)*

Authors: Montero-Hernández G., Castro-Alonso A., Curros-Moreno A., Navarro- Sarmiento J., Caballero-Hernández L., Caballero M.J.

Type of participation: Poster presentation

Name of conference/meeting: XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV)

Location and date: León, Spain, 18-20 June 2025

Title: *Estudio en matadero de la Paratuberculosis caprina: concordancia de las técnicas de diagnóstico*

Authors: Stefanova EP, Espinosa de los Monteros A., Herráez P, Fernández A., Sierra E., Colom-Rivero A., Andrada M.

Type of participation: Poster presentation

Name of conference/meeting: XXXVI Reunión de la Sociedad Española de Anatomía Patológica Veterinaria (SEAPV)

Location and date: León, Spain, 18-20 June 2025

Title: *Estudio patológico de pequeños odontocetos capturados accidentalmente en el Golfo de Vizcaya: Hallazgos de necropsia e histopatológicos*

Authors: Molpeceres-Diego I, Arbelo M., Sierra E., Alonso-Almorox P, Suárez-Santana C., Consoli F, Suárez Z., García-Álvarez N., Balseiro A. and Fernández A.

Type of participation: Poster presentation

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

2

Title: *Training courses on live strandings response in cetaceans in collaboration with IZS PB and the University of Padua, CERT*

Authors: Virginia Mattioda, Cristina Casalone

Type of participation: Oral presentation

Organizer: IZSPLV, IZSPB and University of Padua.

Location and date: Lega Navale Italiana – Sezione di Trani (BAT), 15-16 July 2025 Trani (BAT), Apulia, Italy

Title: *Training courses on live strandings response in cetaceans in collaboration with IZS Sicilia, the University of Padua, CERT and CNR of Capo Granitola (TP).*

Type of participation: Oral presentation

Organizer: IZSPLV, IZS of Sicily and University of Padua.

Authors: Virginia Mattioda, Cristina Casalone, Federica Giorda

Location and date: 24-25 September 2025, Capo Granitola (TP), Sicily, Italy.

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

*IZSPLV is improving immunohistochemistry techniques using lectins (SNA, MAL I and II) as AIV receptors markers in different species of cetaceans brain in order to better understand the neuropathological susceptibility of cetaceans species to influenza virus.*

*IUSA still improves in both histopathological, histochemical, immunohistochemical and molecular techniques for diagnosis in cetaceans.*

12. Additional comments regarding your report:

*A twinning project with Sri Lanka has been proposed to WOA as Collaborating Centre for the Health of Marine Mammals with the local University of Peradeniya. The title of the proposed project is: "Unlocking the Secrets of Marine Mammals in Sri Lanka: A Critical Step Toward Global Health and Ecosystem Preservation". This project aims to enhance health surveillance of stranded cetaceans as a strategic tool to advance scientific understanding of the Indian Ocean's aquatic ecosystem. By generating critical data on marine biodiversity and ecosystem health, the initiative will contribute to global efforts in ocean conservation, animal and public health, thereby allowing information to be provided at regional and international levels.*