

# CURRICULUM VITAE

## CRISTINA CASALONE

### EDUCATION

- 2014 General Management Training Course, SDA Bocconi-University of Milan, Italy
- 2013 Health Management Training Course, SDA Bocconi-University of Milan, Italy.  
Training Course on “*Health Technology Assessment*” Training Centre Temas, Rome, Italy.
- 2009 Master degree in "Sanitary Management" from Bocconi University, Milan, Italy.  
Management Training Course for Managers - I.Re.F.-Lombardy Regional Institute of Education for public administration, Milan, Italy.
- 1999 Post graduate specialisation course in “Laboratory Animals Science”, University of Milan, Italy.
- 1998 Specialisation course on “Animal production and animal-derived food”, University of Parma, Italy.
- 1995 Veterinary Medicine Degree, University of Turin, Italy.

### PROFESSIONAL CAREER

- 2009 (July 01) Head of Neuroscience Department and of the Italian Reference Centre for TSEs (CEA), IZSPLV, Turin, Italy
- 2008 Head of Neuropathology Laboratory, IZSPLV, Turin, Italy
- 2002 Visiting Scientist (4 months) at Neuropathology Laboratory, Veterinary Laboratory Agency (VLA) in Weybridge, (UK), in order to study English BSE and scrapie cases
- 2001 Senior Veterinarian of Neuropathology Laboratory, IZSPLV, Turin, Italy
- 1997 Consultancy contract of Neuropathology Laboratory, IZSPLV, Turin, Italy
- 1996 Internship (March-June) at Pathology Laboratory, Antoine Marxer Research Institute (RBM) of Merck Serono, Ivrea, Italy.
- 1995 Research fellow of Neuropathology Laboratory, IZSPLV, Turin, Italy

### OTHER EXPERIENCE

- 2001-2004 Technical Consultant of the Turin Public Prosecutor Dr. R Guariniello, Turin Italy.

### CAREER BREAKS

- 2007 Maternity leave (7 months).  
2005 Maternity leave (6 months).

### PUBLICATIONS

Sum of the Times Cited: 1530

h-index: 21

Author/co-author of 91 peer-reviewed publications (23 as first/last author) and 23 abstract international meeting

### PERSONAL INFORMATION

**Birthplace and date:** Turin, Italy, September 27, 1967

**Civil status:** Married, two children

**Nationality:** Italian

**Professional address:** Istituto Zooprofilattico Sperimentale del Piemonte Liguria e Valle d'Aosta (IZSPLV) – S.C. Neuroscienze S.S. Laboratorio Neuropatologia - Via Bologna 148, 10154 Turin, Italy

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### RESEARCH INTERESTS

Transmissible Spongiform Encephalopathies (TSEs)  
Neurodegenerative diseases:  
ALS, SM and Alzheimer  
Prion-like mechanisms  
*In vitro* model  
*In vivo* models (hSODG93A and TDP-43 A328T transgenic swine)  
Vector-borne diseases

### AWARDS

- 2007 1° place Best Poster Awards at 5th International Conference of Emerging Zoonoses, Lymassol, Cipro (15-18 November).
- 2003 2° place Best Poster Awards at International Prion Conference, Munich, Germany (10 October).

### Professional Experience

**Diagnosis and Infectivity of TSEs**  
**Differential diagnosis of neuropathological diseases.**  
**PrP strains characterization**

## TEACHING ACTIVITIES – Educational Course

- 2014 Training course “Updates and perspective on the TSE: epidemiological, diagnostic and regulatory aspects” Roma and Palermo, Italy.
- 2009 Lectio magistralis “BASE atypical forms: new acquisitions “XXV cycle of the PhD School of Veterinary Sciences, University of Turin, Italy.
- 2004 – 2005 Schoolmaster “Veterinary Public Health”, University of Padova, Italy. Schoolmaster “Technologies in Food Control Teaching, University of Genoa, Italy.
- 2003 – 2004 Schoolmaster - Technologies in Food Control Teaching, University of Genoa, Italy.

## TEACHING ACTIVITIES – Trainee Supervisor

2003- present *5 Undergraduate students, 1 PhD student, 5 Post-Graduate students, 20 Research Fellowships*

**Four research fellows advanced their career as Veterinary leader in IZSPLV, Italy**

## MAJOR COLLABORATIONS

- **Carlo Besta Institute** (Milan, Italy) — **F Tagliavini**, Topic: Neurodegenerative disease as Prion diseases, Alzheimer disease.
- **Mario Negri Institute** (Milan, Italy) – **C Bendotti** Topic: Animal Models, ALS. **V Bonetto** Topic: ALS protein biomarker.
- **Animal & Plant Health Agency** (Weybridge, UK) — **M Simmons**. Topic: Transmission studies of Prion diseases.
- **Neuroscience Institute Cavalieri Ottolenghi** (Orbassano, Italy) – **A Vercelli**, Topic: Motoneuron diseases, cell cultures.
- **US FDA** (Silver Spring, Maryland) – **DM Asher, P Piccardo**. Topic: Prion Infectivity
- **CEA/DSV/DRM/GIDTIP** (Fontenay-aux-Roses, France) – **E Comoy**. Topic: Prion diseases infectivity.
- **Roslin Institute** (Edinburgh, UK) – **R Barron, W Goldmann**. Topic: Prion proteins characterization
- **NIH** (NIAID, Hamilton, Montana, USA) - **B Caughey** Topic: Prion disease diagnosis
- **Politecnico di Torino** (Turin, Italy) – **A Botter** Topic: Animal model characterization
- **AVANTEA** (Cremona, Italy) – **C Galli** Topic: Swine Transgenic ALS Model
- **University of Turin** (Turin, Italy) – **A D’Angelo, L. Bonfanti**; Topic: Swine ALS Model, Neurodegenerative Diseases.
- **CRESLA** (Turin, Italy) – **A Chiò**. Topic: human ALS pathology.
- **Fondazione Policlinico di Monza** (Vercelli, Italy) - **D Schiffer**, Topic: Brain tumour
- **ISS (Roma, Italy)** – **M Pocchiari**. Topic: Prion diseases.
- **University of Verona** (Verona, Italy) - **G Zanusso**. Topic Prion Diseases. neurodegeneration Diseases

## ACTIVITIES in SCIENTIFIC COMMUNITY

### Institutional Responsibilities

- Head of OIE (Office International des Epizooties) center for BSE and Scrapie, Paris, France (2016).
- Deputy Director of Neuroscience Institute of Turin (NIT), Italy (2015-present)
- Head of National Reference Centre for Animal Encephalopathies (CEA), Italy (2009-present)
- Member of NEUROPRION Association Fontenay-aux-Roses, France (2001-present)

### Editorial Board (present)

BMC Veterinary Research  
Large Animal Review

### Organisation of Scientific Meetings

- Scientific Co-organizer Annual National Meetings of IZS on TSE from 2001 to present.
- PRION 2014 (27-30 May 2014), Trieste, Italy.
- Technical Meeting on ‘Atypical’ BSE Cases (4 December 2003), Paris, France.

### Grant Advisory Panels

- Scientific projects funded by Italian Universities for national funding (active).
- Guidelines for BSE management, DISCOONTOOLS European project (active).
- Scientific projects funded by French Government (2011).
- Scientific project funded by Department of Environment Food and Rural Affairs (DEFRA) (UK) (2008 2009).
- "Twinning- SK/02/IB/AG/O1 "Control TSE - Food Safety", of Agrieurope, Slovakia (2004-2005).

### Manuscript Reviewer

BMC Veterinary Research, Emerging Infectious Diseases, Journal of General Virology, Journal of Veterinary Diagnostic Investigation, PLoS ONE, The Veterinary Record, Veterinary Microbiology, Zoonoses and Public Health.

## ALL ONGOING AND SUBMITTED GRANTS

### On-going Grants

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>	<i>Relation to current ERC proposal</i>
APRON: Assay for prions. Development of an assay detecting prions in animals and humans affected with prion disorders in a preclinical and clinical stage.	Italian MoH	416.859	2016-2019	PI	NO
National reference center for study and research on TSE and comparative neuropathology (CEA)	Italian MoH	1.445.867	2015-present	PI	Pilot study on Prion-like diseases
National reference center for study and research on TSE and comparative neuropathology (CEA)	Italian MoH	1.118.912	2014-present	PI	Pilot study on Prion-like diseases
National reference center for study and research on TSE and comparative neuropathology (CEA)	Italian MoH	1.196.174	2013-present	PI	Pilot study on Prion-like diseases

### Applications

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>	<i>Relation to current ERC proposal</i>
ESSAy: The role of Exosomes in Amyotrophic Lateral Sclerosis pathogenesis	Compagnia di San Paolo Foundation	255.499,20	2016-2018	PI	- Comparative analysis of swine hSOD1G93A data collection, with those obtained from - prion-like transmission of ALS by in vitro analysis .
National reference center for study and research on TSE and comparative neuropathology (CEA)	Italian MoH	1.736.111	2016 -	PI	Pilot study on Prion-like diseases

## Ten years track-record

### PATENT

*New Transgenic animal model of Amyotrophic Lateral Sclerosis* (TO2012A000402 - 04/05/2012) Italian Patent Office

### ORGANISATION OF INTERNATIONAL MEETINGS

2014 Members of Scientific Advisory Board, PRION 2014 (27-30 May), Trieste, Italy.

2003 Expert Member of Technical Meeting on 'Atypical' BSE Cases (4 Dec), Paris, France.

### BOOKS

D Schiffer et al. *Tumor Microenvironment — Perivascular and Perinecrotic Niches* Chapter 3 (pp.49-82) of *Molecular Considerations and Evolving Surgical Management Issues in the Treatment of Patients with a Brain Tumor*, edited by T Lichtor, ISBN:978-953-51-2031-5, Publisher: InTechEd. (2015)

C Casalone et al. *Zoonoses Surveillance in Italy (2000-2009): Investigation on Animals with Neurological Symptoms*. Chapter 2 (pp.29-58) of *Non-flavivirus encephalitis*. Edited by S Tkachev, ISBN :978-953-307-720-8, Publisher: InTechEd. (2011)

C Maurella et al. *Bovine spongiform encephalopathy: history and diagnosis of a decreasing epidemic*. Part 2- Prions (pp. 275–302) of *ECVPH Food safety assurance: Foodborne viruses and prions and their significance for public health* Vol.6 Editors: FJM Smulders, B Nørrung, H Budka Published: eISBN: 978-90-8686-780-6 ISBN:978-90-8686-226-9 Ed. FJM Smulder (2013).

### INVITED SPEAKER, ORAL PRESENTATIONS

2016 Invited presentation in Animal Prion Diseases Workshop, PRION2016, Tokyo, Japan

2013 Invited lecture in European College of Veterinary Public Health AGM & Annual Scientific Conference 2013, Turin, Italy

2011 Oral presentation, OIE Global Conference on Wildlife Animal Health and Biodiversity - Preparing for the Future, Paris, France

2010 Invited lecture in Emerging Infections: A Tribute to the One Medicine symposium, Kansas State University, Manhattan, Kansas, USA.

2008 Invited lecture in "Emerging infections: a tribute to the one medicine, one health concept", Kansas State University, Manhattan, Kansas, USA.

2005 Oral presentation, 81st Annual Meeting of The American Association of Neuropathologists, Arlington, Virginia, USA

2004 Invited lecture, 81st Meeting Spongiform Encephalopathy Advisory Committee (SEAC), Department of Trade and Industry Conference Centre, London, UK

Oral presentation, the sixth conference of the European wildlife disease association TSE and CWD workshop. Uppsala, Sweden

## SELECTED PEER-REVIEWED PUBLICATIONS

### Best publications on the same topic of the project proposal

1. Comoy EE et al. *Transmission of scrapie prions to primate after an extended silent incubation period*. Sci Rep. 2015, 5:11573. IF:5.578, n.cit. 1
2. Chiappa MN et al. *Modeling amyotrophic lateral sclerosis in hSOD1 transgenic swine*. Neurodegener Dis. 2014, 13:246-54. IF:3.511, n.cit. 5
3. Wilson R et al. *Chronic wasting disease and atypical forms of bovine spongiform encephalopathy and scrapie are not transmissible to mice expressing wild-type levels of human prion protein*. J Gen Virol. 2012, 93:1624-9. IF:3.183, n.cit. 27
4. Wilson R et al. *Bovine PrP expression levels in transgenic mice influence transmission characteristics of atypical bovine spongiform encephalopathy*. J Gen Virol. 2012, 93:1132-40. IF:3.183 n.cit. 4
5. Suardi S et al. *Infectivity in skeletal muscle of cattle with atypical bovine spongiform encephalopathy*. PLoSOne. 2012, 7:e31449. IF:3.234, n.cit. 4
6. Béringue V et al. *Transmission of atypical bovine prions to mice transgenic for human prion protein*. Emerg Infect Dis. 2008, 14:1898-901. IF:6.751 n.cit. 57
7. Comoy EE et al. *Atypical BSE (BASE) transmitted from asymptomatic aging cattle to a primate*. PLoS One. 2008, 3:e3017. IF:3.234, n.cit. 68
8. Lombardi G et al. *Intraspecies transmission of BASE induces clinical dullness and amyotrophic changes*. PLoS Pathog. 2008, 4:e1000075. IF:7.562 n.cit. 42
9. Casalone C et al. *Conversion of the BASE prion strain into the BSE strain: the origin of BSE?* PLoS Pathog. 2007, 3:e31. IF:7.562, n.cit. 81
10. Casalone C et al. *Identification of a second bovine amyloidotic spongiform encephalopathy: Molecular similarities with sporadic Creutzfeldt-Jakob disease*. Proc Natl Acad Sci U S A. 2004, 101:3065-70. IF:9.674, n.cit. 246

### Most recent publications

1. Xerxa E et al. *Whole Blood Gene Expression Profiling in Preclinical and Clinical Cattle Infected with Atypical Bovine Spongiform Encephalopathy*. PLoS One. 2016, 11:e0153425. IF: 3.234, n. cit. 0
2. Vallino Costassa E et al. *Characterization of Amyloid- $\beta$  Deposits in Bovine Brains*. J Alzheimers Dis. 2016, 51:875-87. IF:4.151, n.cit. 0
3. Dall'Ara P et al. *Diets with different lipid contents do not modify the neuronal membrane lipid raft profile in a scrapie murine model*. Life Sci. 2016, 144:226-33.
4. Berrone E et al. *Detection of cellular prion protein in exosome derived from ovine plasma*. J Gen Virol. 2015 Sep 22. doi: 10.1099/jgv.0.000291. IF:3.183 n.cit. 0
5. Comoy EE et al. *Transmission of scrapie prions to primate after an extended silent incubation period*. Sci Rep. 2015, 5:11573. IF: 5.578 n. cit. 1
6. Orrú CD et al. *Detection and discrimination of classical and atypical L-type bovine spongiform encephalopathy by real-time quaking-induced conversion*. J Clin Microbiol. 2015, 53:1115-20. IF:3.993, n.cit. 3
7. Mellai M et al. *Astroblastoma: beside being a tumor entity, an occasional phenotype of astrocytic gliomas?* Onco Targets Ther. 2015, 8:451-60. IF: 2.311 n. cit. 0

### Selection of publication representing key results.

8. Wilson R et al. *Presence of subclinical infection in gene-targeted human prion protein transgenic mice exposed to atypical bovine spongiform encephalopathy*. J Gen Virol. 2013, 94:2819-27. IF:3.183, n.cit. 1
9. Martucci F et al. *Detection of typical and atypical bovine spongiform encephalopathy and scrapie prion strains by prion protein motif-grafted antibodies*. J Gen Virol. 2009, 90:1048-53. IF:3.183 n.cit. 4
10. Corona C et al. *Olfactory system involvement in natural scrapie disease*. J Virol. 2009, 83:3657-67. IF:4.439 n.cit. 13
11. Kong Q et al. *Evaluation of the human transmission risk of an atypical bovine spongiform encephalopathy prion strain*. J Virol. 2008, 82:3697-701. IF:4.439 n.cit. 42
12. Béringue V et al. *A bovine prion acquires an epidemic bovine spongiform encephalopathy strain-like phenotype on interspecies transmission*. J Neurosci. 2007, 27:6965-71. IF:6.344 n.cit. 61
13. Casalone C et al. *BSE immunohistochemical patterns in the brainstem: a comparison between UK and Italian cases*. Acta Neuropathol. 2006, 111:444-9. IF10.762 n.cit. 23
14. Casalone C et al. *Pathological prion protein in the tongues of sheep infected with naturally occurring scrapie*. J Virol. 2005, 79:5847-9. IF:4.439 n.cit. 33

### PROCEEDINGS OF INTERNATIONAL CONFERENCES

#### Selection of abstract meeting representing key results.

1. Quadalti C et al. *Use of CRISPR/Cas9 technology combined with ssODNs to obtain a specific mono-allelic amino acid substitution in the TDP43 protein for the generation of a swine model of Amyotrophic Lateral Sclerosis (ALS)*. Int. Society for Transgenic Technologies (ISTT), Prague, Czech Republic (2016)
2. Berrone E, et al. *Detection of cellular prion protein in exosome derived from ovine plasma*. Prion2015, Fort Collins (CO), USA (2015)
3. Vallino Costassa, E et al. *Experimental transmission of classical and atypical BSE in goats*. Prion2014, Trieste Italy (2014)
4. Corona C et al. *Exploring the SOD1-G93A transgenic swine as a novel animal model for Amyotrophic Lateral Sclerosis (ALS)*. 13th Int Congress on neuromuscular diseases. Nice, France (2014)
5. C. Corona, et al. *Integrated phenotypical characterization of the hSOD1-G93A transgenic swine a potential animal model for Amyotrophic Lateral Sclerosis (ALS)*. 9th FENS forum on Neuroscience, Milan, Italy (2014)
6. M.N. Chiappa, et al. *Exploring the SOD1-G93A transgenic swine as a novel animal model for Amyotrophic Lateral Sclerosis (ALS)*. Sharing Advances on Large Animal Models (SALAAM). Munich, German (2014)
7. Corona C, et al. *ALS: new opportunities from an innovative transgenic swine*. International symposium on ALS/MND. Milan, Italy (2013)
8. Vallino Costassa E et al. *Characterization of beta-amyloid deposition in cattle brain* Prion2012 Amsterdam, The Netherlands (2012)
9. Vallino Costassa E et al. *Immunohistochemical Characterization of BASE Plaques by Confocal Microscopy*. Prion2010, Salzburg, Austria (2010)
10. Tagliavini F et al. *Experimental transmission of an atypical form of bovine spongiform encephalopathy*. 81st Annual Meeting of the American Ass. Of Neuropathologists Arlington, VA (2005)