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Formazione ed esperienze lavorative

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Giugno-2007-Mag 2009	**Post-doct,** University Medical Center Groningen
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2004	**Ph.D. in Neurobiologia,** Università di Catania, Italia.
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Ott. 1998	**Laurea magistrale in Chimica e Tecnologie Farmaceutiche**, Università di Modena, Italia, 14 ottobre 1998, 110/110 e lode.

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Lista delle Pubblicazioni Peer-reviewed

1. Amzallag E, Danino YM, Secco V, **Carra S**, Hornstein E. The E3 ligase MKRN2 prevents DRiP accumulation in stress granules and maintains granulostasis. EMBO Rep. 2026 Jun 15. doi: 10.1038/s44319-026-00832-2.
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4. Montepietra D, Bjarnason S, Óskarsson KR, Cecconi C, **Carra S**, Heidarsson PO, Brancolini G. Pathogenic Mechanism of the K141E Mutation in HSPB8: Insights from smFRET and Simulations. Cell Stress Chaperones. 2025 May 29:100086. doi: 10.1016/j.cstres.2025.100086.
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7. Ghezzi A, Gianferrari G, Baldassarri E, Zucchi E, Martinelli I, Vacchiano V, Bonan L, Zinno L, Nuredini A, Canali E, Gizzi M, Terlizzi E, Medici D, Sette E, Currò Dossi M, Morresi S, Santangelo M, Patuelli A, Longoni M, De Massis P, Ferro S, Fini N, Simonini C, **Carra S**, Zamboni G, Mandrioli J. Phenotypical Characterization of C9ALS Patients from the Emilia Romagna Registry of ALS: A Retrospective Case-Control Study. Genes (Basel). 2025 Mar 4;16(3):309. doi: 10.3390/genes16030309.
8. Verde EM, Antoniani F, Mediani L, Secco V, Crotti S, Ferrara MC, Vinet J, Sergeeva A, Yan X, Hoege C, Stuani C, Paron F, Kao T-T, Shrivastava R, Polanowska J, Bailly A, Rosa A, Aronica E, Goswami A, Shneider N, Hyman AA, Buratti E, Xirodimas D, Franzmann TM, Alberti S, **Carra S**. SUMO2/3 conjugation of TDP-43 protects against aggregation. **Sci Adv.** 2025 Feb 21;11(8):eadq2475. doi: 10.1126/sciadv.adq2475. Epub 2025 Feb 21
9. Akaree N, Secco V, Levy-Adam F, Younis A, **Carra S***, Shalgi R*. Regulation of physiological and pathological condensates by molecular chaperones. **FEBS J.** 2025 Jan 5. doi: 10.1111/febs.17390.
10. Ben-Zvi A, **Carra S**, Yeger-Lotem E. Editorial: Celebrating women's contribution to protein folding, misfolding, and degradation in honor of Susan Lindquist (1949-2016). Front Mol Biosci. 2024 Oct 14:11:1504059. doi: 10.3389/fmolb.2024.1504059. eCollection 2024.
11. Gianferrari G, Cuoghi Costantini R, Crippa V, **Carra S**, Bonetto V, Pansarasa O, Cereda C, Zucchi E, Martinelli I, Simonini C, Vicini R, ..., Co-ALS Investigators Group, D'Amico R,

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17. Choudhary D, Mediani L, Avellaneda MJ, Bjarnason S, Alberti S, Boczek EE, Heidarsson PO, Mossa A*, **Carra S***, Tans SJ*, Cecconi C*. Human Small Heat Shock Protein B8 Inhibits Protein Aggregation without Affecting the Native Folding Process. J Am Chem Soc. 2023 Jul 19;145(28):15188-15196. doi: 10.1021/jacs.3c02022.
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25. Ghezzi A, Martinelli I, **Carra S**, Mediani L, Zucchi E, Simonini C, Gianferrari G, Fini N, Cereda C, Gellera C, Pensato V, Mandrioli J. Missense mutation in ATXN2 gene (c.2860C > T) in an amyotrophic lateral sclerosis patient with aggressive disease phenotype. Neurol Sci. 2022 Jun 22. doi: 10.1007/s10072-022-06229-y.
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38. Alberti S, **Carra S**. Nucleolus: A Liquid Droplet Compartment for Misbehaving Proteins. Curr Biol. 2019 Oct 7;29(19):R930-R932. doi: 10.1016/j.cub.2019.08.013.
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92. **Carra S** & Landry J. Small Heat Shock Proteins in Neurodegenerative Diseases. In Review Book: Heat Shock Proteins in Biology and Medicine; Section VI, Chapter 18, 331-352, 2006, Editors: Jurgen Radons and Gabriele Multhoff.
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characterization of CaMKKβ and CaMKKα distribution in the adult mouse brain. *Mol. Brain Research*. 2003. 111:216-21.

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Premi e riconoscimenti alla carriera

Premio Alberto Pio III, ROTARY INTERNATIONAL, District 2072° - Italia (8th June 2023)
The Giovanni Armenise Harvard Foundation and AirAlzh, mid-career on neurodegenerative diseases for 2022
Ferruccio Ritossa Early Career Award for 2017, The 8th international congress on stress proteins in biology and medicine, August 13-17, 2017, Turku, Finland.
Poster Prize (2017) Phase Transitions in Biology and Disease, 2-3 May 2017, Leuven, Belgio
Poster Prize (2014) da Fondazione AriSLA
Youth Travel Fund (2009) da EMBO meeting/Federation of European Biochemistry society.
Best postdoctoral poster presentation Award (2006) meeting annual della facoltà di medicine, Università Laval, Québec, Canada
Best Ph.D. oral presentation Award (2004) Hôtel Dieu de Québec, Università Laval, Québec, Canada
Travelship Award (2003) dalla Società Italiana di Farmacologia
Poster Award (2000) XXIInd Collegium Internazionale Neuro-Psychopharmacologicum, Belgio, Bruxelles
Ph.D. funding (2000-2004) borsa di dottorato di ricerca finanziata da European Commission-Structural Funds e Ministero dell'Università e della Ricerca Scientifica e Tecnologica
Travelship Award (2000) dalla Società Italiana di Farmacologia
Poster Award (1999) European Regional Congress of the World Federation of Societies of Biological Psychiatry, Firenze, Italia

Relatore orale a congressi nazionali ed internazionali, seminari/webinar

1. HSPB3: an active player involved in the differentiation of motor neurons and skeletal muscle cells. *Cell Death and Disease Meeting*, Villa Vigoni, German-Italian Centre for the European Dialogue, 17 – 19 June 2026
2. Protein quality control of stress granules: implications in Amyotrophic Lateral Sclerosis. 23 April 2026, invited seminar for the CriN series "The Many Faces of Stress: from Molecules to Mental disorder", La Sapienza (Rome, Italy)
3. Protein quality control of stress granules: implications in Amyotrophic Lateral Sclerosis. 12 January 2026, invited seminar, EPFL (Switzerland)
4. Protein quality control of stress granules. 19 December 2025, invited seminar, University of Milan, Italy
5. TDP-43 SUMO2/3-ylation prevents its irreversible aggregation. First European Workshop on TDP-43 Proteinopathies, Collège de France, Paris, France, December 1–2, 2025

6. Protein quality control of stress granules: implications in Amyotrophic Lateral Sclerosis. 26 September 2025, invited seminar, HSR Research, San Raffaele, Milan, Italy
7. Protein quality control of condensates: implications for neurodegeneration, “2025 Susan Lindquist School on Proteostasis (EMBO-FEBS)”, Swedish-Finnish Cultural Center Hanaholmen, September 16-19, 2025
8. PIAS-4 mediated SUMO2/3-ylation of TDP-43 protects against aggregation, "2nd biennial conference on TDP-43 function and dysfunction in disease", Trieste, Italy, September 09-11 2025
9. PIAS4 conjugates SUMO2/3 chains to TDP-43 to prevent stress-induced aggregation, “GRC conference series on Stress Proteins in Growth, Development and Disease”, Sunday River, USA, 6-11 July 2025
10. Protein quality control and biomolecular condensates: implications for cellular stress response and neurodegenerative diseases. “Physical Principles Shaping Biomolecular Condensates”, Kavli Institute for Theoretical Physics (KITP), USCB, USA, 11 June 2025.
11. SUMO2/3 conjugation of TDP-43 protects against aggregation. EMBO Workshop "Protein quality control: From molecular mechanisms to aging and disease", 18-23 May 2025, Hersonissos, Greece. Organizers: F.U. Hartl, S. Carra
12. Protein quality control of stress granules: implications in Amyotrophic Lateral Sclerosis, 19 February 2025, invited seminar, SoBS Research Seminar Series, Highfield Campus, University of Southampton, UK
13. SUMO2/3 conjugation of TDP-43 protects against aggregation. “Protein misfolding and aggregation in disease.” 12 - 14 February, Mantova, Italy. Organizers: F. Chiti, M. Nuvolone, S. Ricagno
14. SUMO2/3 conjugation of TDP-43 protects against aggregation. “RNA-binding Proteins in ALS: translating basic mechanisms into novel therapeutics”, Villa Vigoni, German-Italian Centre for the European Dialogue, 14 - 16 October 2024
15. Protein quality control of stress granules: implications in Amyotrophic Lateral Sclerosis. BML seminar series, ETH Zurich, 05 September 2024.
16. SUMO2/3 conjugation of TDP-43 protects against aggregation. EMBO, EMBL Symposium: Cellular mechanisms driven by phase separation. 14-17 May 2024, Heidelberg, Germany.
17. PML nuclear bodies and SUMOylation: new players in ALS-FTD? Third European C9orf72 workshop Feb 22-23 2024, Munich, Germany.
18. Small HSPs as molecular chaperones at the interface between proteins and lipids. SIBBM 2023, Frontiers in Molecular Biology. Beyond Genomics: Next Generation Molecular Biology. Bari, Italy, 26-28 June 2023
19. Small HSPs as molecular chaperones at the interface between proteins and lipids. EMBO Workshop, Protein quality control: From molecular mechanisms to therapeutic intervention, 21 – 26 May 2023, Srebreno-Dubrovnik, Croatia.
20. Condensate Colloqium Series: virtual, biweekly series organized by Rohit Pappu, Simon Alberti, Amy Gladfelter and Julia Mahamid. Losing the GRIP on DRiP? Implications for condensate dynamics upon stress and in human disease. 7 February 2023.
21. MLOpathy, Membrane-less organelle pathology in ALS: identification of causes and rescuing factors. AriSLA Meeting 2022, Research, development and innovation in ALS. 3-4 November 2022, The Westin Palace, Milan, Italy.
22. Losing the GRIP on DRiP? Implication for Amyotrophic Lateral Sclerosis and Frontotemporal degeneration. Amyotrophic lateral sclerosis – from mechanisms to

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novel therapeutics. Organizers: Tanya Levin and Prof. Dr. Jared Sterneckert. Casa Santo nome di Gesù, October 27-28 2022, Florence, Italy.

23. Protein quality control in biomolecular condensates: where protein disorder and chaperones meet to keep proteostasis. Implications for Amyotrophic Lateral Sclerosis and Frontotemporal degeneration. Jacques Monod Conference “Protein phase transitions in ageing and age-related diseases: from atomic resolution to cellular solutions" - October 17-21, 2022, CNRS, Station Biologique de Roscoff, France.
24. Small heat shock proteins act on the α-synuclein lipid-induced aggregation process through multiple mechanisms. Invited speaker. Physics of Biomolecules: Structure, Dynamics and Function, Sept. 5-8, Bressanone, Italy.
25. ALS and FTD: Where RNA metabolism meets protein quality control. Invited seminar. Neurobiology, Experimental Neurology, VIB-KU Leuven, Center for Brain & Disease Research, Leuven, Belgium, 06 May 2022.
26. Misfolding proteico e protein quality control: implicazioni per la SLA. Workshop ALS 2022. Camera di Commercio di Modena, 08 April 2022.
27. Phase transitions and biomedical applications. Anhydrobiosis – cheating death and telling the tale, 21 – 23 March 2022.
28. Condensate targeting as a strategy to prevent irreversible protein aggregation: implications for Amyotrophic Lateral Sclerosis and Frontotemporal degeneration. Webinar for PARIS-DIDEROT CNRS, 9 March 2022.
29. Condensate targeting as a strategy to prevent irreversible protein aggregation: implications for ALS and FTD. I PhasAGE International Conference “Phase Transitions in Aging and Age-related Diseases”, 12-14 October 2021.
30. Condensate targeting as a strategy to prevent irreversible protein aggregation: implications for ALS and FTD. FASEB Conference on Protein Aggregation: Function, Dysfunction, and Disease, June 23-25, 2021.
31. Hsp90-mediated regulation of DYRK3 couples stress granule disassembly to stress adaptation and cell growth: implications for Amyotrophic Lateral Sclerosis. Targeted Protein Degradation: From Small Molecules to Complex Organelles”. Keystone eSymposia, 7-8 June 2021.
32. Hsp90-mediated regulation of DYRK3 couples stress granule disassembly and growth via mTORC1 signaling: implications for ALS/FTD. Rapid Fire Presentation, Virtual ENCALS Meeting 12-14 May 2021.
33. Protein quality control of biomolecular condensates: implications for ALS and FTD. AriSLA Webinar 9 April 2021.
34. Protein quality control of biomolecular condensates: implications for Amyotrophic Lateral Sclerosis and Frontotemporal degeneration. Virtual 31st International Symposium on Amyotrophic Lateral Sclerosis / Motor Neuron Disease, Dec 9 - 11 2020.
35. Protein quality control of membraneless organelles: implications for the stress response and age-related diseases, Cellular and protein homeostasis webinars, Jun 17, 2020 09:30 AM Zurich - Organisers: P. De Los Rios, P. Goloubinoff, A. Barducci and N. Nillegoda.
36. Quality control of membraneless organelles, Webinars in: “Molecular and cellular mechanism of DISEASES”, 15 May 2020, University La Sapienza, Rome, Italy.
37. Aberrant phase transitions and neurodegenerative diseases. 20 February 2020, seminar, European Research Institute for the Biology of Ageing, ERIBA, Groningen, The Netherlands.

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38. Implication of derailed phase separation and molecular chaperones in the stress response and in age-related neurodegenerative diseases, Physiscs of biomolecules: structure, dynamics and functions, 5 - 8 February 2020, Bressanone, Italy
39. Deregulated phase transitions as driver of cellular aging and disease. 14 January 2020, seminar, University of Lausanne, Switzerland.
40. Aberrant phase transitions and neurodegenerative diseases. 5 December 2019, seminar, CRMB, Montpellier, France.
41. Deregulated phase transitions as driver of cellular aging and disease. 12 September 2019, ICGEB - International Centre for Genetic Engineering and Biotechnology, Trieste, Italy.
42. Protein quality control of membraneless organelles. 06 September 2019, Department of Biomedical Sciences, University of Padova, Italy.
43. Symposium chair and speaker, Symposium title: Chaperone networks and signaling pathways in disease and aging, *23rd ESN Biennial Meeting - 7th Conference on Molecular Mechanisms of Regulation in the Nervous System*, September 1-4, 2019, Milan, Italy.
44. Protein Quality Control of Membraneless Organelles: Implications in ALS and Neurodegenerative Diseases. Gordon Research Conference, Amyotrophic Lateral Sclerosis (ALS) and Related Motor Neuron Diseases, Mechanisms of Motor Neuron Degeneration and Therapeutic Intervention, Mount Snow, US, July 21 - 26, 2019.
45. Newly synthesized aberrant proteins impair nuclear condensate dynamics: implications for nuclear function and cell viability. *"Cell Death and Disease"*, Italian-German Center For European Excellence, June 26-29, 2019, Villa Vigoni, Como, Italy
46. Defective ribosomal products challenge nuclear function by impairing nuclear condensate dynamics. *Protein quality control: From mechanisms to disease*, 28 April - 3 May 2019, Costa de la Calma, Mallorca, Spain.
47. Implication of derailed phase separation and molecular chaperones in the stress response and in age-related neurodegenerative diseases. CABIMER Andalusian Center for Molecular Biology and Regenerative Medicine, University of Seville, 01 March 2019, Seville, Spain.
48. Implication of derailed phase separation and molecular chaperones in the stress response and in age-related neurodegenerative diseases. Seminar for PhD School in Genetic and Molecular Biology, University "La Sapienza" Rome, 14 December 2018, Rome Italy.
49. Implication of deregulated proteostasis and phase separation in age-related neurodegenerative diseases. Seminar for PhD School in Biomedical Science and Biotechnology, University of Udine, 6 December 2018, Udine Italy.
50. Small Heat shock proteins and their implication in age-related neurodegenerative diseases. *First Autumn School on Proteostasis*, 12-16 November 2018, Medils, Split, Croatia.
51. Implication of derailed phase separation and molecular chaperones in the stress response and in age-related neurodegenerative diseases. CIBIO, University of Trento, 16 October 2018, Trento, Italy.
52. VCP AND AUTOPHAGOLYSOSOMAL PATHWAY: GUARDIANS OF PROTEOSTASIS AND STRESS GRANULE DYNAMICS. UNRAVELING THEIR IMPLICATIONS IN ALS. *Focus SLA*, Palazzo della Meridiana, 27-29 September, Genova, Italy.

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53. HSPB2 and HSPB3 affect lamin organization with consequences on nuclear morphology and function: implications in neuromuscular diseases. *3rd CSSI Workshop on Small Heat Shock Proteins*, 26-29 August 2018, Quebec, Canada.
54. HSPB2 forms nuclear compartments that affect lamin A and compromise nuclear function: implications in neuromuscular diseases. *SIBBM, Italian Society of Biophysics and Molecular Biology, Frontiers in Molecular Biology*, La Sapienza University, 20-22 June, 2018, Rome, Italy.
55. HSPB2 forms nuclear compartments that affect lamin A and compromise nuclear function. *Cell Death and Disease Meeting*, Villa Vigoni, Italian-German Center For European Excellence, 27-30 June, 2018, Villa Vigoni, Menaggio (Como), Italy
56. HSPB2 forms nuclear compartments that affect lamin A and compromise nuclear function. *EMBO | EMBL Symposium: Cellular Mechanisms Driven by Liquid Phase Separation*, 14-17 May 2018, Heidelberg, Germany.
57. Protein Quality Control of stress Granules, *Cold Spring Harbor Meeting: Protein Homeostasis in Health & Disease*, April 17-21, 2018, USA.
58. Implication of derailed phase separation and molecular chaperones in the stress response and in age-related neurodegenerative diseases. 11th January 2018, invited seminar at *Italian Institute of Technology*, Genoa, Italy.
59. The HSPB8-BAG3-HSP70 complex: implication in protein homeostasis and neurodegenarative diseases. 12th December 2017, invited seminar at *TIGEM*, Pozzuoli, Naples, Italy
60. New functions of chaperones in disease. *234th ENMC (European NeuroMuscular Centre) workshop on Chaperone*, 8-10 December 2017, Naarden, The Netherlands
61. Granulostasis: protein quality control of ribonucleoprotein particles. *XVII Congress Italian Society for Neurosciences (SINS)* 1-4 October 2017, Lacco Ameno, Ischia, Naples, Italy
62. The everyday life of HSPB8: buffering and clearing to avoid irreversible protein aggregation. *The 8th international congress on stress proteins in biology and medicine*, August 13-17, 2017, Turku, Finland
63. Granulostasis: protein quality control of stress granules. *Meeting on Cell Death and Disease*, 14-17 June 2017, Villa Vigoni, Italy
64. Aberrant compartment formation by HSPB2 mislocalizes lamin A and compromises nuclear integrity and function. *EMBO Conference, Protein Quality Control: Success and failure in health and disease*, 14th to 19th May 2017, Sant Feliu de Guixols, Girona, Spain.
65. Molecular chaperones and protein aggregation: from cellular function to disease. *Telethon, THE SCIENTIFIC CONVENTION, Riva del Garda*, *Trento,* 13-15 March 2017.
66. Granulostasis: A Surveillance Function of the HSPB8-BAG3-HSP70 Chaperone Complex That Maintains Stress Granule Integrity and Dynamism. *The Eighth International Symposium on Heat Shock Proteins in Biology and Medicine, Hilton Old Town Alexandria*, VA, USA, October 29 - November 2, 2016.
67. Unexpected properties of HSPB2 and HSPB3: implications in neuromuscular diseases. *The small HSP World, Second International Workshop of Cell Stress Society International (CSSi)*, 12-15 October 2016 – Bertinoro, Italy.
68. The HSPB8-BAG3-HSPA1A complex ensures stress granule integrity and dynamism. *Protein Homeostasis in Health and Disease*, *Cold Spring Harbor*, April 18-22, 2016, New York, USA.

69. Impairment of the Protein Quality Control System Affects Stress Granule Response and Dynamics. *VIIth Cell Stress Society International Congress on Stress and Health*, September 15-19, 2015 Huangshan, PRC.
70. Characterization of the interplay between the protein quality control and the stress granule response: implication in neurodegenerative diseases. Invited speaker at: VI Meeting on the Molecular Mechanisms of Neurodegeneration, May 28th-30th, 2015, Milan, Italy.
71. Investigating the interplay between the protein quality control system, molecular chaperones and stress granules: from cell stress response to disease. Invited speaker at: EMBO Workshop "Macromolecular assemblies at the crossroads of cell stress and function", 31 May - 4 June, 2015, Jerusalem, Israel.
72. Inhibition of autophagy, lysosome and VCP alters stress granule morphology and composition. *EMBO Workshop on the Regulation of Aging and Proteostasis*, Israel February 15-20, 2015.
73. Upregulation of HSPB8 as potential therapeutic approach in Amyotrophic Lateral Sclerosis. The small HSP World, *A Workshop of Cell Stress Society International (CSSI)*, Québec, October 2-5, 2014.
74. Inhibition of autophagy, lysosome and VCP function impairs stress granule assembly. *MND Satellite FENS Meeting*, Milano 3-4 July 2014.
75. Inhibition of autophagy, lysosome and VCP function impairs stress granule assembly: implications in neurodegenerative diseases. *Rijks University Groningen*, University Medical Center Groningen, The Netherlands, 01 july 2014.
76. Implications of the HSPB8-BAG3 complex in neurodegenerative and neuromuscular disorders. *Rijks University Groningen*, University Medical Center Groningen, The Netherlands, 17 may 2011.
77. HSPB8 participates in protein quality control by a non-chaperone like mechanis that requires eIF2a phosphorylation. *EMBO meeting*, Dubrovnick, Croazia, 23-28 May 2009.
78. HspB8/Bag3: a new chaperone complex involved in protein quality control. *8th Dutch Chaperone Meeting*, VU Medical Center, Amsterdam, The Netherlands, 22 February 2008.
79. The new chaperone complex HspB8/Bag3 and its implication in neurodegenerative disorders. *Rijks University Groningen*, University Medical Center Groningen, Groningen, The Netherlands, 22 January 2008.
80. A new chaperone complex involved in the degradation of mutated huntingtin protein by macroautophagy. *Universita' degli Studi di Modena e Reggio Emilia*, Dipartimento di Scienze Biochimiche. Modena, Italy, April 2006.
81. Effect of the small heat shock protein HspB8 on mutated huntingtin aggregation. *Universita' degli Studi di Milano*, Centro di Neuropsicofarmacologia. Milano, July 2005.
82. In vivo chaperone activity of the small heat shock protein HspB8 towards polyglutamine proteins. *Universita' degli Studi di Modena e Reggio Emilia*, Dipartimento di Scienze Farmaceutiche. Modena, Italy, December 2004.

Organizzazione di congressi scientifici internationali

1. *EMBO Workshop "Protein quality control: From molecular mechanisms to aging and disease"*, 18-23 May 2025, Hersonissos, Greece; organizers: Prof. Franz-Ulrich Hartl and Prof. Serena Carra

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2. *Fourth International Workshop of Cell Stress Society International (CSSI)*, 17-18 November 2022 – online event; organizers: Prof. Heath Ecroyd, Prof. Serena Carra and Prof. Justin Benesch
3. *Workshop ALS 2022: dialogue between preclinical and clinical research.* Camera di Commercio di Modena, 08 April 2022. Organizers: Prof. Jessica Mandrioli and Prof. Serena Carra.
4. *3rd sHSP International Workshop of Cell Stress Society International (CSSi)*, 26-29 August 2018 – Québec, Canada; organizers: Prof. Robert M. Tanguay, Prof. Serena Carra and Prof. Lawrence Hightower
5. *The small HSP World, Second International Workshop of Cell Stress Society International (CSSi)*, 12-15 October 2016 – Bertinoro, Italy; organizers: Prof. Serena Carra, Prof. Robert M. Tanguay and Prof. Lawrence Hightower

Fondi per la ricerca scientifica, progetti attivi

1. **Telethon** (2026-2029); PI: Carra S.; partner: Rosa Al. Exploring the role of HSPB3 in chromatin remodeling for neuromuscular junction maintenance: implications for peripheral motor neuropathies.
2. **Armenise-Harvard & AirAlzh** (2023-2027); PI: Carra S. SUMO2/3 as a solubility tag to prevent the misfolding and aggregation of key RNA-binding proteins associated with amyotrophic lateral sclerosis (ALS) and Frontotemporal dementia (FTD).
3. **AriSLA** (2023-2027); PI: Carra S; co-PI: Rosa A.; Buratti E. SUMOsolvable.

Fondi per la ricerca scientifica, progetti conclusi

1. **PRIN** (2023-2026); PI: Carra S.; Partner: Rosa A. HSPB3: understanding its role in the pathophysiology of the neuromuscular system and testing its druggability for future therapeutic purposes.
2. **Telethon** (2023-2025); PI: Carra S. "Boosting HSPB3 to prevent neuromuscular degeneration in peripheral neuropathies"
3. **MDA** (2022-2025); PI: Carra S; co-PI: Rosa A. "HSPB3: a promising candidate for the maintenance of the neuromuscular system"
4. **AFM** (2021-2023); PI: Carra S; co-PI: Rosa A. "Unraveling HSPB3 physiological functions to understand its implication in neuromuscular diseases"
5. **FAR2020** (2021-2023); PI: Carra S; co-PI: Vilella A. Targeting the lipid and protein homeostasis systems with Trodusquemine to fight Alzheimer's Disease
6. **PRIN** (2019-2022); PI: Poletti A; Partners: Carra S; Bonanno G.; D'Agostino V.; Pennuto M. THE INTERPLAY BETWEEN THE "RNA/PROTEIN QUALITY CONTROL SYSTEM" AND "EXOSOMES" AS A SPREADING MECHANISM IN AMYOTROPHIC LATERAL SCLEROSIS [EX_ALS]
7. **AIFA** (2017-2020); Italian PI: Mandrioli J; Partners: Carra S.; D'Amico R.; Chiò A.; Silani V.; Ceroni M.; Simone I.L.; Riva N.; Sabatelli M.; Monsurrò M.R.; Sorarù G.; Poletti A.; Cereda C.; Bonetto V. "Colchicine for Amyotrophic Lateral Sclerosis: a phase II, randomized, double blind, placebo controlled, multicenter clinical trial"
8. **AriSLA** (2019-2022); PI: Carra S; Partners: Poletti A.; Pansarasa O. "Membrane-less organelle pathology in ALS: identification of causes and rescuing factors"

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9. **Ministero degli Affari Esteri e della Cooperazione Internazionale** (Nov. 2017- Apr. 2020); Italian PI: Carra S; Israeli PI : Ben-Zvi A. Tissue-specific protein folding environment can impact metabolic disease etiology
10. **PRIN** (February 2017 – February 2020); Coordinator: Poletti A.; partners: Carra S; Carrì MT; Cozzolino M; Crosio C; Ratti A; Chiò A. "From RNA to Protein toxicity in motorneuron diseases"
11. **JPND** (April 2016-March 2019); Coordinator: Alberti S. (Germany); partners: Carra S; Poletti A; Kaganovich D.; Aguzzi A.; Sterneckert J.; Dantuma N. "Stress granules and proteostasis in motor neurons: towards a mechanistic understanding of ALS"
12. **FAR 2016 University of Modena** (March 2017-Feb. 2019); PI : Carra S; partner : Cecconi C. "Biochemical and biophysical characterization of disease-linked mutants of HSPB8 and BAG3: unravelling their impact on protein-RNA homeostasis."
13. **Ministero degli Affari Esteri e della Cooperazione Internazionale** (Oct. 2016-Sept. 2018); Italian PI: Carra S; Israeli PI : Kaganovich D. "Dynamics and function of stress granules and other protein-RNA assemblies in Amyotrophic Lateral Sclerosis/Dissolve_ALS"
14. **Telethon Research Grant** (Nov. 2015-Oct. 2018); PI : Carra S. "The HSPB2-HSPB3 complex: unraveling new functions that affect nuclear homeostasis and their implication in neuromuscular and muscular diseases."
15. **Cariplo research grant** (June 2015- May 2018); PI: Poletti A.; partners: Carra S; Bicciato S.; Quattrone A.; Provenzano A. "RAN-translation of normal and expanded nucleotide repeat containing transcripts to neurotoxic polypetides in neurodegenerative diseases."
16. **AriSLA Research Grant** (April 2015- March 2018); PI: Carra S; partners: Poletti A., Mandrioli J., Cereda C. "VCP AND AUTOPHAGOLYSOSOMAL PATHWAY: GUARDIANS OF PROTEOSTASIS AND STRESS GRANULE DYNAMICS. UNRAVELING THEIR IMPLICATIONS IN ALS."
17. **Association française contre les myopathies (AFM): Research Grant** (October 2012- December 2015); PI: Carra S. "Identification of HSPB3 mutations in myopathic patients: understanding the mechanisms of disease."
18. **AriSLA Research Grant** (March 2012- February 2015); PI: Poletti A.; partner: Carra S. "ALS_HSPB8"
19. **Telethon Exploratory Project** (November 2012- October 2013); PI: Carra S. "Characterization of the R7S mutation of Heat Shock Protein HSPB3 and of two novel mutations found in patients suffering of congenital myopathy: understanding the mechanisms leading to disease."
20. **MIUR: Rita Levi Montalcini grant** (July 2011- July 2014).
21. **Association française contre les myopathies (AFM): Trampoline Grant** (1st October 2010-30th September 2011); PI: Carra S.
22. **Prinses Beatrix Fonds/Dutch Huntington Association** (1st September 2010- 31st August 2014); PI: Carra S; partners: Kampinga H.H.; Sibon O.C.M.
23. **Marie Curie International Reintegration Grant** (15th May 2009- 14th May 2012)
24. **Young Investigator Award** (1st January 2008- 31st December 2009), National Ataxia Foundation, USA
25. **Ministero della Salute**, Bando 2011-2012, Progetti di Ricerca Giovani Ricercatori (November 2014- November 2017); PI: Crippa V.; partner: Carra S. "Protective role of HSPB8 in motor neuron diseases (MNDs)"

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Referente esterno per giornali scientifici ed agenzie di finanziamento, membro di comitati editoriali

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Membro di comitati editoriali:
da Settembre 2021 - Essays in Biochemistry
dal 2019 - Frontiers in Molecular Neuroscience
2023 - Guest Associate Editor Frontiers Molecular Biosciences per la serie: Celebrating Women's Contribution to Protein Folding, Misfolding, and Degradation In Honor of Susan Lindquist (1949-2016)

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