

Giulia Romano, Ph.D.

CURRENT POSITION

Research Scientist Jan 2023-Present

Mouse Molecular Genetics Unit under P.I. Andres Muro at the International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy.

EDUCATION and PAST EXPERIENCES

Abilitazione Scientifica Nazionale (ASN)

-seconda fascia "Anatomia Comparata e Citologia" BIO/06 (sett. 2023-sett.2034)

-seconda fascia "Biologia Molecolare" BIO/11 (dic. 2023-dic.2034)

Research Scientist Jan 2019-Dec 2022 (NIH Grant)

Human Molecular Genetics Lab (PI Franco Pagani), ICGEB Trieste, Italy.

Postdoctoral Fellow Jan 2015-Dec 2018 (ArisLA Grant - CHRONOS)

Neurobiology Lab (PI Fabian Feiguin), ICGEB Trieste, Italy.

Ph.D., Molecular Genetics and Biotechnology, Dec 2014

Dissertation: "*Characterization of TDP-43, an ALS related protein using D. melanogaster model.*"

University of Nova Gorica, Slovenia.

Master's Degree in Medical Nanobiotechnology (110/110), Apr 2009

Dissertation: "*Molecular analysis of TDP-43 function in D. melanogaster.*"

Faculty of Medicine and Surgery University of Trieste, Italy.

CONFERENCES and COURSES

- Poster session at the 1st Biennial conference on TDP-43 function and dysfunction in disease – 6-8 Sep 2023, Trieste, Italy: "*Su(var)3-9-Mediated Epigenetic Regulation of TDP-43 Expression and its Implications in Age-Related Neurodegeneration.*"
- 4th International Conference on the Long and the Short of Non-Coding RNAs - Aegean Conferences – 12 Jun -17 Jun 2022, Rhodes, Greece. Presentation "Rescue of a familial dysautonomia mouse model by AAV9-ExSpe U1 snRNA".
- Poster session at EMBO Workshop "RNP network dynamics in development and disease" 29 Sep-02 Oct 2019 Ljubljana, Slovenia. "*Rescue of ELP1 exon 20 definition with Exon-Specific U1 snRNAs in a Familial Dysautonomia mouse model.*"
- Poster session at the 17th European Drosophila Neurobiology Conference, NEUROFLY 2018. 3-7 Sep 2018, Krakow, Poland. "*Gad1 downregulation in dTDP-43 ALS fly model.*"
- Poster session at the 2nd SLA Symposium in Turin 2017: "*Chronic and sporadic mechanism in TDP-43 dysfunction.*"
- Poster session at the 6th ARISLA Conference in Milan 2016: "*Glial TDP-43 regulates axon wrapping GluRIIA clustering and fly motility by autonomous and non-autonomous mechanisms.*"
- Poster session at the ICGEB Council of Scientific Advisers (CSA) Congress in Trieste 2016: "*Role of dTDP-43 in glial cells of a Drosophila ALS model, by autonomous and non-autonomous mechanisms.*"
- Poster session at the 1st SLA Symposium in Naples 2015: "*dTDP-43: an unexpected role in glial cells in an ALS fly model.*"

- Poster session at the 1st EURASNET Conference in Trieste 2014: *“Chronological Requirements of TDP-43 Function in Synaptic Organization and Locomotive Control.”*
- Poster session at the 3rd ARISLA Conference in Milan 2013: *“Molecular Characterization of TDP-43 Function in vivo and The Mechanisms that Lead to Motoneuron Disease in Drosophila Models of ALS.”*
- Poster session at the ICGEB CSA Congress in Trieste 2013: *“Temporal Requirements of the ALS protein TDP-43 in the Regulation of Synaptic Activity.”*
- Poster session at the 2nd ARISLA Conference in Milan 2012: *“TDP-43 Regulates Drosophila Neuromuscular Junctions Growth by Modulating Synaptic Microtubules Organization.”*
- Oct 2012 “Molecular Biology of Leishmania” in ICGEB Trieste. (21 hours of lectures)
- Feb 2011 “Mouse Genetics; Models for Human Diseases” in ICTP Trieste. (23 hours of lectures)
- 29 Mar -1 Apr 2010 “RNA Function and Structure” in ICTP Trieste. (21 hours of lectures)
- Poster session at the ICGEB CSA Congress in Trieste 2010: *“Molecular Characterization of the ALS Related Protein TDP-43 in vivo.”*

AWARDS

- Travel Award in recognition of an excellent research contribution at the “4th International Conference on the Long and the Short of Non-Coding RNAs” - Aegean Conferences - in Rhodes, Greece 2022.
- Prize for best poster “Progetto Diventerò 2016” fondazione Bracco at the 6th ARISLA Conference in Milan, Italy.
- Prize for best poster “Cesare Scoccimarro - Giovani per la Ricerca 2013” at the 4th ARISLA Conference in Milan, Italy.
- Prize for best poster “Cesare Scoccimarro - Giovani per la Ricerca 2012” at the 3rd ARISLA Conference in Milan, Italy.
- Top cited article 2009-2011 in FEBS Letters “Depletion of TDP-43 affects Drosophila motoneurons terminal synapsis and locomotive behavior”. FEBS Lett. Volume 583, Issue 10, 2009.

DIRECTION/PARTICIPATION in EDITORIAL COMMITTEES of SCIENTIFIC JOURNALS

- Reviewer of the scientific journal Heliyon of the Cell Press Group. The journal publishes any scientific research that adheres to editorial, ethical and scientific standards. (<https://www.cell.com/heliyon/home>).
- Reviewer of the Frontiers Group. Frontiers is a publisher of peer-reviewed, open access scientific journals currently active in science, technology and medicine. (<https://www.frontiersin.org/>).
- Member of the editorial staff of the journal “Current Gene Therapy Research” of the Probiologists Group. ProBiologists publishes peer-reviewed academic articles in the fields of biology, medicine, and clinical research based on its originality, relevance, interdisciplinary interest, and understandability. (<https://probiologists.com/>)

TEACHING EXPERIENCE

- Summer School project “Tuffi nella Scienza 2022” at Fondazione Pittini - Sestiana (TS). Molecular biology laboratory.
- Relator at the theoretical and practical course: “Drosophila melanogaster models for neurodegenerative diseases”, 17-20 Apr 2018, ICGEB Trieste, Italy.
- Experimental thesis co-supervisor with the courses of:
 - Department of Life Sciences, International Master’s Degree in Neuroscience, University of Trieste, Italy.

- Department of Life Sciences, Bachelor's Degree University of Ferrara, Italy.
 - Department of Pharmacology, Master's Degree in Pharmacology, University of Urbino, Italy.
 - Department of Life Sciences, Bachelor's Degree in Sciences and Biologic Technologies, University of Trieste, Italy.
 - Department of Biology, Master's Degree in Biology, University of Belgrade, Serbia.
- Guest Lecturer 2015 at Scientific High School "Galileo Galilei" Trieste, Italy: "The D. melanogaster: a model for studying neurodegenerative diseases."

SCIENCE DISSEMINATION for the GENERAL PUBLIC

- Trieste Science+Fiction Festival (2024).
- Maker Faire Trieste 2022. Foldscope and Microscopy.
- Trieste Next – ICGEB stand (editions: 2022, 2021, 2019, 2018, 2016, 2015).
- La Notte del Ricercatore 2013 ICGEB stand, "Q&A for the general public."
- Open Day Event (2008, 2009, 2010, 2014, 2018), AREA Science Park Trieste, Italy.

PUBLICATIONS

(1-19)

1. Riccardi,F., **Romano,G.**, Licastro,D. and Pagani,F. (2024) Age-dependent regulation of ELP1 exon 20 splicing in Familial Dysautonomia by RNA Polymerase II kinetics and chromatin structure. *PLOS ONE*, **19**, e0298965.
 2. Marzullo,M.*, **Romano,G.***, Pellacani,C., Riccardi,F., Ciapponi,L. and Feiguin,F. (2023) Su(var)3-9 mediates age-dependent increase in H3K9 methylation on TDP-43 promoter triggering neurodegeneration. *Cell Death Discov.*, **9**, 1–9.
- * Contributed equally**
3. **Romano,G.**, Riccardi,F., Bussani,E., Vodret,S., Licastro,D., Ragone,I., Ronzitti,G., Morini,E., Slaugenhaupt,S.A. and Pagani,F. (2022) Rescue of a familial dysautonomia mouse model by AAV9-Exon-specific U1 snRNA. *Am. J. Hum. Genet.*, 10.1016/j.ajhg.2022.07.004.
 4. **Romano,G.#**, Holodkov,N., Klima,R. and Feiguin,F. (2021) TDP-43 regulates GAD1 mRNA splicing and GABA signaling in Drosophila CNS. *Sci. Rep.*, **11**, 1–8.
- # Corresponding author**
5. **Romano,G.**, Klima,R. and Feiguin,F. (2021) Immunoprecipitation for Protein-Protein Interactions and for RNA Enrichment in Drosophila melanogaster. *Bio-Protoc.*, **11**, e4250–e4250.
 6. Klima,R., **Romano,G.**, Gbadamosi,M., Megighian,A. and Feiguin,F. (2021) Immuno-electrophysiology on Neuromuscular Junctions of Drosophila Third Instar Larva. *Bio-Protoc.*, **11**, e3913–e3913.
 7. **Romano,G.**, Klima,R. and Feiguin,F. (2020) TDP-43 prevents retrotransposon activation in the Drosophila motor system through regulation of Dicer-2 activity. *BMC Biol.*, **18**, 82.

8. Strah,N*, **Romano,G.***, Introna,C., Klima,R., Marzullo,M., Ciapponi,L., Megighian,A., Nizzardo,M. and Feiguin,F. (2020) TDP-43 promotes the formation of neuromuscular synapses through the regulation of Disc-large expression in Drosophila skeletal muscles. *BMC Biol.*, **18**, 34.
- * Contributed equally**
9. Donadon,I., Bussani,E., Riccardi,F., Licastro,D., **Romano,G.**, Pianigiani,G., Pinotti,M., Konstantinova,P., Evers,M., Lin,S., *et al.* (2019) Rescue of spinal muscular atrophy mouse models with AAV9-Exon-specific U1 snRNA. *Nucleic Acids Res.*, **47**, 7618–7632.
10. **Romano,G.**, Holodkov,N., Klima,R., Grilli,F., Guarnaccia,C., Nizzardo,M., Rizzo,F., Garcia,R. and Feiguin,F. (2018) Downregulation of glutamic acid decarboxylase in Drosophila TDP-43-null brains provokes paralysis by affecting the organization of the neuromuscular synapses. *Sci. Rep.*, **8**, 1809.
11. Langellotti,S., **Romano,G.**, Feiguin,F., Baralle,F.E. and Romano,M. (2018) RhoGAPP190: A potential player in tbph-mediated neurodegeneration in Drosophila. *PLoS One*, **13**, e0195845.
12. Lo Piccolo,L., Bonaccorso,R., Attardi,A., Li Greci,L., **Romano,G.**, Sollazzo,M., Giurato,G., Ingrassia,A.M.R., Feiguin,F., Corona,D.F.V., *et al.* (2018) Loss of ISWI Function in Drosophila Nuclear Bodies Drives Cytoplasmic Redistribution of Drosophila TDP-43. *Int. J. Mol. Sci.*, **19**.
13. Langellotti,S., Romano,V., **Romano,G.**, Klima,R., Feiguin,F., Cagnaz,L., Romano,M. and Baralle,F.E. (2016) A novel fly model of TDP-43 proteinopathies: N-terminus sequences combined with the Q/N domain induce protein functional loss and locomotion defects. *Dis. Model. Mech.*, 10.1242/dmm.023382.
14. Cagnaz,L., Klima,R., De Conti,L., **Romano,G.**, Feiguin,F., Buratti,E., Baralle,M. and Baralle,F.E. (2015) An age-related reduction of brain TBPH/TDP-43 levels precedes the onset of locomotion defects in a Drosophila ALS model. *Neuroscience*, **311**, 415–421.
15. **Romano,G.**, Appocher,C., Scorzeto,M., Klima,R., Baralle,F.E., Megighian,A. and Feiguin,F. (2015) Glial TDP-43 regulates axon wrapping, GluRIIA clustering and fly motility by autonomous and non-autonomous mechanisms. *Hum. Mol. Genet.*, **24**, 6134–6145.
16. **Romano,G.**, Klima,R., Buratti,E., Verstreken,P., Baralle,F.E. and Feiguin,F. (2014) Chronological requirements of TDP-43 function in synaptic organization and locomotive control. *Neurobiol. Dis.*, 10.1016/j.nbd.2014.07.007.
17. Romano,M., Buratti,E., **Romano,G.**, Klima,R., Belluz,L.D.B., Stuani,C., Baralle,F. and Feiguin,F. (2014) Evolutionarily-conserved hnRNP A/B proteins functionally interact with human and Drosophila TAR DNA-binding protein 43 (TDP-43). *J. Biol. Chem.*, 10.1074/jbc.M114.548859.
18. Godena,V.K*, **Romano,G.***, Romano,M., Appocher,C., Klima,R., Buratti,E., Baralle,F.E. and Feiguin,F. (2011) TDP-43 Regulates Drosophila Neuromuscular Junctions Growth by Modulating Futsch/MAP1B Levels and Synaptic Microtubules Organization. *PLOS ONE*, **6**, e17808.
- * Contributed equally**
19. Feiguin,F., Godena,V.K., **Romano,G.**, D’Ambrogio,A., Klima,R. and Baralle,F.E. (2009) Depletion of TDP-43 affects Drosophila motoneurons terminal synapsis and locomotive behavior. *FEBS Lett.*, **583**, 1586–1592.