

Elena Irene Rugarli

Personal Data

Title	Prof. Dr.
First name	Elena Irene
Name	Rugarli
Current position	Full Professor of Medicine, permanent
Current institution(s)/ site(s), country	Molecular Biomedicine, Institute for Genetics / CECAD Faculty of Mathematics and Natural Sciences, University of Cologne, Germany
ORCID	0000-0002-5782-1067

Qualifications and Career

Stages	Periods and Details
Medical Doctoral Degree	1988–1989, Prof. Guglielmo Scarlato, University of Milan, Italy
Medical School	1983–1989, University of Milan, Italy

Stages of Academic/Professional Career

Full Professor (W3)	2009–present, University of Cologne, Germany
Associate Professor	2006–2009, Medical Genetics, Faculty of Medicine, University of Milano-Bicocca, Milan, Italy
Group Leader	2005–2009, Head of Laboratory of Genetic and Molecular Pathology, Division of Biochemistry & Genetics, “Carlo Besta” Neurological Institute, Milan, Italy
Group Leader	2000–2005, Telethon Institute of Genetics and Medicine, Naples, Italy
Researcher	1994–2000, Telethon Institute of Genetics and Medicine, Naples, Italy
Postdoctoral Fellow	1991–1994, Department of Human and Molecular Genetics, Baylor College of Medicine, Houston, TX, USA
Specialization	1989–1993, Neurology, University of Milan, Italy

Activities in the Research System

Institutional Responsibilities (selected)

2018–present	Spokesperson, CRC 1218 (DFG) “Mitochondrial regulation of cellular function”, University of Cologne, Germany
2017–present	Co-Chair, Selection and Graduate Committee, Interdisciplinary Program Molecular Medicine (IPMM), University of Cologne, Germany
2016–present	Executive Board Member, CRC 1218 (DFG) “Mitochondrial regulation of cellular function”, University of Cologne, Germany
2015–2017	Member, Selection and Graduate Committee, Interdisciplinary Program Molecular Medicine (IPMM), University of Cologne, Germany
2014–2018	Executive Board Member, RTG 1960 (DFG) “Neural circuit analysis on the cellular and subcellular level”, University of Cologne, Germany

- 2012–2023 Executive Board Member, CECAD Cluster of Excellence EXC 2030 (DFG) “Cellular Stress Responses in Aging-associated Diseases”, University of Cologne, Germany
- 2012–2018 Coordinator, Research Area A “Mitochondrial Dysfunction in Aging and Neurodegeneration”, CECAD Cluster of Excellence EXC 229 (DFG) “Cellular Stress Responses in Aging-associated Diseases”, University of Cologne, Germany

Service to the Scientific Community (selected)

- 2018 Co-Organizer, International Symposium CRC 1218 (DFG) “Mitochondrial plasticity in metabolism and signalling”, Cologne, Germany
- 2017 Co-Organizer, Euromit 2017, International Meeting on Mitochondrial Pathology, Cologne, Germany
- 2015 Co-Organizer, EMBO Workshop “Mitochondrial DNA and neurodegeneration”, Sitges, Spain
- 2013 Co-Organizer, Cologne Spring Meeting “Neural circuits: Development, function and degeneration”, Cologne, Germany

Scientific Results

Category A

- Zaninello, M., Schlegel, T., Nolte, H., Pirzada, M., Savino, E., Barth, E., Klein, I., Wuestenberg, H., Uddin, T., Wolff, L., Wirth, B., Lehmann, H.C., Cioni, J.-M., Langer, T., and **Rugarli, E.I.** (2024). CLUH maintains functional mitochondria and translation in motoneuronal axons and prevents peripheral neuropathy. **Sci Adv** 10:eadn2050. doi: 10.1126/sciadv.adn2050. (open access)
- Montoro-Gámez, C., Nolte, H., Molinié, T., Evangelista, G., Tröder, S., Barth, E., Popovic, M., Trifunovic, A., Zevnik, B., Langer, T., and **Rugarli, E.I.** (2023). SARM1 deletion delays cerebellar but not spinal cord degeneration in an enhanced mouse model of SPG7 deficiency. **Brain** 146:4117–4131. doi: 10.1093/brain/awad136. (open access)
- Schatton, D., Di Pietro, G., Szczepanowska, K., Veronese, M., Marx, M.C., Braunöhler, K., Barth, E., Müller, S., Giavalisco, P., Langer, T., Trifunovic, A., and **Rugarli, E.I.** (2022). CLUH controls astrin-1 expression to couple mitochondrial metabolism to cell cycle progression. **Elife** 11:e74552. doi: 10.7554/eLife.74552. (open access)
- Pla-Martin, D.*, Schatton, D.*, Wiederstein, J.L., Marx, M.C., Khiati, S., Krüger, M., and **Rugarli, E.I.** (2020). CLUH granules coordinate translation of mitochondrial proteins with mTORC1 signaling and mitophagy. **EMBO J** 39:e102731. doi: 10.15252/embj.2019102731. (open access)
- Schatton, D., Pla-Martin, D., Marx, M.C., Hansen, H., Mourier, A., Nemazanyy, I., Pessia, A., Zentis, P., Corona, T., Kondylis, V., Barth, E., Schauss, A.C., Velagapudi, V., and **Rugarli, E.I.** (2017). CLUH regulates mitochondrial metabolism by controlling translation and decay of target mRNAs. **J Cell Biol** 216:675–693. doi: 10.1083/jcb.201607019. (open access)
- Wang, S., Jacquemyn, J., Murru, S., Martinelli, P., Barth, E., Langer, T., Niessen, C.M., and **Rugarli, E.I.** (2016). The Mitochondrial m-AAA protease prevents demyelination and hair greying. **PLoS Genet** 2:e1006463. doi: 10.1371/journal.pgen.1006463. (open access)
- Papadopoulos, C., Orso, G., Mancuso, G., Herholz, M., Gumeni, S., Tadepalle, N., Jungst, C., Tzschichholz, A., Schauss, A., Honing, S., Trifunovic, A., Daga, A., and **Rugarli, E.I.** (2015). Spastin binds to lipid droplets and affects lipid metabolism. **PLoS Genet** 11:e1005149. doi: 10.1371/journal.pgen.1005149. (open access)

Gao, J., Schatton, D., Martinelli, P., Hansen, H., Pla-Martin, D., Barth, E., Becker, C., Altmueller, J., Frommolt, P., Sardiello, M., and **Rugarli, E.I.** (2014). CLUH regulates mitochondrial biogenesis by binding mRNAs of nuclear-encoded mitochondrial proteins. **J Cell Biol** 207:213–223. doi: 10.1083/jcb.201403129. (open access)

Kondadi, A.K., Wang, S., Montagner, S., Kladt, N., Korwitz, A., Martinelli, P., Herholz, D., Baker, M.J., Schauss, A.C., Langer, T., and **Rugarli, E.I.** (2014). Loss of the m-AAA protease subunit AFG3L2 causes mitochondrial transport defects and tau hyperphosphorylation. **EMBO J** 33:1011–1026. doi: 10.1002/embj.201387009. (open access)

Almajan, E.R., Richter, R., Paeger, L., Martinelli, P., Barth, E., Decker, T., Larsson, N.G., Kloppenburg, P., Langer, T., and **Rugarli, E.I.** (2012). AFG3L2 supports mitochondrial protein synthesis and Purkinje cell survival. **J Clin Invest** 122:4048–4058. doi: 10.1172/JCI64604. (open access)

* *shared first authorship*, # *shared corresponding authorship*

Category B

Patents

Inventors: **Rugarli, E.** (University of Cologne)
No.: DE 10 2023 120 716.4, *Pending*
Title: Doppelfluoreszenzfarbstoffverbindung