

"Young Investigator Award" for FLI doctoral student

Georgia Daraki, a scientist from the Leibniz Institute on Aging - Fritz Lipmann Institute (FLI) Jena, has won the "Young Investigator Award" (YIA) from the Children's Tumor Foundation (CTF). This award includes a two-year fellowship for her work on "Exploring the Interplay between Lipid Metabolism and LZTR1 in Peripheral Nerve Pathologies".

Jena. Georgia Daraki, a doctoral student in the Morrison research group at FLI, was recently named a "Young Investigator" by the Children's Tumor Foundation, a non-profit organization that supports research and the identification of effective therapies for the genetic disorder Neurofibromatosis (NF).

With the two-year start-up funding of €71,660.00 Daraki can intensify her research on schwannomatosis (SWN), the rarest form of NF. SWN is a peripheral nervous system disorder where patients suffer from chronic pain and have predisposition to develop multiple non-intradermal schwannomas (tumors of the peripheral nervous system). One of the causes are mutations in a gene called LZTR1.

To better understand SWN, Georgia Daraki used a mouse model in her previous work where the LZTR1 gene is absent in Schwann cells. This model mirrored previous clinical observations and showed an increased sensitivity to painful stimuli. "On closer examination of the nerves, we registered structural changes in their protective sheath, the so-called myelin sheath. Using appropriate mouse and cell models, we found that problems with LZTR1 are related to the metabolism and composition of lipids (fats and fat-like substances). The delicate balance, crucial for the health of the peripheral nerves, is significantly impaired," explains the 29-year-old researcher.

Daraki's discovery further suggests that LZTR1-associated lipid metabolism dysregulation, affects the myelin sheath, which is mainly composed of lipids, potentially leading to increased pain. Georgia Daraki is confident: "Our research can enhance our understanding of why people with *LZTR1*-related Schwannomatosis experience pain and provide valuable insights into treatment options targeting lipid metabolism in nerves." These findings could significantly contribute to alleviating neuropathic pain in affected individuals.

The "Young Investigator Award" is CTF's oldest award program and offers two-years of salary support for young NF researchers. The goal is to attract researchers to the field and help them establish themselves as independent NF researchers. Since its inception, several YIA recipients have achieved groundbreaking research results and remarkable publications. Many awardees have gone on to pursue lifelong careers in the field of NF research.

Background Information

The **Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)** – upon its inauguration in 2004 – was the first German research organization dedicated to research on the process of aging. Around 350 employees from around 40 nations explore the molecular mechanisms underlying aging processes and age-associated diseases. For more information, please visit www.leibniz-fli.de.

The **Leibniz Association** connects 97 independent research institutions that range in focus from natural, engineering, and environmental sciences to economics, spatial, and social sciences and the humanities. Leibniz Institutes address issues of social, economic, and ecological relevance. They conduct basic and applied research, including in the interdisciplinary Leibniz Research Alliances, maintain scientific infrastructure, and provide research-based services. The Leibniz Association identifies focus areas for knowledge transfer, particularly with the Leibniz research museums. It advises and informs policymakers, science, industry, and the general public. Leibniz institutions collaborate intensively with universities – including in the form of Leibniz ScienceCampi – as well as with industry and other partners at home and abroad. They are subject to a transparent, independent evaluation procedure. Because of their importance for the country as a whole, the Leibniz Association Institutes are funded jointly by Germany's central and regional governments. The Leibniz Institutes employ around 20,500 people, including 11,500 researchers. The financial volume amounts to 2 billion euros. For more information: www.leibniz-gemeinschaft.de/en/.

Photo

The doctoral student Georgia Daraki is awardee of the "Young Investigator Award" from the Children's Tumor Foundation (CTF). (Photo: FLI)

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