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Johnson & Johnson Celebrates Innovation in Regulated RNA and Protein Degradation with 2024 Dr. Paul Janssen Award for Biomedical Research

Lynne Maquat, Ph.D., and Alexander Varshavsky, Ph.D., to receive 2024 Dr. Paul Janssen Award for their fundamental discoveries about regulated degradation of RNA and proteins.

NEW BRUNSWICK, N.J., Sept. 25, 2024 /PRNewswire/ -- Johnson & Johnson today announced Lynne Maquat, Ph.D., of the University of Rochester, and Alexander Varshavsky, Ph.D., of the California Institute of Technology, as the winners of the 2024 **Dr. Paul Janssen Award for Biomedical Research**. Dr. Maquat and Dr. Varshavsky are being honored for their fundamental discoveries about regulated degradation of RNAs and proteins.

"It is our honor to recognize Drs. Maquat and Varshavsky for contributing to the forefront of scientific innovation through their stellar work on regulated RNA and protein degradation," said John C. Reed, M.D., Ph.D., Executive Vice President, Innovative Medicine R&D for Johnson & Johnson. "Each scientist's groundbreaking research has the potential to impact many aspects of medicine and human health as we know it. They truly embody the legacy, spirit, and innovation of Dr. Paul Janssen."

Dr. Maquat and Dr. Varshavsky have each made major contributions to our understanding of cellular quality control mechanisms, which has profound implications for medical science. Dr. Maquat's research has unveiled how cells selectively destroy flawed messenger RNA molecules to prevent the production of abnormal proteins, a process that is associated with many diseases such as cystic fibrosis and various cancers. Dr. Varshavsky's work discovered key aspects of the ubiquitin system, including the first degradation signals (degrons) in short-lived proteins. The ubiquitin system regulates numerous cellular processes, including DNA repair and the cell cycle. Perturbations of the ubiquitin system are linked to a broad range of diseases, including cancer, neurodegeneration, and disorders of immunity. Together, the discoveries by Dr. Maquat and Dr. Varshavsky have advanced our understanding of cellular mechanisms and opened avenues for developing new treatments for many human diseases.

Drs. Maquat and Varshavsky were selected for this recognition by **an independent committee** of world-renowned scientists. They join **23 other scientists** who have received the Dr. Paul Janssen Award since 2004, including eight who have gone on to win the Nobel Prize. Prior to the Dr. Paul Janssen Award, discoveries by Dr. Maquat and Dr. Varshavsky were recognized by dozens of major international scientific awards.

"The works of Drs. Maquat and Varshavsky stood out from the many other deserving researchers for this award. These researchers discovered how our cells survey the quality of their RNAs and proteins and control their degradation where needed. The mechanisms they've unearthed have broad implications for health and could be useful targets in lowering the rate of people affected by harmful diseases such as cancer," said Elaine Fuchs, Ph.D., Selection Committee Chair for the Dr. Paul Janssen Award.

Johnson & Johnson will honor these outstanding scientists during a virtual symposium, cohosted with the **New York Academy of Sciences** on January 30, 2025. The program will showcase presentations by Drs. Maquat and Varshavsky. The symposium is free to anyone interested in celebrating scientific innovation. (Registration is required).

"I am honored to be awarded the Dr. Paul Janssen Award for Biomedical Research together with Dr. Maquat," said Dr. Varshavsky. "Many years of research by our laboratories have led to these discoveries. I look forward to further advances of knowledge and medical applications in these fascinating arenas."

"It is a privilege to be selected alongside Dr. Varshavsky as a recipient of the 2024 Dr. Paul Janssen Award," said Dr. Maquat. "I hope that my lab continues to make strides in unraveling the complex molecular causes of cancer, neurologic disorders and other devastating diseases and that our work inspires others to enter the burgeoning field of RNA biology, as it holds tremendous potential in the search for new therapeutic tools and targets."

About the Dr. Paul Janssen Award for Biomedical Research
Dr. Paul Janssen was one of the 20th century's most gifted, accomplished and passionate researchers. He helped save millions of lives through his contribution to the discovery and development of more than 80 medicines, four of which remain on the World Health Organization's list of essential medicines.

The Dr. Paul Janssen Award for Biomedical Research was established by Johnson & Johnson in 2004 to honor the memory of Dr. Janssen. Since its inception, the Award has recognized 24 outstanding scientists, eight of whom have gone on to win the Nobel Prize for the same work. Winners are chosen by an independent selection committee of the world's most renowned scientists. The Award includes a $200,000 prize.

Previous winners include:

- 2023 – Robert Langer Sc.D.
- 2022 – Jeffrey Gordon, M.D.
- 2021 – Katalin Karikó, Ph.D., and Drew Weissman, M.D., Ph.D.; Nobel Laureates
- 2020 – Lewis Cantley, Ph.D.
- 2019 – Franz-Ulrich Hartl, M.D., and Arthur Horwich, M.D.
- 2018 – James Allison, Ph.D.; Nobel Laureate
- 2017 – Douglas Wallace, Ph.D.

- 2016 – Yoshinori Ohsumi, Ph.D.; Nobel Laureate
- 2015 – Bert Vogelstein, M.D.
- 2014 – Emmanuelle Charpentier, Ph.D., and Jennifer Doudna, Ph.D.; Nobel Laureates
- 2013 – David Julius, Ph.D.; Nobel Laureate
- 2012 – Victor Ambros, Ph.D., and Gary Ruvkun, Ph.D.
- 2011 – Napoleon Ferrara, M.D.
- 2010 – Anthony S. Fauci, M.D., and Erick De Clercq, M.D., Ph.D.
- 2009 – Axel Ullrich, Ph.D.
- 2008 – Sri Ravinder Maini, FRCP, FMedSci, FRS, and Marc Feldmann, FMedSci,FAA, FRS
- 2006 – Craig Mello, Ph.D.; Nobel Laureate

Learn more about The Dr. Paul Janssen Award at **www.pauljanssenaward.com**.

About Johnson & Johnson
At Johnson & Johnson, we believe health is everything. Our strength in healthcare innovation empowers us to build a world where complex diseases are prevented, treated, and cured, where treatments are smarter and less invasive, and solutions are personal. Through our expertise in Innovative Medicine and MedTech, we are uniquely positioned to innovate across the full spectrum of healthcare solutions today to deliver the breakthroughs of tomorrow, and profoundly impact health for humanity. Learn more at **https://www.jnj.com/**.

1 Wolf Price – Laureates. *The Wolf Foundation*. 2024. **https://wolffund.org.il/the-wolf-prize/#Laureates**
2 Lynne Elizabeth Maquat, Ph.D. *University of Rochester Medical Center*. 2024. **https://www.urmc.rochester.edu/people/112359023-lynne-elizabeth-maquat**
3 Alexander J. Varshavsky, Ph.D. *Caltech – Tianqiao and Chrissy Chen Institute for Neuroscience*. 2024. **https://neuroscience.caltech.edu/people/alexander-j-varshavsky**