



# Neurology Grand Rounds

February 19, 2025

## Krivickas Memorial Lecture Organelle Quality Control in Neuronal Homeostasis and Neurodegeneration



### **Erika Holzbaur, Ph.D.**

- William Maul Measey Professor of Physiology,
- Director, Pennsylvania Muscle Institute, Perelman School of Medicine, University of Pennsylvania

Dr. Erika Holzbaur is an internationally recognized leader in neuronal cell biology, with a focus on understanding organelle dynamics in neurons. Her group studies the organelle trafficking along the microtubule cytoskeleton, with groundbreaking work revealing how dynein and kinesin motors coordinate to drive long-distance transport in axons, regulated by adaptors and local cytoskeletal dynamics. Her work also addresses the mechanisms by which mutations in molecular motors or their activators and adaptors cause devastating neurodevelopmental and neurodegenerative diseases such as ALS.

Dr. Holzbaur's group has also made significant contributions to the study of autophagy and mitophagy in neurons, uncovering pathways that maintain cellular health by removing damaged organelles. She was the first to identify the role of OPTN1 in mitophagy, linking its dysfunction to ALS and Parkinson's disease. Her research highlights how impaired organelle clearance contributes to neurodegeneration, providing critical insights into disease mechanisms.

A recipient of numerous prestigious honors, Dr. Holzbaur holds the William Maul Measey Endowed Professorship in the Perelman School of Medicine at the University of Pennsylvania, and has been recognized with the Javits Neuroscience Investigator Award and the Pfizer Award for Research Excellence. With over 200 publications and an h-index of 95, she has shaped the fields of molecular motors, organelle trafficking, neuronal autophagy, and neurodegeneration. Beyond her scientific achievements, she is dedicated to mentoring the next generation of scientists, having guided over 50 trainees, many of whom have secured prestigious academic and leadership positions worldwide.

### Learn more about the Krivickas Memorial Lecture

**Date:** February 19, 2025

**Time:** 12:00PM–1:00PM

**Location:** Bigelow Theater (White 4-418)

Directions:

- From the MGH main lobby, walk down the hallway and turn left at the first elevator bank (White Building).
- Take the elevator to the 4th floor and turn right.
- The Bigelow Theater is at the end of the hallway.

**Zoom:** <https://partners.zoom.us/j/88504882124?pwd=mh9QH0pKRNnugofYXeDlavSeaHHJz8.1>

Passcode: **021925**

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- [MGH Website](#)
- [BWH Website](#)

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