

MARTIN LEE CHALFIE



Martin Lee Chalfie (born January 15, 1947) is an American scientist. He is University Professor at Columbia University. He shared the 2008 Nobel Prize in Chemistry along with Osamu Shimomura and Roger Y. Tsien „for the discovery and development of the green fluorescent protein, GFP“. He holds a PhD in neurobiology from Harvard University.

ACADEMIC AND PROFESSIONAL CAREER

Chalfie conducted his postdoctoral research at the Laboratory of Molecular Biology (LMB) with Sydney Brenner and John Sulston, and the three published a paper in 1985 on „The Neural Circuit for Touch Sensitivity in *C. elegans*“. Chalfie then left the LMB in 1982 to join the faculty of Columbia University in the department of biological sciences and continued to study *C. elegans* touch mutants.

He married Tulle Hazelrigg. She later joined him on the faculty of Columbia University. She gave him permission to cite her unpublished research in his seminal Science paper „Green Fluorescent Protein as a Marker for Gene Expression“ on condition that he made coffee, cooked, and emptied the garbage nightly for a month.

Chalfie was elected to the National Academy of Sciences in 2004.

He shared the 2008 Nobel Prize in Chemistry along with Osamu Shimomura and Roger Y. Tsien „for the discovery and development of the green fluorescent protein, GFP“.

In 2015, Chalfie signed the Mainau Declaration 2015 on Climate Change on the final day of the 65th Lindau Nobel Laureate Meeting. The declaration was signed by a total of 76 Nobel Laureates and handed to then-President of the French Republic, François Hollande, as part of the successful COP21 climate summit in Paris.

Chalfie’s lab uses the nematode *C. elegans* to investigate aspects of nerve cell development and function. The wealth of developmental, anatomical, genetic, and molecular information available for *C. elegans* provides a powerful and multifaceted approach to these studies.

He has published over 100 papers of which at least 25 have over 100 citations.

He traces his work on green fluorescent protein to a 1988 seminar from Paul Brehm about bioluminescent organisms, which led to some crucial experiments in 1992, detailed in his paper „Green fluorescent protein as a marker for gene expression“, which is among the 20 most-cited papers in the field of Molecular Biology & Genetics. Chalfie won a Golden Goose Award for this work in 2012.

He received an honorary degree in physics from the University of Parma on 4 July 2023.

AWARDS AND HONORS

- 2008 E. B. Wilson Medal
- 2008 Nobel Prize in Chemistry
- 2012 Golden Goose Award
- 2018 Foreign Member of the Royal Society
- 2018 Lomonosov Gold Medal