Professor

Gregory A. Petsko

Harvard Medical School

Biochemist; Educator; Academic research agency administrator

AREA: Biological Sciences

SPECIALTY: Biochemistry, Biophysics, and Molecular Biology

ELECTED: 2002

Together with Dagmar Ringe, he pioneered the development of low-temperature X -ray crystallography. This information, together with theoretical analysis, has considerably broadened our view of the dynamic nature of proteins. In addition, their seminal contributions to enzyme catalysis mechanisms have enhanced our understanding of the role of enzymes in biological systems. In 2002, he changed the direction of his research to focus on understanding and finding treatments for the major neurodegenerative diseases: Alzheimer's, Parkinson's, ALS, and frontotemporal dementia. With collaborator Scott Small of Columbia University, his Alzheimer's work has concentrated on the role of the retromer multi protein assembly in that

disease, leading to potential drug and gene therapies. His work on ALS with Dagmar Ringe has been directed at gene therapies to enhance mRNA homeostasis. In addition to cofounding several biotechnology companies, he has spent much of time raising public awareness of the coming epidemic of neurologic diseases as the population ages, and the urgent need to mobilize funding and scientific talent to find treatments.

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Academy Involvement

DÆDALUS | SUMMER 2012

The Coming Epidemic of Neurologic Disorders: What Science Is - and Should Be - Doing About It (/publication/coming-epidemic-neurologic-disorders-what-science-should-be-doing-about-it)

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