

Gregg L. Semenza, M.D., Ph.D.

Dr. Semenza is the C. Michael Armstrong professor of genetic medicine, with appointments in pediatrics, radiation oncology, biological chemistry, medicine, and oncology at the Johns Hopkins University School of Medicine. He serves as founding director of the Vascular Program at the Johns Hopkins Institute for Cell Engineering and founding director of the Armstrong Oxygen Biology Research Center.

Dr. Semenza received an A.B. (in Biology) from Harvard University and M.D. and Ph.D. (in Genetics) degrees from the University of Pennsylvania. He completed pediatrics residency training at Duke University Medical Center and postdoctoral training in medical genetics at Johns Hopkins. He has been a member of the Johns Hopkins faculty since 1990.

Dr. Semenza's lab discovered hypoxia-inducible factor 1 (HIF-1), a transcription factor that controls the expression of thousands of genes in response to changes in oxygen availability, for which he was awarded the 2019 Nobel Prize in Physiology or Medicine. Dr. Semenza has also received the Albert Lasker Basic Medical Research Award (2016), Lefoulon-Delalande Grand Prize from the Institut de France (2012), and the Canada Gairdner International Award (2010). He has authored more than 450 research articles and book chapters, and his work has been cited more than 180,000 times according to Google Scholar.

Dr. Semenza's current research interests include investigating the molecular mechanisms of oxygen homeostasis, the role of HIF-1 in cancer progression, and the development of HIF inhibitors for cancer therapy.