



Samuel Achilefu, Ph.D., elected to National Academy of Engineering

Feb. 12, 2025

To the UT Southwestern Community:

We are very pleased to share the news that **Samuel Achilefu, Ph.D.**, inaugural Chair of the Department of Biomedical Engineering, has been elected to the National Academy of Engineering (NAE) in recognition of his significant contributions to the fields of molecular imaging of cancer and nanotherapeutics. He is the first UT Southwestern faculty member to achieve this honor – one of the highest professional distinctions accorded to an engineer. Dr. Achilefu is also a member of the National Academy of Medicine and a Fellow of the National Academy of Inventors.

A prolific inventor who holds more than 70 U.S. patents, Dr. Achilefu has developed cancer-avid materials and a wearable cancer-imaging goggle system, providing real-time guidance for surgeons to ensure the complete removal of cancerous tissue. In addition, his research interests include portable imaging devices and nanotechnology. His seminal work in the use of innovative fluorescent materials for cancer imaging resulted in the clinical translation of a method to identify and treat many cancer types, especially breast tumors.

Dr. Achilefu, who holds the Lyda Hill Distinguished University Chair in Biomedical Engineering, has published more than 300 scientific papers. He also serves on the Society of Photo-Optical Instrumentation Engineers (SPIE) Board of Directors and has been a member of the National Advisory Council for Biomedical Imaging and Bioengineering. A recipient of more than 20 national and international honors and awards for research excellence and leadership, Dr. Achilefu was the first to receive the Distinguished Investigator Award from the Department of Defense Breast Cancer Research Program.

Dr. Achilefu joined UT Southwestern in 2022, helping to launch the Texas Instruments Biomedical Engineering and Sciences Building in October 2023 in partnership with The University of Texas at Dallas. He has grown UTSW's young Biomedical Engineering Department to include 17 primary and 28 secondary faculty members who facilitate basic biomedical research and the detection, diagnosis, and treatment of disease and disability. He's also a Professor in the Department of Radiology and the Harold C. Simmons Comprehensive Cancer Center.

Before joining UT Southwestern, Dr. Achilefu served more than 20 years at the Mallinckrodt Institute of Radiology at Washington University School of Medicine in St. Louis, where he was Professor of Medicine, Biomedical Engineering, and Biochemistry & Molecular Biophysics. He studied chemistry and materials science at the University of Nancy in France before completing postdoctoral training in oxygen transport in biological systems and hematological science at Oxford University in the United Kingdom.

Please join us in congratulating Dr. Achilefu on this exceptional accomplishment as he continues to advance transformational bioengineering at UT Southwestern, which will improve patient care.

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