

Ronald G. Crystal, MD

Dr. Crystal is Professor and Chairman of the Department of Genetic Medicine of the Weill Medical College of Cornell University, where he is also the Bruce Webster Professor of Internal Medicine, Director of the Belfer Gene Therapy Core Facility and Attending Physician at the New York-Presbyterian Hospital/Weill Cornell Medical Center.

After earning a BA degree in physics from Tufts University, an MS degree in physics from the University of Pennsylvania, and an MD degree from the University of Pennsylvania, Dr. Crystal completed his medical post-graduate training in Internal Medicine at Massachusetts General Hospital and in Pulmonary Medicine at the University of California, San Francisco. In 1970, Dr. Crystal joined the National Institutes of Health, where he served as Chief of the Pulmonary Branch of the National Heart, Lung and Blood Institute until moving to Weill-Cornell in 1993.

During the 1970's and 80's, Dr. Crystal focused much of his research on the pathogenesis and therapy of inflammatory diseases of the lung. The work of his laboratory formed the basis of the current understanding of the pathogenesis of lung fibrosis and the hereditary form of emphysema associated with alpha 1-antitrypsin deficiency, a disease for which he developed the FDA-approved therapy now used to treat thousands of patients worldwide.

In the late 1980's, Dr. Crystal shifted his focus to gene therapy, a field in which he is a pioneer. He was the first to use a recombinant virus as a vehicle for *in vivo* gene therapy, and has carried out human trials of gene therapy for cystic fibrosis, cardiac ischemia, cancer and central nervous system disorders. His laboratory also has major programs in deciphering how human genetic variation modulates gene expression in the context of environmental exposure and exploiting these relationships to recategorize human disease at the biologic level and identify who is at risk for disease.

In recognition of his significant accomplishments as a clinical and basic science investigator, Dr. Crystal has received numerous professional honors including an honorary degree from the Johann Wolfgang Goethe University in Germany, an honorary professorship from Sichuan University in China, and an Honorary Fellowship from the Royal Physicians of Ireland. He was the recipient of the Amberson Award from the American Thoracic Society and the Human Gene Therapy Pioneer Award for seminal work in gene therapy. He serves on the editorial boards of numerous biomedical journals. He has published over 900 scientific articles, and his work has been cited over 50,000 times in the scientific literature. He has edited several textbooks, and serves on a number of advisory boards to government and industry. Dr. Crystal is responsible for numerous biomedical patents and is a founder of several biotechnology companies focused on developing gene therapy therapeutics.

Outside of his professional activities, Dr. Crystal is an active mountain climber.