

\$37 Million Grant to Study COPD

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DENVER — Researchers from National Jewish Medical and Research Center and Brigham and Women's Hospital have been awarded a \$37 million grant from the [National Heart Lung and Blood Institute](#) (NHLBI) to lead the most comprehensive study of chronic obstructive pulmonary disease (COPD) ever undertaken. The multi-institutional study will seek to identify the genetic, epidemiological and radiological characteristics of COPD, with a long-term goal of better understanding the disease and finding more effective treatments.

"COPD is the fourth leading cause of death in the United States, and yet we know so little about the disease," said James Crapo, MD, professor of medicine at National Jewish and co-principal investigator of the study. "This study will help us determine which smokers are most at risk of developing the disease, who is most likely to have progressive disease, and how to more effectively treat it."

"Our goal with this massive project is to discover genes responsible for this chronic lung disease and to develop a comprehensive data sharing plan so that this study will become a national resource for the scientific community," said Edwin Silverman, MD, PhD, associate professor of medicine at BWH and co-principal investigator of the study.

The 16 clinical study centers involved will enroll a total of 10,500 participants, 3,500 of whom will be African American, a population whose COPD rates are rapidly growing and whose risk factors have not been adequately studied.

COPD is an umbrella term for a variety of progressive lung diseases, most commonly emphysema and chronic bronchitis, which damage lung tissue and make it difficult to breathe. Cigarette smoking causes the vast majority of COPD cases, but breathing in other kinds of lung irritants may also cause the disease. A mutation in the alpha-1 antitrypsin gene accounts for about one to two percent of COPD cases, but researchers hypothesize other genetic factors are likely involved. COPD is the only leading cause of death in the US that has been steadily increasing in frequency over the past decade. There is no treatment that can cure the disease and only a few measures to extend the lives of patients.

The new study will enroll smokers with and without COPD. Study participants with COPD will donate a sample of blood for DNA analysis and will undergo a single study visit that will include pulmonary function tests, questionnaires about respiratory and general health, a six-minute walk test, a physical examination and a chest CT scan. After study participation, phone and mail contacts will be conducted with study participants every six months.

"The National Heart, Lung, and Blood Institute is excited to fund what will be the largest study ever of the genetics of COPD. Identifying genetic factors that contribute to this devastating disease will help us understand the biological mechanisms involved, and will ultimately lead to better treatments and improved outcomes for patients," said Elizabeth G. Nabel, MD, director of the NHLBI. The NHLBI is promoting better awareness of COPD through its public education campaign, Learn More Breathe Better.

A team from Johns Hopkins University, the Harvard School of Public Health (HSPH), Brigham and Women's Hospital, and the University of Colorado will provide statistical analysis.

National Jewish Medical and Research Center is known worldwide for treatment of patients with respiratory, immune and related disorders, and for groundbreaking medical research. Founded in 1899 as a nonprofit hospital, National Jewish provides the best integrated and innovative care for patients and their families; seeks to understand and find cures for the diseases we research; and educates and trains the next generation of healthcare professionals to be leaders in medicine and science. We pursue this vision by pioneering individualized medicine programs which embrace the paradigm shift from reactive medicine to proactive, personalized healthcare. For 10 consecutive years, *U.S. News & World Report* has ranked National Jewish the #1 respiratory hospital in the nation. Scholarly publisher Thomson Scientific has ranked National Jewish among the 25 most influential research institutions in the world in its

areas of focus.

[Brigham and Women's Hospital](#)(BWH) is a 747-bed nonprofit teaching affiliate of Harvard Medical School and a founding member of Partners HealthCare System, an integrated healthcare delivery network. BWH is committed to excellence in patient care with expertise in virtually every specialty of medicine and surgery. The BWH medical preeminence dates back to 1832, and today that rich history in clinical care is coupled with its national leadership in quality improvement and patient safety initiatives and its dedication to educating and training the next generation of healthcare professionals. Through investigation and discovery conducted at its Biomedical Research Institute (BRI), BWH is an international leader in basic, clinical and translational research on human diseases, involving more than 800 physician-investigators and renowned biomedical scientists and faculty supported by more than \$400M in funding. BWH is also home to major landmark epidemiologic population studies, including the Nurses' and Physicians' Health Studies and the Women's Health Initiative.

Clinical Centers Participating in this Study:

Baylor College of Medicine

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Brigham and Women's Hospital / Harvard School of Public Health

John J. Reilly, MD, Clinical Study Center PI, Co-Director, Imaging Center

Columbia University Medical Center

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National Jewish Health is the leading respiratory hospital in the nation. Founded 121 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the [media resources page](#).

Media Contacts

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