

## Giants in Chest Medicine

### Bartolome Celli, MD, FCCP



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Webster's dictionary defines a giant as a "legendary human-like being of giant stature or strength." At 5 feet, 9 inches tall, Bartolome Celli has rarely heard the term giant to describe him. However, in terms of Bart's impact on chest medicine, the term giant is too small of a word to describe his many achievements.

Bart's strength of being is, in large part, due to his humble origins, the son of a Venezuelan mother who was a piano teacher and an Italian immigrant father who grew up in Valencia, Venezuela. His interest in medicine started at an early age by observing doctors who made house calls and showed compassion and skill when they came to his house to treat him and his family. This background, plus the virtues instilled in him by his parents (ie, the value of hard work, kindness, compassion, and the responsibility to do something with your life to better the world), led Bart to choose medicine as a field of study. Hard work catapulted him to the preeminent medical university in Venezuela where he graduated at the top of his class. He was inspired as a student reading *Harrison's Textbook of Internal Medicine* to come to Boston to be trained by academic physicians who wrote expert medical textbooks. He secured an internship in internal medicine in Worcester, Massachusetts, under the direction of



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Dr Harold Jeghers, chair of the Department of Medicine at that time. Dr Jeghers was himself a noted medical educator and scholar, part of the founding pair of physicians who reported the Peutz-Jegher syndrome and also the founder of the Medical Index. Following the internship, Bart still yearned to train in Boston, and Dr Jeghers, recognizing his student's zeal and unrelenting drive to become a top-tier academic physician, helped Bart secure a residency position at Boston City Hospital, his alma mater. After completing a medical residency and chief residency at Boston City Hospital, Bart went on to become a pulmonary fellow at Boston University School of Medicine.

At that time, two new faculty, Gordon Snider and Jerome Brody, had recently arrived at Boston University; they would go on to develop one of the most highly respected academic pulmonary programs. Both of these academic pulmonologists, giants of chest medicine in their own rights, left profound and indelible marks on

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**FINANCIAL/NONFINANCIAL DISCLOSURES:** None declared.

**ADDITIONAL INFORMATION:** See video interview of Dr Celli online at [journal.publications.chestnet.org](http://journal.publications.chestnet.org).

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DOI: <http://dx.doi.org/10.1016/j.chest.2016.08.1464>

Bart's career by serving as both role models and mentors. Under Jerry's direction, Bart worked on the mechanism of postsynaptic lung growth in response to hypoxic stimulation in hamsters. Jerry instilled in Bart the virtue of "letting the data talk to you" to better understand how to collect and analyze data to answer the scientific question at hand. Under Gordon, Bart learned superb clinical skills, such as how important it is to really listen to patients with difficult lung problems, how to ask insightful questions about their disease process to foster a better understanding of their problem, and how to create a research plan to develop new and better treatment strategies. It was in Gordon's weekly outpatient clinic that Bart first treated patients with COPD who had advanced disease and observed how a compassionate, thoughtful, and inquisitive physician like Gordon could make a patient's plight substantially better.

Following completion of his fellowship, Bart moved back to Venezuela to repay the medical school that he felt he owed so much for his beginnings in medicine. For 5 years, he toiled with a heavy burden of clinical work but still desired to conduct research despite limited resources. It was at this medical school that Bart conducted the first prospective randomized trial of incentive spirometry to prevent postoperative pulmonary complications. Wanting more research and teaching opportunities, Bart returned to Boston University as faculty.

On his return to Boston University, Bart excelled in clinical physiology, specifically in assessing the diaphragm and pectoral girdle muscle contractile pattern in patients with COPD. Observing that patients with COPD had less difficulty in doing seemingly more strenuous tasks such as walking or going up stairs compared with brushing their teeth or combing their hair, Bart used respiratory physiology to study this problem. This study led to additional research efforts that were also based on clinical observations such as the importance of nonpulmonary factors affecting a COPD patient's outcomes such as lower BMI and poor exercise tolerance. As a result, the multidimensional BODE index (for body mass index, airflow obstruction, dyspnea, and exercise) was conceived, a major step forward in our understanding that COPD is more than just a disease that affects the lungs. Similar other clinical observations led Bart to study the impact of comorbid conditions on the outcome of patients with COPD. Other studies followed that assessed various therapeutic interventions to improve lung function and other outcomes. Recently,

Bart has focused on the principles of system biology that can be applied to the myriad of disorders affecting patients with COPD by examining interconnecting pathways that make teleological and biological sense. His extensive research background and expertise have now established him as one of the top worldwide thought leaders in the pathogenesis, impact, and treatment of COPD.

More important than the landmark work that Bart has done in research is the mentorship that he has provided to a myriad of trainees over the past several decades. As his first fellowship trainee over 30 years ago, his curiosity and drive even as a young faculty to solve clinical problems by using the principles of clinical investigation were infectious, and his guidance and support to a novice trainee like me were endless. Many trainees have followed me over the decades from many different countries around the globe and have benefited from his boundless energy, enthusiasm, intellect, and support. Of special note is the leadership and guidance that he has provided to trainees and colleagues from Latin America. His leadership and guidance were instrumental in the creation of the Latin American Thoracic Association and formation of the PLATINO study (Spanish acronym for the Latin American Project for Research in Pulmonary Obstruction). All of these involvements are his way of giving back to others the mentorship, support, and advice that were given to him in the beginning of his career.

Although Bart has been extremely successful in his professional career, his success as a son, spouse, father, and grandfather is even more impressive. Doris (his wife and partner throughout his life), his 4 children, and 9 grandchildren are his core foundation and the light of his life.

All of us who have had the privilege to know and work with Bart can attest to his mentorship, support, and, most importantly, his friendship that characterize this unique man who has given so much to the field of chest medicine that has benefited trainees, colleagues, and especially the patients with COPD. I encourage all to listen to Bart's words of wisdom that were captured during a videotaped interview that can be accessed online at [journal.publications.chestnet.org](http://journal.publications.chestnet.org).

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