Ann Allergy Asthma Immunol 114 (2015) 265–268

Contents lists available at ScienceDirect

Father of modern immunology—Robert A. Good (1922–2003)

Sami L. Bahna, MD, DrPH

Allergy and Immunology Section, Louisiana State University Medical School, Shreveport, Louisiana

ARTICLE INFO

Article history:
Received for publication January 13, 2015.
Received in revised form January 27, 2015.
Accepted for publication February 4, 2015.

Introduction

As with several previous invitations to speak or write about Dr Robert A. Good, I appreciated the invitation of the *Annals'* Editor-in-Chief, Dr Gailen Marshall, to prepare this Perspective. I had the privilege of knowing Dr Good for more than 25 years and the great fortune of working with him for 9 years (1992–2001; Fig 1). As did everyone who interacted with this unique man, I admired him very much and tried to know as much about him as I could. In this Perspective, I summarize the information about his life as I saw, heard, or read—and hope I have not committed any inaccuracies.[1–15]

Childhood

Robert Alan Good was born on May 21, 1922 in Crosby, Minnesota. He was the second of 4 sons. His father was a school principal and his mother was a school teacher. At 5 years of age, he watched his father die of cancer—an event that might have stimulated his interest in pursuing a medical career and in fighting cancer. While a teenager, he developed a polio-like illness that affected his walking and necessitated his use of a wheelchair for some time. That illness left him with a limp for life, yet with only little effect on his physical activities. During high school, he had a morning newspaper route and saved his earnings to use for college.

Academic Career

Dr Good was educated primarily in Minnesota (Table 1). At the University of Minnesota, he was the first student to obtain combined MD and PhD degrees at the young age of 25. He received training in pediatrics at the University of Minnesota Hospital, followed by an immunology fellowship at the Rockefeller Institute. Then, he was appointed to the faculty of the University of Minnesota Medical School in 1950. He quickly rose the academic ladder to the rank of professor of pediatrics at 32 years old. He also was a professor of microbiology and pathology and chaired the department of pathology in 1970.

In 1973, he moved to New York City to become president of the Sloan-Kettering Institute for Cancer Research and professor of pediatrics, medicine and pathology at Cornell University. He directed the research of a large number of distinguished scientists and clinicians in various areas of immunologic and neoplastic diseases.

In 1982, he moved to the University of Oklahoma as professor of pediatrics, medicine and microbiology–immunology to found a cancer research program. However, the plan was hindered by an unexpected marked decrease in oil revenues for the state, which affected funding for the program. This created an opportunity for the University of South Florida.

In 1985, he joined the University of South Florida School of Medicine in Tampa as professor of pediatrics, medicine and microbiology–immunology and served as chair of the department of pediatrics for a few years and physician-in-chief of All Children's Hospital in St Petersburg. However, his main commitment was building up the immunology program at All Children's Hospital with full capabilities for research and clinical service, including immunodeficiency disorders, allergies, and rheumatology. He also founded an active unit for bone marrow and stem cell transplantation. He markedly boosted research by establishing modern laboratories and directing a team of distinguished investigators. The program provided an excellent ground for training physicians to qualify for certification by the Board of Allergy and Immunology and the Board of Diagnostic Laboratory Immunology. He maintained full-time duties even during the years of fighting esophageal cancer that caused his death in 2003.

Major Achievements

Throughout his long distinguished career, Dr Good focused his research on exploring the human immune system and made major original contributions that earned him the title "Father of Modern Immunology" or "Founder of Modern Immunology" (Table 2). He was the first to demonstrate the important role of the thymus and describe the humoral and cell-mediated arms of immunity. His research included describing different primary immunodeficiency disorders, investigating transplantation immunology, studying cancer immunology, exploring the effect of aging on immunity, and studying the relation between nutrition and immunity.

Reprints: Sami L. Bahna, MD, DrPH, Professor of Pediatrics and Medicine, Chief of Allergy and Immunology Section, Louisiana State University Medical School, 1501 Kings Highway, Shreveport, LA 71130, USA; E-mail: sbahna@lsuhsc.edu.
Disclosure: Author has nothing to disclose.

http://dx.doi.org/10.1016/j.anai.2015.02.001

Figure 1. Robert A. Good (1922–2003).

He demonstrated in experimental animals that undernutrition without malnutrition prolonged life.

He performed the first successful immune reconstitution by bone marrow transplantation from a matched older sibling in 1968. It was a definitive cure for a 5-month-old boy with severe combined immune deficiency who has since enjoyed a normal healthy life. In 1987, with the help of Congressman Bill Young of Florida, Dr Good founded the National Bone Marrow Registry, which markedly facilitated the use of the procedure worldwide. Bone marrow transplantation and its later modification of stem cell transplantation have offered life to patients with many different immunologic, neoplastic, hematologic, and metabolic disorders. He also is credited with describing the entity of immunodeficiency with thymoma (Good syndrome). He had a distinct clinical acumen and exploited it well in learning about immunodeficiency diseases that he often referred to as "experiments of nature."

Table 1
Robert A. Good's career

Combined PhD and MD, University of Minnesota, 1947 (at 25 y of age)
Pediatric residency, University of Minnesota Hospitals
Immunology fellowship, Rockefeller Institute
Pediatrics faculty, University of Minnesota
Instructor, 1950
Assistant professor, 1951
Associate professor, 1953
Professor of pediatrics, microbiology, and pathology, 1954
Chair, Department of Pathology, University of Minnesota, 1970–1972
President, Sloan-Kettering Institute for Cancer Research, 1973–1982
Professor of pediatrics, medicine, and pathology, Cornell University,1973–1982
Research professor of pediatrics, medicine and microbiology–immunology, University of Oklahoma 1982–1985
Professor of pediatrics, medicine, and microbiology–immunology, and distinguished research professor, University of South Florida 1985–2003
Head of allergy, immunology, rheumatology, and bone marrow transplant section, All Children's Hospital, 1985–2003
Director of allergy–immunology training program, All Children's Hospital, 1986–2003

Table 2
Robert A. Good's major achievements

Description of several primary immunodeficiency disorders
Description of the role of the thymus
Advances in transplantation immunology
First successful human bone marrow transplant
Founded the National Bone Marrow Registry
Studied the effect of nutrition on immunity
Studied the immunology of aging
Published >2,000 papers and book chapters
Authored or edited >50 books
Trained >300 physicians and scientists, most of whom became senior scientists or academic leaders

Dr Good's scientific publications exceeded 2,000, including original research articles, book chapters, and textbooks. He was a charter member of the Institute of Medicine and a member of the National Academy of Science. He also served as editor or editorial board member of many prestigious scientific journals. However, he was most proud of his students. His passion for teaching was unsurpassable and enriched whoever heard him, from the naive young medical student to the most sophisticated scientist. His exceptional ability in simplifying the most complex subjects was best demonstrated in his love of one-on-one teaching. In this regard, a statement he casually said has profoundly influenced me, and to this day I have it framed and displayed in my office (Fig 2).

For a long time, he used to start meetings with his faculty members individually at 5 AM so that they would not be delayed for their daily work. During an international meeting, a distinguished department chairman asked me to "tell Dr Good your 'barber' says 'hello.'" When he was working with Dr Good, he offered to cut Dr Good's hair to guarantee a time to discuss his research work. Dr Good trained more than 300 physicians and basic scientists—a large number of whom became prominent immunologists in the United States and other countries. More than 200 of Good's former trainees or young faculty members became professors or department chairs at institutions around the world. Some rose to the highest academic ranks as deans of medical schools and at least 1 became a university president.

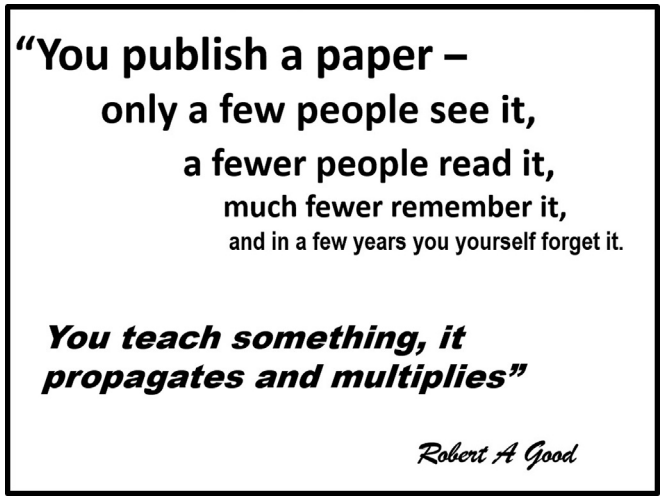

Figure 2. Quotation by Robert A. Good.