



# Guy H. Simmons Jr., PhD – Bluegrass Medical Physicist

Peter Sandwall, Ashley Cetnar, Ahmet Ayan, Kevin Little, Dennis Cheek, Joshua Hessler, Michael Lamba, & Christopher Njeh  
Ohio River Valley Chapter, American Association of Physicists in Medicine

## Abstract

Dr. Guy Held Simmons is a pioneer of nuclear medicine physics. Beyond professional achievements in developing technology, educational, and quality assurance standards; he is a treasured and trusted friend who developed life-long relationships. Dr. Simmons started his professional career in Cincinnati, Ohio where he studied under Dr. Jim Kereiakes while helping to develop the first Bachelor's degree program in Nuclear Medicine technology.

Following completion of his PhD at the University of Cincinnati, Dr. Simmons was recruited by the University of Kentucky (UK) to serve under dual appointment to the College of Medicine and the U.S. Department of Veterans Affairs (VA). While working at UK, Dr. Simmons helped developed the first certification exam for the American Board of Science in Nuclear Medicine and was an early contributor to the use of computers in nuclear medicine. Among many professional roles, Dr. Simmons served as President of Ohio River Valley Chapter (ORVC) of the American Association of Physicists in Medicine (AAPM) (1974-75) as well as the national organization (1995).

A career public servant, Dr. Simmons "retired" after thirty-one combined years of service with the United States Public Health Service and the VA. Retaining his academic appointment at UK, Dr. Simmons started another chapter in his career founding a successful radiological physics consulting company that would continue to serve the region for 25 years. During his distinguished career, he developed strong friendships with fellow luminaries, many lasting 40 or more years. Dr. Simmons is known as a true friend with a terrific sense of humor; soft spoken with, "strong hands and an iron will." His professional work has enriched our profession and he has set a personal example for us all with his modesty and integrity.

## Origin & Family

Guy Held Simmons Jr. was born in a small town in Macon county Tennessee, near the seat of Lafayette, October 9<sup>th</sup>, 1936. Guy's parents were from North Central Tennessee and his earliest memories were living on a farm, playing along the sandbar of a creek that ran through the property. Guy was raised with his sister, 3½ years his senior, who would go on to obtain a graduate degree in education and spend her career focused on special education. When Guy was 4 years old, his family moved to Indianapolis.



Above, Guy's birthplace. Below, his childhood home in Kentucky



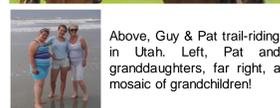
Guy's father grew up in a large family of farmers and learned to farm from his own father. He was a farmer his whole life, except for a 5-year hiatus in Indianapolis during the second world war. During this time Guy's father helped with the war efforts by working in a factory making butyl rubber tires. In 1945, when Guy was in 4<sup>th</sup> grade, his father bought a farm in Kentucky, where they lived until he left home. Guy grew up working on the farm, raising cattle, tobacco, and grain. Working alongside each other, father and son became good friends. A heavy smoker, his father died an early death at 56.

Guy met his first wife Janet in Southern California during his "drop-out" years. Married in 1959 for 24 years, they had 5 children together, 2 boys and 3 girls; Tracy, Scott, David, Sarah, and Lydia. Their eldest daughter Tracy had Down's syndrome and passed away early, at 31 years of age. His four other children earned graduate degrees in various areas. Scott a PhD in mathematics, David and Sarah a Master's in counseling and education respectively, and Lydia a Juris Doctor. Together they have grown the family with 7 grandchildren and recently (18 months) one great grandchild.

Guy enjoys working on projects alongside his family and playing with his toys; cars, boats, and airplanes. Comfortable taking turns on country roads, flying only moderately increased his speed of travel. His son Scott recalls summer road trips as a family to the AAPM, where they would spend time with family friends Joe Windham and Bill Hendee, among others. Throughout the years Guy has enjoyed hiking, trail-riding, and camping around the country with friends and family. He was introduced to his second wife, Pat, on blind date set up by a former student, they were married in 1989.



Above, Bertha (nee Glover) & Guy Sr. Below, children, David, Sarah, Tracy, Lydia, and Scott (left to right)



## Education

### BA in Mathematics and Physics (1961), Western Kentucky University Bowling Green, Kentucky

Guy's interest in science began in high school when he took chemistry and mathematics classes. This developed into a passion for science and mathematics. However, he worried mathematics would have limited opportunities. Once he took his first college level physics course, Guy made the decision to go into physics as a career.



During his time in Bowling Green, Guy enjoyed visits to Tandy's Billiard Parlor. Supporting his education through summer work, one summer he hadn't been able to save enough money. Coupled with a waning interest in academics, he dropped out. After facing the realities of not being prepared for a profession, he decided to return.

When he finally graduated in 1961, with a double major in Mathematics and Physics, he had more hours in math than physics. The summer following graduation, Guy served as an instructor for an optics lab. His first academic appointment.

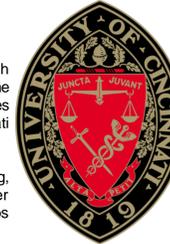
### MS Radiological Health (1964), University of North Carolina Chapel Hill, North Carolina

Guy was recruited to his position in Cincinnati by a friend and roommate who had graduated a year ahead at WKU. This same friend, William Buckman, eventually left to pursue a PhD while serving as faculty at UNC. Again, William recruited Guy, sharing information about the availability of fellowships funded by the department of health, education, and welfare. Guy took a leave of absence from the Public Health Service to complete his masters in the department of environmental sciences and engineering. He returned to Cincinnati, rejoining his unit following graduation.



### PhD Nuclear Engineering (1972), University of Cincinnati Cincinnati, Ohio

Following completion of his Master's degree, the Bureau of Radiological Health began reorganization, with discussion of the dissolution of the Cincinnati group and moving members to Washington DC. At the same time, Dr. Kereiakes was initiating a nuclear medicine bachelor degree; a first in the country. Dr. Kereiakes asked Guy if he would help spearhead the program. Guy agreed and joined the University of Cincinnati group. It was at that time he began to learn and perform the duties of a medical physicist.



Dr. Kereiakes had developed a relationship with the Department of Chemical and Nuclear Engineering, allowing students to perform medical physics research and obtain a PhD. For six years he worked under Kereiakes, creating the nuclear medicine program and completing his PhD. One of Guy's lifelong friendships was formed with committee member and later chair of Nuclear Engineering, Dr. John Christenson.

## Public and Academic Work

### United States Public Health Service Cincinnati, OH



Recruited by his college friend, William Buckman, Guy worked at the Robert A. Taft Center (pictured above), run by the public health service. His position was in the training group, conducting short term (1-4 week) courses on radiation safety focused on environmental and occupational health physics.

Some courses had lectures devoted to medical applications with guest lecturers, often Dr.'s Jim Kereiakes and Eugene Sanger. First meeting in 1962, Dr. Kereiakes was Guy's introduction to medical physics.

### Physicist, Bureau of Radiological Health, Training Section (1961-1965)

### Unit Chief, Bureau of Radiological Health, Training Section (1965-1966)

### Medical Physicist, University of Cincinnati College of Medicine, Dept. of Radiology (1966-1972)

### University of Kentucky College of Medicine Lexington, Kentucky



### Assistant Professor, Radiation Medicine & College of Allied Health Professions (1972-1978)

### Associate Professor, Radiation Medicine & College of Allied Health Professions (1978-1989)

### Associate Professor, Radiology Dept. & College of Allied Health Professions (1989-1992)

### Professor, Radiology Department & College of Allied Health Professions (1992-2006)



Dr. Simmons was recruited as the first nuclear medicine physicist for UK in 1972. UK had an affiliation with the VA hospital, sharing faculty and funding. At the time, the VA had purchased a whole-body counting device, modeled after a unit at Oak Ridge. Dr. Simmons was given responsibility for getting the unit operational.

The acquisition device, PDP-11, interface and software all needed to be developed independently. It was a single dimension device that could scan profiles (rectilinear). The initial device couldn't produce 2D images; Dr. Simmons developed a 16-unit array of oscillating detectors, moving back and forth as the patient was translated underneath.

## Private Practice

### Bluegrass Radiological Physics, Inc. Lexington, Kentucky

### Founder and President (1993-2018)

Upon "retirement," Dr. Simmons transitioned from nuclear medicine to diagnostic radiology, forming Bluegrass Radiological Physics (1993). Dr. Simmons had been performing independent consulting in the area for quite a while, and when eligible for retirement, decided to maintain his faculty appointment but transfer the quality assurance work to his consulting company. He consistently employed three physicists, one board certified (BC) physicist, one whose certification was in progress, and a part time graduate student. The first BC physicist was Tomi Van Cleve, graduate of University of Wisconsin - Madison. The second BC physicist was Travis Painter, who worked alongside Dr. Simmons for 19 years and continues with the company today. In 2018, Bluegrass was acquired and merged with Associates in Medical Physics of Brecksville, Ohio.



Left, Dr. Simmons & step-granddaughter, alongside his plane used often throughout his consulting career. Below, long-time associate, Travis Painter



## Service

### American Association of Physicists in Medicine

President, Ohio River Valley chapter, 1974-75  
Director of Summer School, 1977  
Secretary, 1988-90  
President, 1995



### Society of Nuclear Medicine (and Molecular Imaging)

Computer Council, 1980-1994  
President, Instrumentation Council, 1981  
Secretary, Southeastern Chapter, 1988-90  
Society of Nuclear Medicine: President, Southeastern Chapter, 1993-94



### Radiological Society of North America

Third Vice President, 1998-99



### American Board of Radiology

Board of Trustees, 1986-90  
Physics Examiner, 1990-2012



### International Atomic Energy Agency

Technical Assistance Consultant, Philippines, 1985, 87-88, 99  
Technical Assistance Consultant, Armenia, 2000



In the early 70's, Dr. Simmons started regularly attending the AAPM and RSNA meetings. First involved in the nuclear medicine committee in 1974, Dr. Simmons served on numerous committees as both member and chair throughout his career. Notable roles have been highlighted above, his engagement in service to our professional societies and certification boards are too extensive to list exhaustively. Author of books, many book chapters, and numerous peer-reviewed articles, Dr. Simmons professional work has established him as a pre-eminent nuclear medicine physicist. A prolific volunteer, he shared his expertise to benefit others. Quoting Dr. Simmons, "A person who has a desire to be of service to humanity, will find medical physics very rewarding."

Dr. Simmons primary engagement was in education, and he has especially enjoyed the success of his students including Jerry White, John Hazel, Charlie Coffey, and many other very competent clinical physicists. Jim Kereiakes and Eugene Sanger, had the largest impact on his career. A regular attendee of the 'Cincinnati Luncheons', Dr. Simmons enjoyed the family atmosphere of early AAPM meetings and is known for his excellent sense of humor and impressive dancing skills.



Left, 1989 Officers and Board, Seated (from left to right), Alfred Smith, Elaine Osterman, Faiz Khan, Gary Barnes, Kenneth Kase, and Dr. Simmons. Right, 1994, Steve Thomas, Jim Galvin, Pat Windham, and Dr. Simmons.

Wendell Berry stated it well, "We have neglected the truth that a good farmer is a craftsman of the highest order, a kind of artist."

While not a farmer of the land like his father and grandfathers, Dr. Simmons is indeed a farmer, of ideas and friendships. He tilled the soil that we stand on, allowing us to benefit from the fruits of his labor, while sowing the seeds of long-lasting friendships he continues to enjoy today.

## Bibliography

- Simmons, Guy AAPM "History Interview with Guy H. Simmons," Robert Gorson. July 27<sup>th</sup>, 1999
- Laughlin, J.S. and Goodwin, P.N. "History of the American Association of Physicists in Medicine 1958-1998." Med. Phys. 25, 1235-1383 1998
- Simmons, Guy Telephone and email communication, Peter Sandwall. April 2021
- Buckman, William Telephone conversation, Peter Sandwall. April 25<sup>th</sup>, 2021
- Thomas, Stephen Telephone conversation, Peter Sandwall. April 25<sup>th</sup>, 2021
- Hendee, William Telephone conversation, Peter Sandwall. April 27<sup>th</sup>, 2021
- Painter, Travis Telephone conversation, Peter Sandwall. April 27<sup>th</sup>, 2021
- Simmons, Scott Telephone conversation, Peter Sandwall. April 27<sup>th</sup>, 2021
- Galvin, James Telephone conversation, Peter Sandwall. April 28<sup>th</sup>, 2021

