

## IN REMEMBRANCE

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# Michael H. Ross (1930–2009)

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**Michael H. Ross (1930–2009)**

Michael H. Ross, an eminent scholar, professor, and chairman emeritus of the Department of Anatomy and Cell Biology at the University of Florida, College of Medicine in Gainesville, passed away in Gainesville, Florida on June 8th at the age of 78.

Dr. Ross was born in 1930 in Jamaica, New York, where he attended high school. He graduated with a B.S. degree from Franklin and Marshall College in Lancaster, Pennsylvania, in 1951. After serving in the U.S. Army in Korea from 1951 to 1954, he went on to receive a Master's degree in Biology in 1959 and Ph.D. degree in Biology in 1960 from New York University. His dissertation *An electron microscope study of the adrenal cortex in the human fetus* was one of the first ultrastructural studies of the fetal adrenal gland.

Upon graduation, Dr. Ross became a member of New York University School of Medicine, advancing from instructor to assistant professor to associate professor by 1968. In 1971, he joined the faculty of the University of Florida College of Medicine as professor and director of the Division of Anatomical Sciences in the Department of Pathology. He was instrumental in creating a new Department of Anat-

omy (now renamed the Department of Anatomy and Cell Biology) in 1976 and became its first chair. He used his administrative talents to build one of the university's strongest research and teaching departments.

During his tenure as chair, Dr. Ross was regarded as an innovator and early adopter of the newest technological advances to improve research, education, and service at the University of Florida College of Medicine. In the early 1980s, he developed a modern electron microscopy facility in his department with state-of-the-art transmission and scanning microscopes. Simultaneously, he renovated and upgraded an outdated black-and-white photography laboratory into a modern color photography suite that served both research and teaching faculty. In

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late 1980, he created one of the first confocal microscopy suites in the College of Medicine. He was also a pioneer in acquiring a high-resolution digital camera and professional high-definition dye-sublimation printing equipment for processing microscopic images in the early 1990s. Under his watch, computers were introduced into the dissection room, the first computer-based human dissection manual was developed by the gross anatomy teaching faculty, and students were given integrated gross anatomy, radiology, histology and cell biology computerized examinations. He was supportive of integrating basic and clinical sciences education, promoting and introducing small group discussions in the Medical Cell and Tissue Biology course as well as problem-based learning activities in the Clinical Human Anatomy course. Dr. Ross encouraged the presence of clinicians in basic science courses offered by the department. In the College of Medicine, the Department of Anatomy and Cell Biology became synonymous with technological innovations and excellence in anatomical sciences education.

As a director of the Anatomical Board of the State of Florida, Dr. Ross was the first in the United States to adopt the new technology of resomation of human bodies donated to anatomy education using an alkaline hydrolysis-based tissue digester. During his frequent visits to Europe, he became familiar with plastination techniques of tissue preservation and opened the first plastination laboratory in the State of Florida.

Dr. Ross had a wonderful, warm, and gentle personality tinged with a wry humor and wit. He was deeply concerned about the well-being of his faculty and students and their families. His department became an oasis for students, fellows, and young faculty from all over the world, where they could learn science and teach in gross anatomy or histology courses to refine their education skills. Many of his pupils are now prominent researchers, well-known physicians, university professors, and chairs of anatomy departments in other institutions. Dr. Ross served as chair for 20 years until his retirement in 1996, although he retained professor emeritus status, actively working in the department until his death.

Throughout his career, Dr. Ross's interest was divided equally between research and education. His research interest continued in discovering new structures using electron microscopy, first describing contractile properties of cells in seminiferous tubules of the testis (myoid cells) and perineurium (perineurial cells) and contractile elements in ameloblasts. He pioneered studies on the blood-testis barrier and described the Sertoli-to-Sertoli intercellular junctions that maintain this barrier.

Dr. Ross was a passionate teacher and mentor to a young generation of students, post-doctoral fellows, and faculty. He published several textbooks and atlases both in histology and in cross-sectional anatomy based on plastinated specimens. For older generations of histologists, he is best known as the co-author with Edward J. Reith of the *Atlas of Descriptive Histology*, the newest edition of which was in print the week of his death.

This atlas is still found on the shelves of many histology and pathology libraries. The inspiration to publish this book came from the enthusiastic reactions of his students to the large, extensively labeled black- and white- micrographs that Dr. Ross displayed on the department walls before histology examinations at New York University. Dr. Ross's interest in and knowledge of the visual arts greatly influenced his approach to histologic representation. His micrographs are examples of not only the highest scientific achievement in microscopy but also striking visual images themselves. If histology could be considered art, Dr. Ross was the consummate artist.

The early editions of the atlas became the inspiration for the development of a comprehensive textbook and atlas titled *Histology: A Text and Atlas* in 1985. Over the next 25 years, Ross's *Histology* went through five editions and was translated into half a dozen languages to become one of the most influential American textbooks in the field of medical histology. It was not merely the easy-to-read text and carefully selected illustrations, but also its creative style that made this text very popular. Dr. Ross implemented many reader-friendly innovations, such as full-sentence text headings, color-coded functional considerations and clinical correlation text boxes, emphasis on the relationship between histologic principles and up-to-date cell and molecular biology discoveries, and vividly informative illustrations and superb micrographs.

Dr. Ross believed in an integrative approach to teaching histology with clinical correlations and cellular and molecular biology. While editing the rough draft of a new paragraph, he asked simple questions: Why is this information important? How will this information help students learn histology? Is this information used in clinical medicine for diagnosis or treatment?

As an author, Dr. Ross was committed to delivering his textbook into the hands of students with the highest possible quality – avidly participating in and monitoring every step of the publication process – from editing drafts of the text and sketches of drawings to making fine adjustments to the color ink jets on the printing press. Dr. Ross attended every printing of his textbook, and was well-known to the printing press operators at the color presses, where his book was printed.

Dr. Ross was a member of many national and international professional organizations. He was a member of the American Association of Anatomists (AAA) for over half a century, having joined in 1958. He also joined the American Society for Cell Biology in 1961. He was most active in the AAA and served the society in several capacities, including as a member of the Board of Directors and the Educational Affairs Committee and as chair of the Nominating Committee, as well as being an associate editor of the *American Journal of Anatomy* (now *Developmental Dynamics*) and *The Anatomical Record*. Most recently, Dr. Ross served as chair of AAA's Journal Trust Fund & Investment Committee, successfully shepherding AAA's resources from 1997–2002. He was also a member

and past president of the Association of Anatomy, Cell Biology, and Neurobiology Chairpersons.

Michael Ross was married to Agnes Ross in 1957. She survives him, along with three married children – Suzanne, Thomas, and Dana – as well as nine grandchildren.

Those of us who knew him will always remember Dr. Ross as a dedicated educator and researcher, distinguished colleague, skillful administrator, and excellent mentor to young generations of anatomists and histologists. Fortunately for us, he has left a lasting legacy.