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Marilyn Gist Farquhar

Marilyn Gist Farquhar grew up a third generation Californian in the Central Valley farming community of Tulare. Her pioneer great-grandmother settled in California in the 1870s. Farquhar attributes her desire to find new frontiers and explore the unknown to her parents. Her father, Brooks Gist, was an insurance agent and part-time farmer who in his spare time wrote novels detailing the settling of California's Central Valley. Farquhar often accompanied her father on pack trips into the wilderness of the Sierra Nevadas. She remembers these trips as instilling a love of nature and a spirit of exploration and innovation. Farquhar's mother, also from a pioneer family, insisted that her daughter receive a college education. One of Farquhar's mother's closest friends was a pediatrician who Farquhar credits with greatly influencing her desire to seek a career in medicine and biology.

Farquhar's professional history parallels her pioneer upbringing. She is a charter member of the ASCB and has contributed significantly to the Society's development. As one of the ASCB's early settlers, she remembers the first Chicago meeting when the entire field of Cell Biology consisted of a few hundred participants. At the time Farquhar knew that cell biology was a biological discipline poised on the verge of exploding into a new and exciting era of great scientific promise and opportunity, but it was difficult to imagine the rapidity of the development and the scope of activities achieved by the Society and Annual Meetings today.

Farquhar quickly rose to Society leadership, serving twice on the ASCB's Council (1966-1970; 1980-1983), and as President from 1981-82. She also served on the editorial board of the *Journal of Cell Biology* and currently serves on the Editorial Board of *Molecular Biology of the Cell*.

Farquhar graduated from the University of California at Berkeley and completed her Ph.D. at UCSF. She was one of three women admitted to the medical school at UCSF where, after two years she shifted to a Ph.D. program in Experimental Pathology. Her thesis work, on the secretory process in the anterior pituitary gland, took advantage of electron microscopy the exciting new technology of the day. Following her Ph.D., Farquhar did postdoctoral work at the University of Minnesota and at UCSF. During this period she married and her two sons were born. In the late 50s Farquhar left UCSF to do post-doctoral work at the Rockefeller University in the Palade and Porter laboratory. Farquhar recounts that this was the most exciting place to be at that time. There was a new discovery practically every day, and many pioneers in cell biology passed through that lab.

After leaving Rockefeller, she went on to establish her own laboratory at UCSF where she remained for eight years and eventually became full Professor of Pathology. In 1970 she married George Palade and returned to Rockefeller University where she was appointed Professor of Cell Biology. At the time she was the only woman professor at the institution. In 1973, she, Palade, and Jim Jamieson moved to Yale, where Farquhar

eventually became Sterling Professor of Cell Biology and Pathology. Together they built a new Department of Cell Biology in the Medical School.

Farquhar and Palade were at Yale until 1990 when they moved to California to undertake a new challenge to build and strengthen cell and molecular biology at the University of California San Diego School of Medicine in La Jolla. Farquhar relates that they moved to UCSD because, given the collective scientific excellence at UCSD and the surrounding institutes (Salk, Scripps, La Jolla Cancer), they thought that La Jolla was going to be a very exciting place for a cell biologist to be in the next ten years. Their most visible accomplishment is the recruitment of a number of outstanding cell biologists and the initiation of a new Division of Cellular and Molecular Medicine of which Farquhar is the Head. During her career Farquhar's lab has maintained research interests in two general topics: control of intracellular membrane traffic and the molecular pathogenesis of autoimmune kidney diseases. Currently her laboratory is focusing on two areas of membrane trafficking: 1) the signaling pathways by which heterotrimeric G proteins influence intracellular membrane trafficking, and 2) the functions of megalin (gp330), a new endocytic receptor which her lab discovered based on its role as a target autoimmune antigen.

Looking back on her career and the changes that have taken place in cell biology, Farquhar often compares her life to that of her father and mother. In their lifetimes her parents had to adapt to the dramatic changes in the world, which began with the horse and buggy and continued into the jet era and the time when man walked on the moon. Similarly, Farquhar has seen cell biology expand from the time when it was sufficient to be a morphologist (electron microscopist) or a biochemist, to the time when one has available all the approaches of the molecular cell biologist, which span from molecular biology, genetics, and protein chemistry to immunochemistry, cell fractionation, and modern morphology (confocal microscopy, immunoelectron microscopy). One must combine all these approaches to analyze and understand a cell biological process. Farquhar states that she believes these are very exciting times to live in, because, given the availability of all these approaches, one can tackle major questions in a way that we could never have conceived would be possible 20-30 years ago.

In recognition of her accomplishments, Farquhar received the E.B. Wilson Medal of the ASCB in 1987 for her contributions in cell biology, the Homer Smith Medal of the American Society of Nephrology for her contributions to understanding the cellular and molecular basis of normal renal function and renal diseases, and the Distinguished Scientist Medal of the Electron Microscopy Society of America. She was also elected to membership in the National Academy of Sciences and the American Academy of Arts and Sciences. Farquhar is proud of her research contributions but is especially proud of the people she has trained and is currently training. She particularly strives to provide a positive role model for young women and men who are beginning their careers. This interest is reflected by current leadership of the Biomedical Graduate Sciences Program at UCSD.

Farquhar confesses that she is a workaholic, but believes you have to be to be successful in science today. Nonetheless she and Palade enjoy traveling particularly their annual vacation in Aspen, Colorado, where they delve into the Aspen Music Festival and hiking above timberline with the same fervor as they approach science. Closer to home, they walk on the Del Mar beach, and regularly attend the San Diego and San Francisco Operas.