

Borisy remembers Hans Ris of the University of Wisconsin giving one of the first presentations. “It was titled, ‘The Continuity of Cytoplasmic Organelles,’ but what he talked about—and I remember this vividly—was Feulgen staining of DNA in chloroplasts and then observation of the chloroplasts with the electron microscope that showed very thin filaments, two nanometers in diameter, which were later recognized as strands of DNA. It was the first visualization of DNA in an organelle, the basis of cytoplasmic hereditary,” Borisy explains. “I fell off my chair listening to him.”

It was electron microscopy (EM) that drove the growth of a new science of cell biology in its early years, says Borisy. “For the first time, we could see the internal structure of mitochondria and chloroplasts, all sorts of filaments which we would later identify as actin and intermediate filaments, plus the specialized structures that hold cells together or to their substrate. EM transformed the field.”

Leafing through the 1961 ASCB program and abstract book ([http://ascb.org/meetings/1961\\_Meeting\\_Program.pdf](http://ascb.org/meetings/1961_Meeting_Program.pdf)), Borisy says you can make out the first signs of what would become major landmarks in cell biology—the cytoskeleton, the translational endoplasmic reticulum, and an intricately regulated cell cycle. These and other vital cellular processes were still indistinct, disputed, or existed only as tantalizing data in 1961. Improvements in EM would provide important clues, but Borisy contends that it was the explosion of biochemical approaches and new imaging technologies that opened up cell biology.

Yet despite its EM roots, the ASCB didn't stay an EM society, says Borisy. “One of the remarkable feats of our Society has been how actively it has sought to incorporate science that was important but was previously thought to be outside its field.” The ASCB has been proactive in bringing cutting-edge disciplines into cell science. “Cell biology is ravenous,” Borisy believes. “It has an insatiable appetite for new science.”

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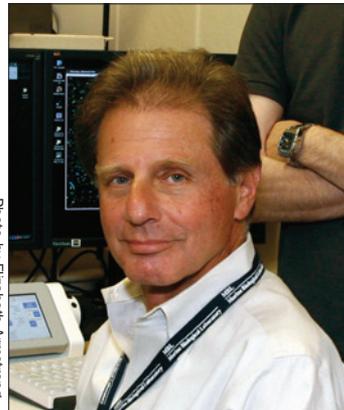


Photo by Elizabeth Armstrong

Gary Borisy



Keith Porter

## “La Biologie Cellulaire”

In 1961, cell biology itself was novel. Early ASCB Council member Florence Moog recalled in 1985 how she was surprised in 1961 when a National Institutes of Health (NIH) colleague

asked her to join a society for cell biology: “It had not occurred to me (or to NIH either) that I was a cell biologist, and I'm not sure that I was even aware of the term.” The term cell biology had been around since 1876 when Jean-Baptiste Carnoy established a laboratory devoted to what he dubbed “*la biologie cellulaire*” at the Catholic University of Louvain. (Carnoy was a Belgian priest and trained natural scientist.)

But it wasn't until the mid-20th century that the term gained wider currency. In 1947, the European section of the International Union of Biological Sciences called itself the Society for Cell Biology. NIH convened a Cell Biology Study Section in 1958.

Both the name cell biology and the ASCB had no greater booster than Keith Porter. “Keith Porter was the strongest advocate for the name but there were other founders there,” says

Borisy, naming George Palade, Don Fawcett, Hewson Swift, Arthur Solomon, Ris, and others.

“There's no question that Keith was the one behind it,” says Marilyn Farquhar, who is now at the University of California, San Diego. Farquhar served as ASCB president in 1982. Her late husband, George Palade, was ASCB president in 1976. She and Palade were both in Chicago in 1961 to see Porter's plan for an ASCB come to fruition. “Keith consulted very closely with George and others, but Keith just liked to organize things,” Farquhar explains.

Porter was a brilliant and persistent Canadian biologist who came to the U.S. in 1934 for graduate study at Harvard and postdoctoral work at Princeton. In 1939, Porter joined the Rockefeller Institute for Medical Research in New York City, where he established one of the first biological EM labs in the world. By the time he left in 1961 for Harvard, Porter had trained so many of EM's founding generation that at his Rockefeller farewell party, his protégés