

## James Siedow

### How did you spend your career?

I graduated from the University of Texas in 1969 with a degree in chemistry and botany. From there, I decided to go to graduate school in the biochemistry training program at Indiana University, where I worked with Anthony San Pietro on plant mitochondrial electron transfer during photosynthesis. I was interested in the pathway of electron transfer from photosystem II to photosystem I. My thesis work established the electron transfer pathway from ubiquinone through plastocyanin. Along the way, we were able to show that a previous electron carrier that had been published was an artifact, relieving some confusion in the field. I also established the role of an iron-sulfur complex in electron transfer. After graduating in 1972, I moved on to a postdoc and worked with Graham Palmer at the University of Michigan, and after six months I followed him to Rice to complete my postdoc. While with Graham, I continued my work on electron transfer in plant chloroplast and mitochondrial systems and then in yeast, with a focus on Complex III.

In 1976, I landed a job in the Botany Department at Duke University, where I spent my career until my retirement in 2016. I pursued research focused on the mitochondrial electron transfer pathways, specifically on the cyanide-resistant respiratory pathway in higher plant mitochondria, now called the “alternative” pathway. Most of my work contrib-



uted to our growing understanding of the alternative pathway. As that research advanced, I also grew increasingly involved in the life of Duke University, and beginning in 1993 I became chair of the Academic Council. Several years later, in 1997, my primary responsibilities shifted from the lab to dean of faculty development in the College of Arts and Sciences. In 2001 I became vice provost for research, a position I held until I returned to the Department of Biology in 2014. I retired in 2016 after 40 years of a career rich with discovery, friendships, students, and colleagues.

In addition to my work at Duke, I spent a year in Washington, DC, as program director for the Cellular Biochemistry Program at NSF in 1988–1989, and I was president of ASPP in 1994–1995. I served on the editorial board of the *Journal of Biological Chemistry* from 1998 to 2006 and as associate editor from 2006 to 2016. In that capac-

ity, I enjoyed reviewing a remarkable number of advances in plant physiology. Also, as part of my vice provost responsibilities at Duke, I served on a number of committees in the Southeast, at Oak Ridge, in Washington, DC, and in China. In each of these capacities, I gained friendships and learned much.

### What do you consider to be your most important contributions to plant science?

I think two contributions were my most important. The first was to work out the connection between photosystem II and photosystem I. When I started graduate school, it wasn't clear how electron flow moved from one photosystem to the other, and there was some confusion about the data that had been published. The second contribution, along with training my students at Duke, was to work out details of the alternative cyanide-insensitive respiratory pathway. In both, it was a pleasure to work with mentors and later with students toward understanding the mysteries of electron flow.

### When did you become a member of ASPP/ASPB?

I first joined in the fall of 1976, after arriving at Duke. I attended my first meeting in the summer of 1977. When I arrived at the meeting, I realized I was in the presence of so many people I held in high regard, many of whom had published some of the great papers in the field. They were all there: the scientists who had laid the groundwork for modern plant physiology. I still

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## ASPB Legacy Society Founding Member

remember well my first impression of that meeting, and it established a custom for me to attend the annual ASPP/ASPB meeting almost every year until I retired.

### **How did the Society impact your career, and what motivated you to become a Founding Member of the Legacy Society?**

ASPP/ASPB enabled me to meet and become acquainted with most everyone in the field, and their talks and papers provided an annual update on what was current in plant physiology. Later in my career, when I took on editorial responsibilities, my knowledge of these scientists provided me with a long

list of referees to choose from for expert review of papers. The Legacy Society provided a way to pay back all that the Society had provided to me over the course of my career. The resources of the Legacy Society are designed to help advance the careers of young scientists, and this is probably the best way a senior scientist can direct funds toward that appreciation.

### **What important advice would you give to individuals at the start of their career in plant science?**

Get to know the people working in your field. Attending the ASPB annual meeting is a great way to do

this. Become familiar with the literature in your field, as it will help with your research in the beginning and provide you a stronger set of questions for your dissertation. Learn how to ask good and meaningful questions that will move the field forward. You can ask many scientific questions about a given topic, but always focus on those that will be the most impactful.