Professional Pathways

Professional Pathways is a regular column in which AOCS members answer questions about their professional experiences and share advice with young professionals who are starting to establish their own careers in oils and fats chemistry.

Our first subject is Jerry King, a former professor and current consultant based at the University of Arkansas in Fayetteville (USA). King has more than 40 years of experience in oils and fats chemistry that includes industry, academia, and government work.

Why did you join AOCS?

I joined AOCS in 1988 during my time at the US Department of Agriculture (USDA). At the time I was required to be part of organizations such as AOCS as part of promoting my professional image, but not all government agencies require this.

Describe your career path.

I earned a bachelor's degree (1965) and master's degree (1969) from Butler University (Indianapolis, Indiana, USA) before completing my Ph.D. at Northeastern University (Boston, Massachusetts, USA). I started out in academia as a postdoctoral scholar at Georgetown University (Washington, DC, USA) for a year, followed by working as an assistant professor from 1974–1976 at Virginia Commonwealth University (Richmond, USA). My first job outside of academia was with Arthur D. Little, Inc. in Cambridge, Massachusetts, as a research chemist. From 1978–1980, I worked at the American Can Company in Barrington, Illinois, USA, as a research associate developing packaging technology. From 1980–1986, I worked at CPC International in Argo, Illinois, as a food research chemist/engineer. Then I moved to Peoria, Illinois, to work as a lead scientist at the Agricultural Research Service (ARS) of the USDA from 1986–2002. From 2002–2005, I was with the Los Alamos National Laboratory's Chemistry Division in New Mexico, USA, as program manager/senior scientist/engineer. Starting in 2005, I was a professor of chemical engineering at the University of Arkansas in Fayetteville.

How has your industry changed since you entered the field?

Since I have experienced a multi-faceted career—academia, industry, and government—it's a rather complex question to answer. It seems academia has abandoned a lot of its basic principles that have traditionally focused on research and teaching for the benefit of the students. There is far too much emphasis in major universities in pursuing money at all costs

in order to support research, and something has been lost in the process. Although I have been away formally from industry for some time, my sense is that research is no longer being supported as it was 30–40 years ago and that long-term commitment and loyalty to employees (and vice versa) of companies is lacking in the current atmosphere. Government employment today is compromised consistently by funding issues, such as sequestration and delays in congressional budget approval, which impact on the morale and effectiveness of public servants conducting research and development. I feel the continual privatization of government laboratories also impacts negatively on the professionalism the chemist or engineer can attain.

All this being said, I think these changes challenge individuals to be more diverse and flexible in their career goals. It may take several professional positions for one to find a niche that is compatible with their desires—and this can be a decade-long period of time.

Do you have any advice for those looking to enter your field?

The most important quality to develop, whether you go into industry, academia, or government, is communication and writing skills.

How do you see the industry changing in the next five years?

There will be less basic research—this at best will be done by the few academics involved in this line of work and organizations such as USDA-ARS, and the US Department of Energy laboratories. I think it's important that AOCS as an organization be there to support professionals faced with job and income loss within the next five years.

Describe a memorable job experience.

While at Arthur D. Little, I helped develop analytical/physical methods for the US Environmental Protection Agency,, the US Food and Drug Administration, and the National Institute for Occupational Safety and Health, as well as applying polymer chemistry in food, polymer, and flavor projects. We worked on contract, with government agencies, and in private industry, even working on pet food. It was very interesting. It gave a great deal of diverse experience, more so than just industry.

Please describe a course, seminar, book, mentor, or speaker that has inspired you in ways that have helped you advance your career.

I would say my early involvement with Professor J.C. Giddings at the University of Utah was seminal to the path my career and interests would take. It was this academic research setting many years ago that led to me developing along this career pathway and building a healthy respect for applying fundamental studies to practical problems and situations.

Do you have any advice for young professionals who are trying to develop an effective network of other professionals?

Since I am not much into Internet, blog sites, and the like, I advise young professionals to attend many professional meetings, even those outside your specialty. The networking will occur almost automatically. Young professionals should also publish and review manuscripts. It's a surreptitious way of getting around to interacting with people, including those in the publishing world. Take advantage of interview opportunities: by that, I mean contributing more generic brief publications in widely read or dispersed professional magazines (e.g., *R&D Magazine*).

What are the opportunities for advancement in your career/field and how can someone qualify for such advancements?

My basic academic training occurred in physical-analytical chemistry, an area in which there is always demand for well-trained individuals. With this type of background you can contribute to chemical and food processing engineering or food technology since analytical chemistry is seminal to all of these fields. So I recommend that you get some training in this discipline, whatever your field. It also opens up opportunities in marketing, service engineering, and related areas.

How would you describe the culture in your field, and how has it developed?

In academia you receive a great degree of freedom when you achieve tenure, and you can leave behind your mark in a way that you can't accomplish in industry. Industry is interesting, but it is there for one purpose and that is to make money. It doesn't always help one's professional growth.

In your area/field and considering today's market, is it more important to be well-rounded or a specialist?

I feel that I have benefitted substantially from being rather interdisciplinary in my orientation and experience. I personally feel this is important when defining yourself as an engineer, chemist, or food technologist. All the trends I see embrace this merging of fields.

What is your opinion of the value of obtaining or possessing a graduate degree during a challenging economy?

It is necessary, especially in academia. If you are going into a Tier-1 research university, you need a postdoc appointment. ■