

## Successful Women in Chemistry Series—Continued

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team member with exceptional problem solving skills and capability to produce high quality results.

*Katie* takes each day at a time so that she can balance work and life. Priorities constantly change and being prepared helps to ease stress. She says, “You simply have no control over some matters and must trust yourself to handle them the best way possible. With two young children, a husband, a dog, and a career to balance takes some logistics - but *Katie* wouldn't change it. She tries to keep home life relaxed and does not over plan weekends and evenings. *Katie* says, you really need the down time, especially with family. Her husband Matt constantly reminds her to slow down and enjoy the simple things in life. She gives most of the credit for balancing her life to her family. Simple things make her happy, like going for ice cream together, a quiet dinner, or taking her dog for a walk.

*Katie's* advice for women in chemistry is that you will have to navigate through personalities, prejudices, etc., regardless of which job you choose. However, if you love what you do and you give it your best, obstacles somehow seem less formidable and a lot of times they simply work themselves out. Don't be afraid to step out of your comfort zone and learn something new, get an additional degree, or train to run a half-marathon! You will be surprised what you can do when you challenge yourself, and what you learn about yourself in the meantime.

### **Dr. Nicole Crane** **By Lisa Houston**



**Dr. Nicole Crane**, 2014 Rising Star Award Winner, received her B.S. in Chemistry from Kutztown University (Pennsylvania) in 2000. She then headed to Ann Arbor to attend the University of Michigan where she received a Ph.D. in Analytical Chemistry in 2004. After graduation, she completed two Post docs, one as a Visiting Scientist in the Counterterrorism and Forensic Science Research Unit at the FBI Academy in Quantico, Virginia and one for the National Institute

of Diabetes, Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health in Bethesda, Maryland. Each of these provided *Nicole* with the opportunity to develop her skills in applied spectroscopy and imaging.

*Nicole* began her independent career at the Naval Research Center in Bethesda, Maryland applying her analytical and spectroscopic expertise in 2007. After one year, she decided

to see if the “grass was greener” somewhere else and took a position at Wyeth Pharmaceutical as the Analytical Development Manager. There she applied FTIR spectroscopy, near-infrared spectroscopy, and Raman spectroscopy to characterize raw materials, drug substances, and drug products and developed spectroscopic models for at-line and in-process monitoring. After less than a year on the job, Wyeth was purchased by Pfizer and *Nicole* decided to return to the Naval Research Center.

*Nicole's* research centers on development and utilization of spectroscopic techniques including Raman and FTIR spectroscopies and visible reflectance imaging to improve the understanding of wound healing, particularly traumatic acute wounds, as well as identifying and quantifying transplant associated ischemia and reperfusion injury. She initiated the Advanced Surgical Imaging Program within the Regenerative Medicine Department for the U.S. Navy and developed new technology to further evolve research projects. In addition, she has been an Associate Professor at the Uniformed Services University of Health Sciences since 2011. She is a big believer in trying to make the world a better place and her drive comes from knowing that her work may one day change a patient's life for the better.

*Nicole* feels that hard work, ambition and support from her mentors have gotten her where she is today. She feels very fortunate to have had some stellar mentors – people that have believed in her and pushed her to succeed – including her mother and grandmother and a number of undergraduate and graduate advisors. In fact, her advice to other women in chemistry in something her mother always told her – the sky is the limit! *Nicole* also advises to not be afraid to go after what you want. No one is going to hand it to you – when the opportunity arises, grab it and hold on tight.

### **Dr. Michelle Claffey** **By Lisa Houston**

Great chemistry teachers in high school and college and her chemistry aptitude inspired 2014 Rising Star Award Winner **Dr. Michelle Claffey** to pursue chemistry further. *Michelle* grew up in Connecticut and attended Bates College in Lewiston, Maine where she graduated magna cum laude with a B.S. in Chemistry in 1994. As an undergraduate, she worked three summer internships at Pfizer as a medicinal chemist which exposed her to hands-on organic synthesis in a research environment. The practical application of organic chemistry sparked her desire to focus on organic chemistry at the graduate level. She attended the University of California at Berkeley where she did her graduate research in natural product synthesis.

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After graduating with a PhD in Organic Synthesis in December 1998, *Michelle* felt fortunate to return to Pfizer as a medicinal chemist in Neuroscience Chemistry where she enjoys the challenges of interdisciplinary problem solving along with collaborations with great scientists. She has led numerous multi-disciplinary teams for the last 15 years in various programs to

develop novel therapeutics for central nervous system diseases including depression, Alzheimer's, Parkinson's and schizophrenia.

*Michelle* is passionate about leadership development opportunities for women to maximize their future success and, in collaboration with another colleague, founded the Women Leaders in Medicinal Chemistry. She has organized activities including yearly workshops with executive coaches on a variety of development topics, Pfizer Leader Lunches, and group networking events to assist and encourage women to reach their

full potentials. This effort was started at Pfizer but, sparked by its success, has expanded to include women within all east coast medicinal chemistry groups.

*Michelle* balances work and her personal life by compromising on both ends. Since having her children, she has been able to work 4 days/week which has given her great flexibility to meet both the needs of her job and family. She believes there is no such thing as a perfect work-life balance, so she tries to make the best of both and let go of less important things. Throughout the years of her career and motherhood, she has managed to maintain at least one night a week of tennis with her friends. Tennis is what she does for herself but she also enjoys watching her children, niece, and nephews participate in their activities.

*Michelle's* advice to women chemists is to seek out positions where you are motivated by the science and people and also where you will have support for your continued development. Continue learning and developing from both a scientific perspective as well as a leadership perspective and overcome any self-limiting fears or beliefs.

## WCC Celebrates Madeline Jacobs

***Madeleine Jacobs: mentor, maven, maestro, mensch, and role model par excellence.***

***By John Palmer***

Recently I had the great pleasure and fortune to speak to ***Madeleine Jacobs*** about memorable moments of her long and admirable professional career as well as her continuing plans as she enters yet another phase of an absolutely remarkable and clearly self-directed life. She has already shared with many an illustrative but brief biographical presentation in the offering "Ten Lessons from a Lifetime of Science" but I'll attempt to give an even shorter vignette to help those readers looking for career tips or wondering about how she seems to succeed so easily at all she does.

I've known *Madeleine* for over ten years, ever since she took on the mantle of Executive Director and CEO of the American Chemical Society (ACS), and every time we speak I'm reminded of just how special she is, of her boundless energy, her commitment to diversity and to her profession, and most of all of her passion for offering support and guidance to young scientists and our future chemistry leaders. During our discussion, she expressed just how fortunate she feels she's been in having had jobs in organizations that allowed her to grow and explore both her personal and professional goals. Despite the reality that neither of her parents had much interest in science she became enamored with it when she was a

very young lady of less than 10 years old. She watched "Mr. Wizard" on TV as a kid and became particularly enamored with chemistry. It's apparent that *Madeleine*, a "baby-boomer", growing up at the height of the space-race, really never recognized or bowed to the boundaries that often limited others of her gender in pursuing an interest in the physical sciences.

She grew up in the Washington D.C. area and attended George Washington University on a full-tuition scholarship. Her early plans included an eagerness about attending a first-rate graduate school and gaining a Ph.D. in chemistry but by the age of 22 while bidding time and studying towards a master's degree at the University of Maryland she abruptly found herself reassessing her goals and began pursuing a job in science writing. That first "ACS" job came as the result of having enough self-confidence to just show up at the office of the then publisher of Chemical & Engineering News (C&EN), Dr. Richard Kenyon, and expressing her desire to work there despite her lack of any real experience. She shares that her enthusiasm and poise must have impressed him and he introduced her to the editor, Pat McCurdy, whence she immediately took the opportunity to share her opinion of both the strengths and weaknesses of the ACS's flagship publication - and how she was equipped to help fix its problems.

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