

**Kopchick College of Natural Sciences and Mathematics  
Alumni Showcase, April 2021**



**Amber Brosius '13**  
**Psychology**

**Please give us a brief summary of your current profession.**

As the Program Specialist for the MD-PhD Program at UNC, I meet with prospective students interested in becoming a Physician Scientist. I assist in the recruitment process by reading applications and organizing the Interview Weekends. In day to day operations, I help students navigate transitions in the curriculum and provide them with the any resources they need.

**What are your priorities for your professional life?**

I prioritize building and maintaining professional relationships, mentorship, and continuing education to always better myself.

**How did you prepare for your profession?**

My undergraduate and graduate degrees did not directly prepare me for me current position. However, I decided I wanted to be involved with the University of North Carolina Chapel Hill in some capacity. Through networking, I made valuable connections exposed me to the Medical School at UNC.

**What advice would you give to young people preparing for professional life?**

Always be kind to everyone you meet. You will never know who you will meet, who you will be working with in the future, or who you will need a favor from in your career.

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**Ellen Cobb '84  
Chemistry**

**Please give us a brief summary of your current profession**

International Paper is a leading global producer of renewable fiber-based packaging, pulp and paper products with manufacturing operations in North America, Latin America, Europe, North Africa and Russia. I'm responsible for managing systems to ensure safety and global regulatory compliance of our products; and for leading our corporate social responsibility (CSR) assessment activities to meet supply chain needs of our global customers.

**What are your priorities for your professional life?**

It's important to me to have opportunities to make meaningful impacts within an organization that embraces sustainability and corporate responsibility.

**How did you prepare for your profession?**

Degrees in Chemistry (B.S IUP – 1984 and M.S. West Virginia University – 1986) and an interest in environmental chemistry led me to the paper industry. Once there, my willingness to take on new assignments that broadened my skill set led to more opportunities with greater organizational reach.

**What advice would you give to young people preparing for professional life?**

Work hard, but recognize the difference between working long and working hard. A good manager will reward results, not hours. Be flexible. Take on new assignments that may be considered undesirable or "beneath" you. You'll be seen as a team player and you'll also broaden your skill set making yourself more valuable. Speak up when you're interested in a new opportunity. Advocate for yourself in a way that benefits the entire organization.

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**Cindy Conrad Barnhart '85  
Computer Science**

**Please give us a brief summary of your current profession**

I am an Information Technology Manager working 10 years at Eaton. I manage architects, developers and support personnel on IBM's B2B Sterling Integrator application, platform, architecture and governance.

**What are your priorities for your professional life?**

Driving for results that support Eaton's strategic plan. Leading by example and working collaboratively to get things done. I am a "working manager", you could say.

**How did you prepare for your profession?**

Attending IUP's Computer Science offering prepared me for my profession. I started as a programmer and worked my way to where I am now.

**What advice would you give to young people preparing for professional life?**

Don't quit, even if it seems impossible, by seeking guidance from your advisors. I tried to change majors but Professor Cunningham said to stay the course no matter how rocky it gets. Dean Buriok said do what you can and show your work even if the programming logic doesn't work 100%. There is such a thing as partial credit and he smiled.

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**Kellie Dean '92**  
**Chemistry**

### **Please give us a brief summary of your current profession**

I am a college lecturer (assistant professor) at University College Cork in Ireland. I teach first-year science students, first-year dental students, final-year biochemistry students - and lots of master's students. I direct and teach in two programs - the MSc in Molecular Cell Biology with Bioinnovation and the MRes in Biochemistry and Cell Biology. I also lead a research group of 2PhD and 4 master's students. Currently my lab is focused on understanding the roles of non-coding RNAs, RNA-binding proteins, RNA-protein complexes in cancer and other human diseases. The research group also has interests in translational regulation and liquid-liquid phase separation of RNA-protein assemblies. Besides that I coordinate a scientific outreach team that does hands-on molecular biology experiments with children, and in collaboration with the University of California - Davis, I direct and teach a summer abroad program in the biological sciences.

### **What are your priorities for your professional life?**

My priorities for my professional life are to enthuse and motivate my students in science. I very much go out of my way to help, support and encourage students. I have been doing biochemistry since my 3rd year at IUP, and it never gets old! I hope to convey my passion of my discipline to my students.

### **How did you prepare for your profession?**

After completing my degree at IUP, I went on to complete my PhD in Biochemistry and Biophysics at the University of North Carolina at Chapel Hill in 1999. I then worked as a post-doctoral researcher first at the Center for Molecular Biology (ZMBH), University of Heidelberg, Germany, and later with the Howard Hughes Medical Institute at Duke University in Durham, North Carolina. After moving to Ireland, I started teaching at University College Cork. I always had an interest in teaching - that started at IUP, and I took advantage of any teaching opportunities that came my way as a PhD student and post-doc.

### **What advice would you give to young people preparing for professional life?**

My biggest advice is to be open to what comes your way - be open to opportunities, open to challenges and open to new ideas. The best things in my career were not planned. Be flexible, respect others and lead by example.

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**Sarah Hogue '09**  
**Economics, Psychology**

### **Please give us a brief summary of your current profession**

I am the Director of Analytics and Data at a media tech startup called Advisr. Previously, I worked in financial technology, largely in the startup space. I also have some experience at larger firms such as IDC (now ICE), American Express, and Bloomberg, but I prefer stealth mode over corporate life currently.

### **What are your priorities for your professional life?**

My shorter term goals are to build out a reporting and analytics engine for my current company to help the platform continue to grow in both functionality and our client base. The longer-term goal is to see the company succeed and grow to be a force in the industry. If the company succeeds, then I succeed!

### **How did you prepare for your profession?**

The main way I have prepared for professional life is by learning how to be comfortable with uncertainty and uncomfotability. This has probably been the main throughline in my career. Whether this means moving to a new area to take a job that will get me to where I want to be. To applying for jobs and stretching myself to take positions where I might feel underqualified and incompetent at first. Or to take some consulting work that has some work uncertainty attached to it. Because I've been uncomfortable, I have gained mentors and a network that I can now lean on if I feel stuck in my work. This same uncomfotability is also what forces me to continue to learn online to keep myself as updated in the industry as possible. Uncomfotability makes you prepare.

### **What advice would you give to young people preparing for professional life?**

I would give two pieces of advice -- invest in learning niche, hard skills and have goals. Decide what you are going to do today to try to move forward toward that goal. Whether it is furthering your skills through online learning or applying for jobs that you see as a means to get to where you want to be. And remember that the goals that you make should be sustainable and something that you want, not something that you think is expected of you.

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**CJ Jaynes '79, M'82  
Mathematics Education**

**Please give us a brief summary of your current profession.**

I am an Executive Technical Advisor for Raytheon Technologies, a major defense contractor. I provide strategic guidance and acquisition expertise in assisting the company in growing their military business. As a retired Rear Admiral, I am able to provide insight from the government's perspective and help Raytheon align with the needs of the Department of Defense customers.

**What are your priorities for your professional life?**

At this point in my career, my focus is on helping others succeed. Whether that is as an advisor at the corporate level, providing guidance to those in the company, or mentoring military and government civilians who worked with me in the past. I want to give back and pave the way for others to grow professionally and personally.

**How did you prepare for your profession?**

The path I ended up on was not the one I started with, or even thought about. I taught school for 4 years before joining the Navy on a whim. It was the best leap of faith I ever took. 33 years later, I joined the corporate world. During my 33-year Navy career, I took every challenging position that was offered. I wanted to learn everything I could, no matter the job. In the end it paid off - I was set up to choose whatever path I wanted after the Navy.

**What advice would you give to young people preparing for professional life?**

Be flexible, be willing to be challenged and uncomfortable, be open minded, don't assume you know exactly what you want to do. The world will open unexpected doors for you, be brave enough to step through.

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**Ann Kotch '17  
Ecology Conservation Environmental Biology**

**Please give us a brief summary of your current profession**

I'm a plant operator for American Water military services at a potable water treatment plant. My duties include monitoring the water quality, making chemical adjustments, recording data, and ensuring the plant is operating within set parameters.

**What are your priorities for your professional life?**

My priorities include supplying safe and clean drinking water to the region I am responsible for.

**How did you prepare for your profession?**

Obtaining my degree was the first step in preparing for my profession. I earned a Pennsylvania water operator license and am currently working towards earning a New York license.

**What advice would you give to young people preparing for professional life?**

The best advice I can give to young people is to not be discouraged if you do not land your dream job right out of college, think of it as being where you need to be in order to get where you want to go.

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**Maria Markovich '74  
Chemistry**

### **Please give us a brief summary of your current profession**

I worked as a scientist in the chemical and pharmaceutical industries for 36 years. My positions spanned from bench chemist to laboratory manager, from research through post-manufacturing, primarily in chemistry-related positions, while also moving briefly through information systems. After retiring from private industry, I established a consulting firm, my broad industry background having provided me with a wide range of contacts and ample opportunities to contribute in an area that had most recently piqued my interest -- pharmaceutical compendial affairs. Currently, I consider myself fully retired and focus primarily on volunteer work. But I don't think I'm finished with science just yet...

### **What are your priorities for your professional life?**

Throughout my professional and personal life, my primary goal has been to keep learning. It is what sparks joy for me. When I feel I am no longer learning, I know that it's time for me to move on.

### **How did you prepare for your profession?**

IUP gave me the blueprint. A number of my chemistry professors were key in opening my mind to the many opportunities that existed for chemists. After graduating from IUP, I accepted positions and assignments that I found both interesting and challenging – a number of them where success was anything but guaranteed (and not always fully achieved). Through the years, I continued to take graduate level courses in both chemistry and business – both to stay current in my field and to expand my knowledge base.

### **What advice would you give to young people preparing for professional life?**

Maintain a focus on your priorities and passions. Re-assess them regularly, as they are different for everyone, and are constantly evolving. While a profession cannot always be fun in the pure sense of the word, the work should be engaging and should leave you with an overall sense of satisfaction. Keep your mind and heart open to new people, fresh ideas and challenges. Success is never guaranteed, but even the occasional failure can provide surprising opportunities for growth.



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**Danielle Miller '06**  
**Earth and Space Science Education**

**Please give us a brief summary of your current profession**

Astronomy Teacher and Instructional Coach at East River High School Observatory  
Facilitator at Orlando Science Center

**What are your priorities for your professional life?**

My priorities are to make learning science fun and accessible to as many people as possible.

**How did you prepare for your profession?**

My time at IUP - especially my time Student Teaching at Indiana Junior High during my senior year - was an amazing learning experience. Nothing prepares you for being in a classroom except being in a classroom.

**What advice would you give to young people preparing for professional life?**

Be open to opportunities! My first teaching job was not at all what I had planned, but it led me to learn exactly what I needed to learn to find my perfect job.

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**Kathleen Ogilvie '86  
Family Medicine/Biology**

**Please give us a brief summary of your current profession**

I oversee and coordinate non-clinical development for a biotechnology company.

**What are your priorities for your professional life?**

Patients, robust data.

**How did you prepare for your profession?**

After IUP, I earned a PhD at the University of Delaware followed by postdoctoral training at the Salk Institute for Biological Studies.

**What advice would you give to young people preparing for professional life?**

Choose to pursue opportunities that are interesting to YOU.

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**Dianne Rothstein '75  
Biology**

**Please give us a brief summary of your current profession.**

For 18 yrs., until my retirement in 2018, I was the VP of Research at a Biotech company whose main product was a solid support used in the production of artificial DNA/RNA (oligonucleotides). In my department, we explored ways to enhance the efficiency our support to improve the quantity and purity of the oligonucleotides per unit weight of support.

**What are your priorities for your professional life?**

1) Find good work/life balance. 2) Always be in a position to contribute in a significant way to the company goals. 3) Use my knowledge and experience to promote scientific literacy.

**How did you prepare for your profession?**

I obtained a BS in Biology at IUP and began my professional career after that as a technician at a well-known instrument company. As I advanced in that position, I continued my education with a MS in Chemistry and ultimately a PhD in Materials Engineering. This advanced education was key to my advancement in my profession.

**What advice would you give to young people preparing for professional life?**

Be passionate, have goals but be flexible! With the continued and rapid increase in knowledge and opportunity in the STEM fields, the job you end up in may not even exist today. It is important to constantly rethink and reevaluate.

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**Sarah Royce '12, M'15  
Applied Mathematics**

**Please give us a brief summary of your current profession**

I use statistics and predictive modeling to make recommendations for improving internal operations.

**What are your priorities for your professional life?**

I enjoy being part of the analytic design of company products and strategy. My priorities are to grow in my capacity to lead these analytics and their business implementation.

**How did you prepare for your profession?**

My MS in Applied Mathematics played a major role in preparing for my profession. Additionally, independently training in AI & ML and gaining a few years of experience in the industry have been necessary to continue to grow in this space.

**What advice would you give to young people preparing for professional life?**

Preferred softwares can vary vastly across companies. Even if your core responsibilities are not specific to computer science or programming, many STEM roles involve using a programming language, and platforms now incorporate multiple different IDEs within a single cloud platform or end-to-end tool, so the more softwares and programming languages you can become fluent in, the more easily you will be able to integrate into a new role and the more employable you will be.

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**Karlin Toner '83**  
**Applied Mathematics**

### **Please give us a brief summary of your current profession.**

I am an aerospace engineer and executive at the Federal Aviation Administration. For the past year, my work has focused on developing global guidance to protect passengers and aviation workers from COVID-19. I work with an international team of experts from airports, airlines, medicine, law and diplomacy to consider topics such as testing, transport of vaccines or quarantine as they relate to safe air travel. These experts are also examining how aircraft, crew and operations staff that have been inactive during the pandemic will need retrained to ensure safe activation as countries work to restart air travel. In March 2021, I will create a new role in the FAA's Aviation Policy and Plans office where I will bring a program management approach to organizing and maintaining agency data for quick reference by decision-makers and for forecasting air traffic for commercial fleets along with urban air mobility and commercial space flight. Aerospace engineers have many different roles. Earlier in my career I designed and tested aircraft, developed computer and flight simulations, and managed large research programs.

### **What are your priorities for your professional life?**

My priorities are really quite simple. I want to work for and with great people. I want to tackle complex problems and deliver solutions that others can't find.

### **How did you prepare for your profession?**

I prepared for my career through education and continual learning. At IUP, I majored in applied math and took courses in computer science and physics because they interested me. In my junior year, I decided that my future was in engineering and I began my search for a graduate program. I chose the University of Florida's Aerospace Engineering Department because the Department Chair welcomed students from diverse backgrounds (not just engineering) and offered me a teaching assistant position at a great school in a warm climate. While at Florida, I was fortunate to work on research grants at the Eglin Air Force Base and at the NASA Ames Research Center where I later started my first job as an aerodynamicist. As I transitioned from researcher to manager and to executive, I took many courses and temporary assignments to develop my leadership skills alongside my technical expertise.

### **What advice would you give to young people preparing for a professional life?**

Here are three thoughts on preparing for professional life:

- Honesty and transparency are two of the most important things that you can bring to any job because great ideas can only flourish in a great work environment.
- Your career will last a long time so do something that you love.
- A career isn't a ladder – it's a jungle gym. Your professional life will take twists and turns and you'll need to rise to each new opportunity to build your portfolio.

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**Laura Wholey '78  
Natural Sciences/Pre-Dental**

**Please give us a brief summary of your current profession**

I graduated from IUP then attended Pitt Dental School. In dentistry you are not required to do an internship or residency, but I chose the 2-year General Practice Residency at the University of Virginia Hospital because of an interest in the care of medically compromised patients. While I learned a tremendous amount during those years, I decided to open my own private practice, I am presently retired due to a hand injury.

**What are your priorities for your professional life?**

I encourage, and try to be an example of living a healthy lifestyle. If you choose a career in health care, I feel you should be as healthy as possible.

**How did you prepare for your profession?**

Shadowing professionals in dentistry, both general and some specialties, was very helpful. Since dentistry requires a high level of dexterity, I worked on hobbies I enjoyed to develop fine motor skills.

**What advice would you give to young people preparing for professional life?**

The most important and worthwhile thing to do is to shadow a variety of people in your chosen field and also some people in other fields you would consider. I know this may sound funny, but I have also found You Tube videos of dental or medical procedures very educational.

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**Linda Willett '69  
Biology Education**

**Please give us a brief summary of your current profession**

Executive Vice President, General Counsel and Secretary of Horizon Blue Cross Blue Shield of New Jersey

**What are your priorities for your professional life?**

To apply the knowledge that I have gained in the practice of law in the not-for-profit arena after I retire from my current position.

**How did you prepare for your profession?**

Graduating from Law School was a prerequisite to actually practicing law. After graduation, I gained experience in a law firm in healthcare law in order to prepare for an eventual position in a healthcare corporation.

**What advice would you give to young people preparing for professional life?**

A strong Resume of experience and a stellar reputation, in all, respects, are the foundation for professional success. So, perform as well as you can in getting an education and build your reputation as you go along.