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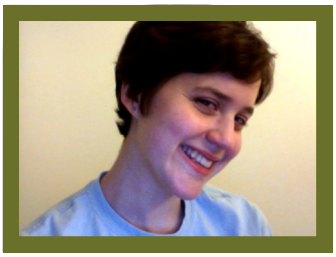
Meet some of Chatham's Science Seniors



Chana Aedel Brodie will be graduating this Spring with a B.S. in Exercise Science. She plans on attending graduate school in the fall, pursuing a Doctorate of Physical Therapy. In response to her memories of Chatham Adel said, "I have so many good memories in the science department! The two that come to mind as my favorite ones are when the Chem Lab class went up to Dr. MacNeil's lab and lit chemicals on fire to produce different colors as they combusted (this was really, really cool and like the other labs, made the connection between the lecture topic and what was happening in real life) also, the first time I went into the cadaver lab. It was so neat to see the physical manifestation of what we were learning about in lecture." Her advice to future students is "Get involved! There are so many wonderful activities and opportunities that are provided to Chatham Women (from campus life to study abroad and internships), but YOU have to be the one to take the initiative and pursue your dreams. Don't be afraid to use your voice (respectfully) and always remember that your college experience is what you make of it." In reference to her tutorial she said, "I am completing my tutorial with Dr. Hershberger, Dr. Giles, and Dr. Gift, examining the physiological and psychological effects of sauna experience on female college students. I have had a really enjoyable time working on my tutorial so far, and can't wait to be finished." In closing she shared, "I've been really lucky to have learnt with the professors here at Chatham, and feel that the science department has worked to enable me to go on to higher learning. Chatham has opened so many doors and I will always be thankful for this."

Jenna Luek will be graduating this Spring with a B.S. in Chemistry and a minor in Environmental Studies. She plans to attend the Virginia Institute of Marine Science (VIMS) to pursue a PhD in Chemical Oceanography. Her research in graduate school will build on her tutorial, which analyzed persistent organic pollutants in the Atlantic and Southern Oceans and Oceanic Atmosphere. At VIMS, she will research how climate change is impacting the fluctuation of pollutants between air and water on a global scale. Her favorite memories at Chatham include all of the time she spent tutoring students in first year chemistry courses, consuming excessive amounts of chocolate from Dr. Falconer's desk, and being the go-to person for everyone's Buhl Hall needs. She has three pieces of advice for students: 1) get to know your professors 2) go to class and 3) apply for summer research programs.

Chatham's Science Seniors (continued)

Leanne VanBuren will be graduating this Spring with a B.S. in Chemistry and a minor in Mathematics. Her future plans include "attending graduate school, either Temple University or Dartmouth College to pursue my PhD in chemistry." Her favorite memory of Chatham was travelling to New Orleans for PitConn in 2002. "It was very exciting to see all the different technology in the science field and visiting a vibrant city with such a different culture than our own." Her advice to future students is "Persevere. It can be so overwhelming at times and you feel like you can't see the light at the end of the tunnel, but it will come to an end sooner than you think. Develop a good study group and support system."

Chatham's Science Faculty Leading Campus in Participating in Weight Race

Science Faculty are outperforming other departments in participating in the *MyHealth* Weight Race on campus this semester. The race is not based on how much weight you lose but how close you get to your weight-loss goal. The goal is determined by UPMC so it is a healthy and realistic goal. The department has four teams. The "Creatine Machine" team consists of Dr. Rob Lettan, Dr. Linda Johnson and Dr. David Fraser. Dr. Renee Falconer, Dr. Barbara Biglan and Dr. Aaron Trout joined together to form the "Rabble Rousers" team. Faculty in the 128 office quad in Buhl, Dr. Sherie Edenborn, Dr. Lisa Lambert and Dr. Kelly Weixel, joined forces to form the appropriately named team: "Women of Mass Destruction." In the 226 office quad, Mary Beth Davison, Dr. Christy Heid and Dr. Gary Marshall joined forces on the "Winners" team. So please don't bring any extra deserts to Buhl or anywhere on campus since currently 60 university employees have signed up to participate in the Weight Race. Wish them luck!

Chatham Science Graduates awarded AAUW scholarships

Three 2009 Chatham graduates in science were awarded the American Association of University Women (AAUW) Chatham Career Launching Scholarships. **Rachel Newton** (2009) is currently pursuing a Masters Degree in Forensic Science with a Criminalistics concentration at the University of New Haven (UNH) in Connecticut. Rachel noted "the class sizes are small and the faculty are great; in a way it reminds me of Chatham. I love the fact that I am solely focusing on Forensics and learning so much about the career I would like to get into, that is working in a crime laboratory. The one thing I love about UNH is that all of the faculty here have at some point worked in this field and have the real experience to share with us. At UNH we do trimesters so I will start my next one in April until July, and will be finishing up in April 2011."

The second awardee, **Maureen McGuirk** (2009), has been working since June 2009 in the Volatile Organic Compounds (VOC) laboratory under the *National Center for Environmental Health and the Emergency Response and Air Toxicants Branch* in Atlanta. She was awarded a fellowship from the Centers for Disease Control and Prevention (CDC). In a recent letter to AAUW about her activities she wrote the following: *At the CDC, I work in an analytical chemistry laboratory where we analyze water, blood and urine samples for VOCs, such as benzene and trichloroethylene. For those that are interested: we use headspace solid phase microextraction gas chromatography mass spectrometry (HS-SPME-GC/MS) to analyze for 56 different volatiles. Most of our samples come through the National Health and Nutrition Examination Survey, which collects samples representative of the U.S. population. These samples allow us to biomonitor the entire population to confirm internal exposure to many chemicals. This data provides a baseline for average exposure and allows us to identify exposure trends. For example, by analyzing your blood we can identify whether you've pumped your gas recently and even how many cigarettes you smoke per day! In addition to biomonitoring, we also participate in smaller studies. Currently, we are analyzing samples from Dish, Texas where residents have been exposed to natural gas and we are preparing for a study in Corpus Christi, Texas where residents near "refinery row" are complaining of several health problems. Lastly, our lab is part of CDCs emergency response and we participate in rapid toxic screens to identify whether citizens have been exposed to several compounds, including cyanide.*

My day-to day activities include instrument tuning, repair and maintenance, sample preparation, data analysis and method development. Currently, my pet project is automating our standard preparation method. I've been able to meet with several representatives trying to sell us software for our "robots" which has been a really fun part of the process (and usually involves free lunch). Working at the CDC is fantastic, but I am so glad that I spent 4 years surrounded by strong female leaders because 99% of my superiors here are male! It is so important for young women to meet and interact with more experienced female role models and I appreciate you continuing this tradition at Chatham.

Melissa Tosiano (2009) was also awarded the AAUW scholarship. She is currently pursuing a Ph.D. in Environmental Health and Toxicology at Duke University. In a recent letter to AAUW she wrote, *"I am going through a process of "rotations"*

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Duquesne University's Cyril H. Wecht Institute of Forensic Science and Law is offering a reduced registration fee for Chatham students to their "Forensic Fridays" events 1:00—4:30 pm. Registration for "Forensic Fridays" is only $5 for any or all seminars through June, normal cost is $30 for the half day seminars and $90 for the 1 1/2 day seminar. To register, please contact Jessica Paschke at wechtinstitute@duq.edu

Upcoming seminars:

March 12-13 (Power Center Ballroom at Duquesne University)
Is Football Bad for the Brain? Forensic Scientific, Medical-Legal and Societal Aspects of the Concussion Debate
In the wake of the growing controversy surrounding the impact of chronic trauma on the brains of NFL players, several of the leading medical, scientific, legal and sports authorities on the issue will convene here over the course of a day and a half to present on and discuss the clinical and pathological research on the subject, as well as its legal and policy implications.

April 9 (Duquesne Room, Student Union at Duquesne University)
Accident Reconstruction in Personal Injury Cases and Products Liability Forensic Pathologist Cyril H. Wecht will be joined by one or more experts in failure analysis and/or biomechanics, along with veteran accident investigators Gary and Sarah Tallent in this discussion of personal injury and products liability cases in which verdicts depended upon the use of available physical and biological evidence to reconstruct events.

May 14 (Duquesne Room, Student Union at Duquesne University)
Forensic Investigation of Sexual Assault Cases
Dr. L. Kathleen Sekula, director of Duquesne University's Forensic Nursing program, will join a forensic nursing practitioner and Valerie Schreiber, operations director for the Sexual Assault Response team of Allegheny County, in discussing the investigation of sexual assault cases.

June 4 (Law School, Room 203 at Duquesne University)
Behavioral Science Evidence in Divorce and Custody Cases
In this seminar, Allegheny County Common Please Court Family Division Judge David Wecht will be joined by forensic psychologist Dr. William Fisher and matrimonial attorney Candace Komar in a consideration of the behavioral scientific issues pertaining to divorce and child custody proceedings.

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where I get to spend a semester in three different labs before I decide where to complete my thesis. I spent the fall semester in Dr. Hinton's lab working a new protocol to stain lipids in developing medaka fish embryos. This work is extremely useful since it would be an excellent model for human lipid storage diseases and the action of obesogens (environmental contaminants which interfere with metabolic processes leading to obesity). I am already working on publishing my data and new methodology, so keep an eye out! I just started my spring semester with Dr. Ferguson, I am working on setting a breast cancer tissue culture which fluoresces in the presence of estrogens (GFP MCF-7). This would be used as a quantitative measure of estrogen and estrogen mimics in waste water and human serum. My summer rotation will be with Dr. Miranda where I will use GIS to analyze geographic, ethnic, and soci-economic risk factors for lead poisoning in children. Classes are challenging, but thanks to a great background at Chatham I am doing quite well academically."

Editor: Dr. Christy Heid *To suggest articles for future issues or for general inquiries, please contact cheid@chatham.edu.*