

# Focus on Forensics

Volume 10, Issue 1

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**Points of Interest:**

- Interview Tips
- SOFT 40th Anniversary Meeting
- Historic Drug Analysis Project



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## Around the World and Back Again



Kaixo! ("Hello" in Basque).

Our forensic world has many pockets worth exploring.

**Warning:** one lifetime is not enough to visit them all.

**Spoiler:** there are so many possibilities you may not know where you'll land.

**Word of advice:** enjoy the ride and get involved.

For me it all started late May 2007 with a letter from the Institute of International Education to inform me that I had been chosen as a recipient for a Fulbright scholarship.

Wait. Let's go even further back. It all started with a great teacher, it always does.

While my undergrad professor was holding his binoculars trying to follow one fidgety warbler, I was sharing my interest about pursuing a career in molecular biology. At the time I was preparing myself for a long career in field Ecology. Still holding his binoculars, not giving up on identifying the new migrant species, he said: young professionals in Science should diversify their interests, don't be afraid to "go molecular" on us.

It was the push I needed to find a door and knock. A couple of months later I applied for a Fulbright scholarship and about a year later I was awarded one to pursue a graduate degree in Forensic Science at Virginia Commonwealth University. I had the privilege of working at the Dawson-Cruz Laboratory where I gained experience in DNA analysis. I also had the opportunity to perform an internship at the Institute of Forensic Science of Puerto Rico.

After graduating from VCU a lot of doors were closed, as expected, but one that opened led to the Old Continent through an Erasmus Mundus scholarship to pursue a PhD in Forensic Analysis at Basque Country University in the beautiful city of Vitoria-Gasteiz A.K.A. the European Green Capital. I landed at the BIOMICs research group under the supervision of Dr. Marian Martínez de Pancorbo. The BIOMICs group houses the DNA Bank and several other research groups, such as cancer, neurological disorders (Alzheimer, Parkinson, Autism, and drug dependency), forensic molecular biology, ancient DNA and population genetics.

My current research activities have been focused on a population genetics project on the Basque Diaspora from Argentina. We are employing X and Y chromosome short-tandem repeats and single nucleotide polymorphism analyses on a large sample from Basque migrants and descendants.

Basque Country (Euskadi) offers a high quality of life, the cities are extremely safe, the sights of green have no apparent end, the beaches are charming, the *cuisine* is exquisite, and its population is diverse. My future plans involve a post-doc appointment in France which means that when I'm not at the lab or discovering the deep Basque Country I'm learning French and getting ready for whatever the future might bring.



## Forensic Science Student Club

### Still the best club on campus!



During the Fall semester the Forensic Science Student Club co-sponsored several speakers including Dr. Miller and Ms. Seashols. The club also participated in the graduate student alumni panel, bringing out more students than ever to that event. The club was the first student club to volunteer at the Society of Forensic Toxicologist annual conference here in Richmond.

The club engaged in a number of off-campus learning opportunities, facilitating trips to the medical examiner's office and to the shooting range. Fundraising initiatives for the club and the department included a night of fund-raising at Tropical Smoothie to raise funds for the Murder Mystery Dinner Theater and a Phone-a-thon to solicit travel donations from alumni for student travel..

This spring the FSSC will have its biggest event -- the Murder Mystery Dinner Theater, held annually in April. Club members will also be volunteering and having a team for Relay for Life at VCU. The club also plans to do more fund-raising events for the club and sell our new t-shirt design from the SOFT Conference for Relay for Life and Murder Mystery Dinner Theater. Spring plans include another trip to the Medical Examiner's office and shooting range for everyone. We will also be volunteering at the open houses this semester and participating in a number of other opportunities. Please send your suggestions to Jennifer Tuten at [tutenjm@vcu.edu](mailto:tutenjm@vcu.edu).



## Phone-a-thon a Success!



In November, the forensic science student club, held a phone-a-thon to increase funding for undergraduate students in the forensic science program. Michael Marin, Jennifer Tuten, Lindsey Rodgers, and Megan Tabor were all eager to be part of this rewarding experience knowing we were bettering our program by creating additional opportunities for future forensic science students.

Like all FSSC events, we had a blast, and we even got free pizza and soda (thanks to Dr. Eggleston). Contacting former alumni, many of which are currently professionals in the forensic science world, was slightly intimidating at first; however, after the first few calls we became more comfortable and it became fun!

Thanks to our awesome alumni we managed to raise a total of about \$1200!!! This will allow four more students funding to travel to conferences for societies like AAFS, SOFT, and MAAFS!

If you are interested in participating in a fund-raising event in the future, contact the club!

## Scholarship Opportunities



The Department always gets a number of questions about opportunities for students to find funding for their education. In these economic times, it is more important than ever that students know where to go for information about scholarships and grants. Financial aid is the first and most obvious place to look for information, but there are a few other resources about which students should be aware.

The College of Humanities and Sciences offers a number of scholarships which are open to Forensic Science students, more information on these scholarships is available at

<http://www.has.vcu.edu/development/scholarships/>.

In addition, check the VCU Forensic Science website, under the "Resources" section, we have myriad resources for finding travel funding for conferences, grants and scholarships, etc.

For more information talk to your advisor.

The important thing to remember is that there are often more opportunities for funding than you think, you just have to be patient and systematic in ferreting them out.

# Haley's Helpful Hints for Interviews

## (with Additional Advice from Forensic Science Faculty)



Most students want to get interviews, but don't feel at ease when going on one. We can help in a number of ways:

1. Check out interview tips and practice commonly asked interview questions: <http://www.students.vcu.edu/careers/docs/Interviewing.pdf>
2. InterviewStream: you can watch clips of experts answering commonly asked interview questions; and practice interviewing with actual Forensic Science geared interview questions; a webcam records your answers to interview questions so you can review your answers to evaluate how you are doing

If you have a webcam, visit: <http://vcu.interviewstream.com/>

If you don't have a webcam, you can still visit the above web site to see the expert clips, but stop by or call 828-1645 to reserve the InterviewStream interviewing room.

3. Do a mock interview with me! Haley Sims: [hgsims@vcu.edu](mailto:hgsims@vcu.edu); Often people do much better than they think, but we can work on polishing your skills.
4. Come to our Open House on Tuesday, January 25 from 12-2 to network with employers and get their feedback.
5. Come to our university-wide career and internship fair on Tuesday, February 1 from 10am-3pm to network with employers and build your interpersonal skills.

Please feel free to contact me to set up an appointment or answer any questions ([hgsims@vcu.edu](mailto:hgsims@vcu.edu) or 804.828.1645). I look forward to working with you!

### Additional Interview Tips Directly From Your Professors

When asked about their top recommendations for acing an interview, here's what your professors and mentors said was their #1 piece of advice:

Project an air of professionalism while still maintaining a sense of humor. Let your CV (or resume) speak for your abilities and your personality speak for whether or not someone would want to be stuck next to you in a laboratory setting until they reach retirement. - **Dr. Kevin Whaley, Virginia Office of The Chief Medical Examiner**

Review your textbooks and courses that are relevant to the job. Also, know the lab, know the lab director's name, know the job's nature before you go for the interview. Be yourself and it is okay to be nervous..for me that shows you really care about the job and that you want to be the best you can be.... - **Dr. Marilyn Miller, VCU Department of Forensic Science**

Relax and be yourself – don't be too stiff! Be personable.—**Dr. Tracey Dawson Cruz, VCU Department of Forensic Science**

Expect a test, so study and be prepared. Interviews for forensic science positions do not only have your typical interview questions (i.e. what are your strengths and weaknesses?); instead you are questioned about instrumentation and how you would handle/analyze a variety of case scenarios. - **Robyn Weimer, Trace Evidence Section, Virginia Department of Forensic Science**

Know everything possible about the company and position for which you are applying. Research the company online, find articles about their operations and learn about their hierarchy so you can include this information in your answers as well as develop positive pointed questions for the end of your interview. - **Mr. Russ Chandler, Virginia Department of Fire Programs**

Express your enthusiasm for forensic science in ways other than citing television shows (e.g. CSI inspired me – don't say that) - **Dr. Susan Greenspoon, Forensic Biologist, Virginia Department of Forensic Science**

Prepare. Anticipate the questions you would typically expect in a technical interview and practice (out loud) how you would answer the questions.—**Mr. Eric Hazelrigg, VCU Department of Forensic Science**

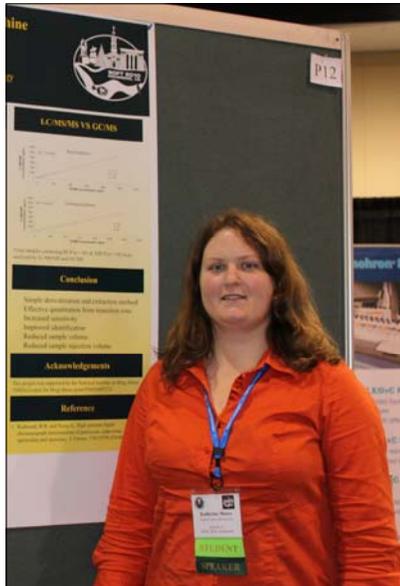
Know the job requirements/expectations and know/have examples how you meet each of those requirements or have each of the skill sets the interviewer is looking for. In addition, do your homework on the position you are interviewing for and come with questions that demonstrate you have thought about the position and about yourself in that position. - **Lauren Claytor, Firearms and Toolmarks, Virginia Department of Forensic Science**

Be calm and confident (not cocky!). Making eye contact with the interviewer and having a relaxed body posture are two great ways to accomplish this. - **Mr. Joshua Kruger, Trace Evidence Section, Virginia Department of Forensic Science**

Don't be afraid to ask questions... It makes it look like you are really interested, and the interviewer usually opens up more about the job and company. Also, it will help you understand what they are asking you about because they are often using their own jargon. - **Dr. Carl Wolf, Forensic Toxicologist, VCU Health System**

# Society Of Forensic Toxicologists

## 2010 Annual Meeting Held in Richmond



The Society of Forensic Toxicologists Annual Meeting in Richmond, Virginia was unforgettable as the Society celebrated its 40<sup>th</sup> meeting. Nearly 1000 guests traveled from across the United States and from around the World to present research and method developments and share anecdotes and memories. The meeting was a resounding success, highlighting the talents and enthusiasm of the local slate of forensic toxicologists who served to organize the meeting – AND, for the first time, welcomed a large student contingency, predominantly made up of the students from the Department of Forensic Science at VCU.

Eleven workshops were offered across a wide variety of topics pertinent to forensic toxicology. Justin Poklis and Aron Lichtman, Ph.D., both in the Pharmacology and Toxicology Department at VCU, conducted "A Stroll Through the Cannabinoid Field: Pharmacology, Therapeutics, and Untoward Effects", focusing on the pharmacology of Cannabis sativa and synthetic cannabinoids, as well as their pre-clinical investigations. Carl Wolf, Ph.D., Supervisor of the Clinical Toxicology Laboratory at the VCU Medical Center, served as the Workshop Coordinator and organized the 69 instructors for the 980 participants.

The Scientific Program Co-Chairs, Julia Pearson, Ph.D. (formerly with the Virginia Department of Forensic Science and now the Chief Forensic Toxicologist with Hillsborough County in Tampa, FL) and Justin Poklis, delivered a strong scientific program with 385 authors of 124 scientific research abstracts for platform or poster presentations.

Alphonse Poklis, Ph.D. organized the SOFT Student Education and Enrichment Program (SEEP) to target secondary education teachers, who in turn will pass on forensic toxicology lessons and lab work on the principles of forensic toxicology in post-mortem, DWI, and FUDT to hundreds of Richmond area high school teens. Dr. Poklis delivered exciting and relevant lesson plans in a way that instilled confidence in the teachers. Many great thanks to Heather Zoller (of Chesterfield Public Schools), Lyndsay Durham (FRSC Alum), Lindsay Rogers (FRSC Senior), Emily Dye (FRSC Senior), Travis Harris (FRSC Grad Student), and Angela Foss (in VCU School of Education) for their help in planning and assistance with teaching.

To celebrate SOFT's rich history, Sarah Carney and Lyndsay Durham (both FRSC Alum) assembled 8 posters that highlighted different areas of development in forensic toxicology and cases. They also provided an opportunity for members and attendees to illustrate their training path so that we could both capture and celebrate the genealogy of forensic toxicologists. Sarah also spent more than a year collating information from official archives in the SOFT office and the backs of closets and old desks and cabinets of SOFT members to create a display that honors SOFT's 40 Presidents and describes the development of the Society. This treasure trove of information was an enormous project that will continue in perpetuity and be displayed at SOFT meetings so that we can continue to honor and discuss our history as we move into the future. Tremendous thanks to both Sarah and Lindsay for helping us to capture our history so cohesively – and thanks to our many participants for helping them do so!

As the host of the meeting, one aspect that I am particularly proud of is that we also had the great new addition of student volunteers thanks to Virginia Commonwealth University's Forensic Science Student Club! More than 50 of them helped throughout the week - so thanks to Rebecca Doane (FRSC Alum) and Emily Dye for coordinating and managing them. You brought with you great enthusiasm and freshness to the week that was commented on by so many SOFT members – THANK YOU for making the week extra special! Additionally, the entire faculty was involved with helping to manage the week of activities for 1000 people – I greatly appreciate all of their help! And, as well, I will take this opportunity to also thank Angelica Bega-Hart for her support and contributions – planning a meeting of this caliber is an enormous task that invariably impacts everyone who with whom the planner works. She toiled away quietly, supporting, laughing, suggesting, and doing – all in an effort to help us all shine. Thank you all for your loyalty and your commitment to excellence!

I am happy with having had the opportunity to serve the Society of Forensic Toxicologists in this manner. But, I am more thrilled to be able to show off our great faculty and students at Virginia Commonwealth University. I am looking forward to more opportunities for us to shine!

Dr. Michelle Peace, Interim Chair



## Development of Iraq's Forensic Laboratories

In 2010, Sarah Seashols spent approximately 20 weeks total in the Kurdish-controlled region of Iraq, where she worked under a Department of Defense contract to assist the Iraqis in developing and implementing their new national forensic laboratories.

Ms. Seashols was part of a multinational team, consisting of various forensic experts, who would rotate in and out of the laboratory to train in their respective disciplines.



As the Forensic Chemistry and DNA Mentor, she worked with upper laboratory management as well as with the scientists in the DNA, Arson & Explosives, Trace and Drugs/Toxicology units to get their instruments installed and working.

This proved to be a significant challenge, as power and other basic things like supply deliveries that we take for granted here in the US took weeks and months to establish and work through. The manufacturer's

representatives came to the laboratory and installed the instruments: for the DNA unit, a Real-Time PCR Quantitation instrument, a DNA extraction robot, and 2 Capillary Electrophoresis units were installed.

For the Chemistry sections, 4 Gas Chromatographs with different detectors and a Raman/FT-IR spectropho-

tometer were installed.

Once the units were installed, she had more time to work one-on-one with the scientists, and together they wrote protocols and began validation of the new techniques.

It was quite exciting to see the first cases analyzed in both the DNA and Chemistry sections. Ms. Seashols still keeps in touch with many of the scientists – as of 2 weeks ago, the laboratory is still the only functioning forensic DNA laboratory in Iraq, and they have analyzed over 30 cases in the past couple of months! Quite an accomplishment in less than 1 year.

The city of Erbil was beautiful and safe, and the people were quite welcoming to all of us, even as non-muslim (and American) men and women. We lived and worked in the city, and ate at the local restaurants and shopped at the malls and local shops.

The Iraqi scientists were eager to learn and begin working in their disciplines, and it was both a challenging but highly-rewarding time.



## Murder in Mocksville

Faculty member Marilyn Miler presented a talk about a case in Mocksville, NC where Kirk Turner, DDS was charged with the first degree murder of his estranged wife, Jennifer Turner. Dr. Miller was asked by Dr. Turner's attorneys to reconstruct the crime using the crime scene and the physical evidence found at the scene.

Using bloodstain patterns, footwear impressions, wound dynamics and other physical evidence, Dr. Miller was able to determine that Jennifer Turner stabbed Kirk Turner with a 8 foot spear and, in the result-

ing struggle after his spearing, Kirk Turner used a knife to kill his wife.

Dr. Miller then testified on behalf of Kirk Turner to her findings. The jury found Kirk Turner not guilty by reason of self-defense. This case was presented on the CBS show, 24-Hours in March 2010.

During her talk, Dr. Miller also presented some of the ethical and non-scientific work done by the North Carolina State Bureau of Investigation in this case that was used as part of a review of the NC SBI by the NC

Attorney General's Office.



# Congratulations to our December Graduates!



The Department would like to extend heartfelt congratulations to the 28 students below who completed their Bachelor's degrees in December 2010.

Salma Achiba  
 Amy Barksdale  
 Amanda Battin  
 Shanté Bell  
 Latasha Berkley  
 Christina Blouir  
 Tristan Brown  
 Noemi Febles-Garrido  
 Robert Gillis  
 Pamela Greiss  
 Matthew Harville  
 Victoria Jackson  
 Sabrina Johnson  
 Emily Kasky  
 Jennifer Lane  
 Tia Lewis  
 Nicholas McDowall

Mary Ostrowski  
 Kelly Peak  
 Amanda Pinto  
 Raymona Pyos  
 Moshea Rease  
 Balsam Shawky  
 Nancy Tran  
 Brenda Vigil  
 Hannah Zellner  
 Ting Zhang



## Congratulations



Congratulations to VCU Forensic Science Affiliate Faculty Member Ann Davis on her retirement from the Virginia Department of Forensic Science.

Ann was the Section Chief of Firearms and a past president of the Association of Firearms and Toolmarks Examiners (AFTE).

Ann has been an actively involved alumna, who has served on the Department's Undergraduate Committee for many years. She has also served on our Accreditation Committee and

participated on our faculty search committees. Ann also developed the graduate-level Firearms and Toolmarks course and has supervised countless interns

We will miss Ann, and we wish her the very best. Congratulations Ann!

## Farewell

Congratulations to VCU Forensic Science Chair, Dr. William Eggleston on his return to Biology. Dr. Eggleston has played a critical role in the development of the Forensic Science Department - he has worked tireless hours for the past seven years - and, no doubt, his sacrifice and service have lead us to the success we claim today.

With Dr. Eggleston's return to Biology, he will devote his attention to teaching and research. Dr. E, as most students know him, will continue to teach Genetics (BIOL 310), so he'll continue to have an impact on Forensic Science students for many years to come!

With heartfelt gratitude we wish Dr. Eggleston only the best as he immerses himself in his research endeavors and continued pursuit of scholastic teaching.



## Graduate student gets to play with dolls and explore American history in PBS History Detectives Documentary



Despite her ripe old age of over 150 years old, Nina continues to stir controversy and intrigue.

Nina, a nearly 3 foot long doll from the Civil War era, was donated to The Museum of the Confederacy (Richmond, VA) in 1923 by the family of Gen. James Patton Anderson, commander of the Tennessee Confederate Army.

Nina came to the Museum with a history all her own. She was believed to be used to smuggle much-needed medicines across Union blockades to Confederate soldiers, the most valuable of which were quinine and morphine. The desperate conditions during this time, and extreme ingenuity used to acquire these drugs, which were in limited supplies in the South, set the stage for a rare investigation of this historical "criminal" activity.

In late October 2010, a preliminary x-ray examination of Nina and Lucy Ann, the only two dolls at the Museum allegedly used for such purposes, was performed at the VCU Medical Center. Results revealed that their papier-mâché busts were indeed hollow and spacious enough to house small packages or vials of medicine. These findings captured the interest of the History Detectives at PBS, who decided to film a documentary surrounding Nina's story.

The PBS History Detectives and Catherine M. Wright, collections manager at the Museum, next enlisted the help of the Virginia Department of Forensic Science (DFS). On January 21, 2011, tests were carried out in

attempts to identify the presence of drugs, particularly quinine or morphine, within Nina's head cavity. Swabs used to sample from within Nina's head were analyzed directly by AccuTOF-DARTTM, an instrument that continues to gain notoriety for its ability to analyze a variety of samples in a rapid and non-invasive manner.

The analysis was supervised by Robert Steiner, M.S., a Principal Forensic Scientist in the Controlled Substances section at DFS. Casey Mims, a second-year Forensic Science graduate student at VCU, was selected to help with the analysis because of her concentrated studies in trace evidence

and drug analysis and previous experience as an intern with Mr. Steiner.

The History Detectives documentary will reveal the results of the analysis, as well as a history of the dismal medical conditions during the Civil War. The program is set to air in late Fall 2011.

This captivating exploration of our country's history, and ability to incorporate the AccuTOF-DARTTM in this novel research, has definitely been a rare experience that is well worth staying tuned to see this fall.



## FEPAC Site Visitors Review Programs

FEPAC site visitors were on campus October 4th-6th to review the Forensic Science B.S. and M.S. Programs.

The team, composed of two visitors, visited on-campus facilities like the library and the Chemistry department and met with small groups of students and alumni. They also evaluated hundreds of pages of documenta-

tion, including all of your feedback, both positive and negative, regarding the program and have made their recommendations to the FEPAC commissioners.

The department expects to hear back from the commission early in the Spring semester with their decision regarding our Accreditation Renewal.

Many thanks to those who met with the site visitors and helped them learn more about our programs. All of this information will be useful to us as we continue to strive for excellence in Forensic Science education here at VCU!



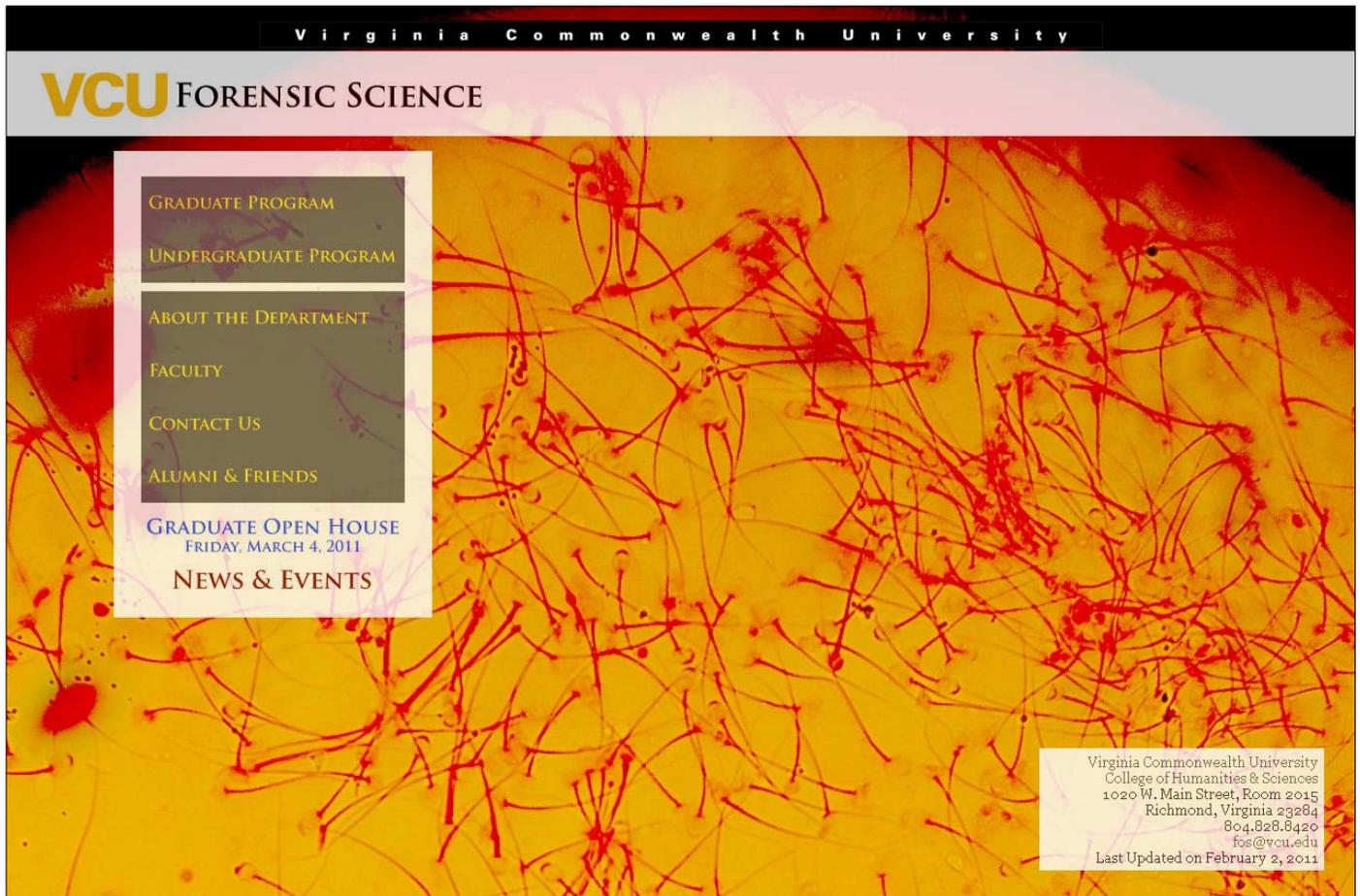
# View the Updated VCU Forensic Science Website



Did you know the VCU Forensic Science Website has been brought up-to-date on the latest information affecting our stu-

dents and alumni. Whether you want to keep in touch, learn about faculty specialties, or confirm whether you need that

extra course, the VCU Forensic Science Website is a great resource!



## In the Next Issue of Focus on Forensics:

Stay tuned for our Spring newsletter for highlights from the American Academy of Forensic Sciences Annual Meeting, FSSC spring activities, and Graduate Seminar Series. Alumni will want to stay tuned for more information on how to become involved with the Department and the University.

If you have information that you'd like to contribute to our newsletter, we welcome faculty, students, alumni and friends of the

Department to send us pictures, stories, anecdotes and "where are you now" updates. Please email your information to us at [fos@vcu.edu](mailto:fos@vcu.edu).

