

Young Forensic Scientists Forum Newsletter

AMERICAN ACADEMY OF FORENSIC SCIENCES

September 2005

Editor: Jeannette M. Perr, PhD

Frontiers in Forensic Science Update

Only five months until the 2006 Academy Meeting in Seattle and the events and speakers for the Young Forensic Scientists Forum have been confirmed. This year's theme is *Frontiers in Forensic Science*. The planning committee has been working hard to create YFSF events that have something for everyone.

Marrah Lachowicz and **Allison Curran** have planned a multi-faceted academic session with speakers from various forensic science disciplines, **Robin Bowen** has updated the YFSF Bring Your Own Slides, **Jennifer Mercer** has been sending the word to universities around the country encouraging participation in the 2nd Annual YFSF Bring Your Own Poster Session, and **Amanda Frohwein** has planned a resumé a KSA writing workshop to be held in conjunction with the annual breakfast.

— Allison M. Curran, BS, BS
YFSF President

YFSF Academic Session

The Academic Session is full of speakers from various disciplines within the Academy. The 2006 Academic Session will begin with a welcoming address from current AAFS President **Edmund Donoghue**. **Claire Shepard** will relay how to advance within the Academy and **John Lentini** will speak about the importance of standards. The 5th Annual Emerging Forensic Scientist winner, **Linda Rourke**, will speak about her forensic DNA analysis research. **John Williams**, from Western Carolina University, will give a talk on the role of the forensic anthropologist in unraveling mass fatalities and **Sreetharan Kanthaswamy**, from UC Davis, will be giving a presentation on animal forensics and his experiences. Also, **James Marano** from FDLE will be speaking about his skills as a forensic paint analyst. **Max Houck**, of West Virginia University, will be speaking about how to plan a forensic education, career, and profession.

After the break, **Anita Wonder** and **Michele Yezzo** will speak about challenges facing bloodstain pattern analysts and the debate over whether bloodstain pattern recognition is a science. Christine Janson, Chief Editor of *Forensic Science Magazine*, will discuss how to publish a paper. A multi-disciplinary talk entitled "The Science of Mass Disaster" will end the Academic Session. This talk includes young forensic

scientists who have been involved in such disasters as the World Trade Center, the Tsunami, as well as the Guatemalan mass grave sites. After the end of session look forward to the Bring Your Own Poster Session to close the day. The 2006 YFSF Planning Committee hopes to see some new faces as well as some old ones in Seattle this coming February. See you soon!

— Allison M. Curran, BS, BS
YFSF President

YFSF Bring Your Own Slides

The YFSF Bring Your Own Slides is looking for presenters! We are in need of anyone who would like to present interesting cases or forensic research in which they have participated. Presentations will be held on Wednesday, February 22, from 5:30 p.m. - 7:00 p.m. Each presentation should be about 10 minutes or less. We would love to know what our fellow Young Forensic Scientists are doing! If you are interested in sharing your experiences, please contact **Robin Bowen** at Robin.Bowen@mail.wvu.edu. We look forward to learning from your experiences.

— Robin Bowen, BS
YFSF Program Co-Chair

YFSF Bring Your Own Poster

It is time again to start thinking about the annual Young Forensic Scientist Forum Bring Your Own Poster Session! This continuing event is important to the YFSF and continues to grow in participation each year. Students and emerging forensic scientists are invited to introduce ideas, undergraduate or graduate research, or papers in a comfortable and educational environment. Feel free to share unique or educational cases encountered in the field. If you are already presenting a poster in another session, then by all means bring your poster to the YFSF Bring Your Own Poster Session! Please contact either **Marrah Lachowicz** at Gradpath@aol.com or **Jennifer Mercer** at jwiseman@mix.wvu.edu for additional information regarding this year's poster session.

— Marrah Lachowicz
YFSF Program Co-Chair

YFSF Breakfast Session Update

Planning is underway for the 2006 YFSF Breakfast Session, which will focus on attaining a job in the forensic science field. This year we will continue to offer a resumé review, but will expand our review panel to include representatives from a wide variety of forensic disciplines. By including representatives from state and federal agencies, we hope to provide all of the young forensic scientists in attendance with the skills and advice needed to succeed from the application process through the interview and hiring processes. This year we will also be covering hiring exams and Knowledge, Skills, and Abilities questions and answers. This addition will prove to be very beneficial to those applying for federal jobs which require KSA's or state and regional jobs which may have hiring exams. If you are or will be looking for a job, you won't want to miss this year's breakfast session. Start making plans now to attend the AAFS conference in Seattle!

— Amanda Frohwein
YFSF Program Co-Chair

YFSF Feature Article

The Feature Article contains short editorials written by a professional in the forensic science field highlighting the diverse fields of forensic science, current education practices, interview suggestions, and tips concerning professional development. These articles bridge the gap between the experienced forensic scientist's desire to dispense knowledge and young forensic scientist's thirst for knowledge. This issue we have articles contributed by James Crippen of the Colorado Pueblo University, CO and the Asociación Costarricense de Profesionales en Ciencias Forenses (ACCF). The contributing authors of the ACCF article are Tatiana Trejos, a Research Coordinator for Florida International University formally of the Departamento de Ciencias Forenses Organismo de Investigación Judicial, Costa Rica's equivalent of the FBI laboratory, and John Vargas, a Forensic Biologist with the Costa Rican Departamento de Ciencias Forenses.



Never be Afraid to Ask Why

First before anything else I have to state what an honor it is to be asked to write this article. I have to ask myself "Why?" Is it because I have been around awhile (i.e. 25+ years) or is it because I started as a generalist? Or maybe even both.

I think starting as a generalist has helped me retain an overall view of forensic science/analysis. Now as an educator it serves me even better. As someone that has an opportunity to make the first impression (and this fact alone probably scares a lot of people) of what forensic science really entails to prospective students. At my facility, we have been asked to be the primary instructors in entry level forensic science course. We do approximately 5 to 10 lectures a year at libraries or high schools about what forensic science is really about. Having done most of the jobs in a forensic lab from serology to drug

analysis to trace analysis to crime scene response, I have a fairly good overview of what forensic science is. We spend a lot of our time dealing with the "CSI Effect." The general public and most people coming into forensic science have huge misconceptions about what forensic science can and cannot do. This can cause problems not only for incoming student but those people who might sit on a jury.

Many students coming into forensic science have a very warped view of what goes on in a forensic laboratory. Many do not realize they may be required to respond to crime scenes. Some do not realize that they may be a commissioned officer that is required to carry a weapon during responses. They think that they will be sitting in a laboratory day in day out doing analysis. If you are one of these people you may be in for a very rude awakening. Over the years I have spent a lot of time out of the lab. I have picked up a lot of dead bodies in my time. The most notable times were as a team leader at the Columbine High School shootings and sixteen days in body armor during the Cortez, Colorado police shooting response. Not what you would call a normal day in the crime lab. Not all people are cut out to do crime scenes, but you may not have the option to always do what you want to when you are hired to work in a forensic laboratory.

This cuts to the chase for an issue near and dear to my heart because I feel most people coming into forensic science are already or want to become specialists. Those people are limiting themselves in their abilities. Yes techniques and instrumentation have become more sophisticated as technology advances. Yes it takes more and more time to keep current with a single discipline let alone numerous ones. Yes you will spend more time taking proficiency tests to prove your competency. All of those arguments are true. However, the more versatile someone is the more marketable and valuable they become.

Do not limit yourself. Invest the personal time it takes to learn different technologies/techniques, do research, and become involved in forensic organizations. All of this is important if you want to excel in the field of forensic science. Forensic science is driven by those who question, not by those who sit back and wait. It is always easy to accept what you are told and do what you are told, but is it always right?

If we look back at the history of forensic science we can see that most, if not all, developments were driven simply because somebody asked the question "Why?". Never be afraid to ask why, how come, or is there a better way. Do not sit back; be multitalented for want of a better phrase. By investing the time now to learn and become knowledgeable in several disciplines, the better you will be able to do your job.

Always remember that forensic science if not a job, it is or should be a career. You work at a job, in a career you should excel at what your field and the field itself will be better for your efforts. Do not think of forensic science as a 8 to 5 job. It isn't. I am on call 24/7, 365 days a year. Be prepared for long hours and little recognition. It goes with the territory. Have no illusions about how glamorous forensic science is. It takes long hours and involves tedious, mind numbing, boring work for the most part, but when looked back over a career, it can and will be extremely rewarding.

— James Crippen
Colorado Pueblo University, CO

Young Forensic Scientist Work to Improve Forensics in Latin-America

On March 17th, 2004 a group of young forensic scientists from the Department of Forensic Science in Costa Rica (DCF), created an Association of Forensic Sciences: Asociación Costarricense de Profesionales en Ciencias Forenses (ACCF). These young forensic scientists were inspired by the American Academy of Forensic Sciences and decided to organize a group of professionals to improve forensic science in their country and Latin-American. The ACCF supports a unique co-operation between Latin-American and intercontinental forensic institutions to enhance the education and training of Latin-American forensic scientists. The mission of the ACCF consists of "Promoting and stimulating the improvement of professionals in Forensic Science, through scientific training and updating of this discipline, with the aim of reinforcing the Judicial System of the Costa Rican Society."

The ACCF and the Costa Rican Department of Forensic Science hosted their 1st Forensic Meeting: "Congreso de Ciencias Forenses: Costa Rica 2004" in November of 2004. More than 200 participants from the U.S., Switzerland, UK, Panama, Salvador, Honduras, Guatemala, Dominican Republic, Ecuador, Colombia, and Costa Rica shared scientific expertise in posters, oral presentations, and discussion forums.



The First Congreso de Ciencias Forenses: Costa Rica 2004 organized by young forensic scientists in San José, Costa Rica

The ACCF also created a scientific journal, *Revista de Ciencias Forenses*, that allows publications in either Spanish or English. A printed version of the journal will be distributed to several libraries within the Americas, Europe, and Australia. In addition, the electronic format will be available through the ACCF website (www.accf.or.cr). The first volume will be published in December 2005. Call for papers ends September 5th, 2005. *Revista de Ciencias Forenses* offers diversity. Manuscripts may be submitted covering Criminalistics and Criminology, Chemistry, Bio-Chemistry, Biology, Toxicology, Physics, Engineering, Photography and Digital Imaging, Questioned Documents, or any other area relating to science and law. A selected international committee of forensic scientists provides guidance to the editorial board to assure that this non-profit annual publication promotes research, communication, and cooperation among forensic scientists and other colleagues.



— Tatiana Trejos
Co-director *Revista de Ciencias Forenses*
Coordinator of Research Programs
International Forensic Research Institute
Florida International University

— John Vargas, Lic.
Presidente ACCF
Co-director *Revista de Ciencias Forenses*
Forensic Biologist
Departamento de Ciencias Forenses
Costa Rica

Education Briefs

Many high school and college students are interested in pursuing an education in forensic science but do not know where to start. The Forensic Science Education Programs Accreditation Commission (FEPAC) maintains and enhances the quality of forensic science education through a formal evaluation and recognition of college-level academic programs. FEPAC is currently the only accrediting body for academic forensic science programs. This section of the *YFSF Newsletter* will feature a FEPAC accredited university, beginning with Cedar Crest College, each publication.

Forensic Science at Cedar Crest College

Among the many colleges/universities expanding their curriculum to include the ever-growing sensation of forensic science, Cedar Crest College (CCC) has maintained an evolving program ensuring that students are prepared to enter the advancing forensic science field. The forensic science program is one of the most sought after CCC programs increasing enrollment by 20% in the past year. The program is fully accredited by FEPAC as of January 2005, and is under the direction of **Lawrence Quarino**. CCC is a private all-women's college located in Allentown, PA, with an 84-acre park-like campus that boasts an arboretum featuring 130 species of trees. CCC was founded in 1867 and has become a prominent college for educating young women. America's Best College: Northern Comprehensive Colleges ranked CCC eighth out of thirty-four universities.

The forensic science concentration is an 80 credit program for Biology, Chemistry, Biochemistry, and Genetic Engineering majors. Core science courses provide a strong science background in order to succeed in forensics. To be admitted to the forensic science concentration the student must attend CCC and possess a grade of "C" or better in the freshman biology, chemistry, and calculus two semester sequence. The forensic science concentration consists of the liberal arts requirements of the college, core requirements for the chosen major, and program requirements that include five forensic science classes: Crime Scene Reconstruction and Pattern Analysis, Trace Evidence and Microscopy, Forensic Molecular Biology and Population Statistics, Instrumental Analysis with Forensic Science Laboratory, and Professional Issues in Forensic Science.

The Crime Scene Reconstruction and Pattern Analysis course introduces students to crime scene documentation and reconstruction. Pattern evidence such as impression, imprint, and striation evidence is studied. Fiber, hair, soil, glass, and paint analyses using light and polarized light microscopy techniques in conjunction with instrumental methods are employed in Trace Evidence and Microscopy. Forensic Molecular Biology and Population Statistics introduces students to DNA typing methods and provides the necessary background for the statistical evaluation of DNA evidence. Instrumental Analysis with Forensic Science Laboratory focuses on the use of chromatographic and spectroscopic analytical methods in the examination of physical evidence. Professional Issues in Forensic Science presents the legal aspects of forensic science such as courtroom admissibility rules as well as those involving disclosure and discovery. Students also learn about ethical

standards in the field and discussion centers on the resolution of typical ethical dilemmas. Students also are required to testify in a moot court.

A research thesis is required of all the students in the forensic science program. CCC has a proud tradition of undergraduate research and tries to hold the program to a very high standard. The research program is a four semester process encompassing a student's junior and senior year. Students spend the first semester writing a research proposal, the second and third semesters conducting research, and the last semester writing the thesis and presenting their work to faculty and students. Students are also urged to present at professional meetings such as the Northeastern Association of Forensic Scientists and the American Academy of Forensic Sciences. CCC encourages students to begin looking early for internship/research opportunities and keep abreast of opportunities by attending internship nights, career fairs, and resumé writing workshops. Although internships are not a program requirement, students wishing to perform internships do so after their junior year. The program has internship agreements with the Philadelphia Medical Examiner, the New Jersey State Police, the New York City Office of Chief Medical Examiner Department of Forensic Biology, and the Drug Enforcement Administration's Northeast Laboratory. Since inception in 2002, 70% of the program's graduates go on to graduate school. Graduates of the program are currently working for the New York City Office of Chief Medical Examiner, Bode Technology Group, and the Pennsylvania State Police.

Forensic science is not all about just studying. The Forensic Science Student Organization (FSSO) is a student lead organization that offers academic support to students, develops outreach programs designed to help initiate an interest in science in grammar school students, attends high school career/education fairs as representatives of the program, and participates in college campus activities. FSSO is responsible for the sponsorship and organization of the College's annual Forensic Science Symposium where forensic science professionals speak on a variety of topics. FSSO facilitates involvement at professional meetings through student volunteering thereby promoting network connections between students and professionals.

Current faculty for the program includes **Carol Ritter** and **Donna Mohr** in addition to Program Director **Lawrence Quarino**. Ms. Ritter, who holds a MS in biochemistry, is a part-time faculty member and Pennsylvania State Police forensic scientist. Ms. Ritter has mentored several student research projects, including development of SE33 as a screening marker for DNA testing and in-situ DNA hybridization techniques using fluorescent microscopy. Dr. Mohr holds a MS in forensic science and a PhD in analytical chemistry from Michigan State University. She is a former FBI Research Scientist focusing on the dating of inks in questioned documents using mass spectrophotometry and high pressure liquid chromatography. Dr. Quarino graduated with a PhD from the City University of New York Forensic Science Program and spent eleven years as a supervising forensic scientist at the New York City Office of Chief Medical Examiner. His research interests include the examination of nociceptive peptides in post-mortem tissue and the enzymatic characterization of soil.

An external funding research program has been initiated to further the undergraduate research program and a forensic chemistry class is also under development. A Forensic Science Training Institute was developed to continue educating forensic practitioners. Over the past year, the Institute has offered courses in bloodstain pattern analysis, forensic nursing, digital photography, and hair examination. The forensic science program at CCC will undoubtedly continue to evolve.

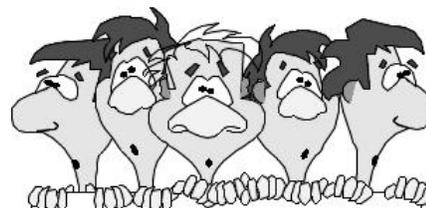
For more information please contact Dr. Quarino lquarino@cedarcrest.edu or visit www.cedarcrest.edu.

— *Melissa Smith*
Lab Associate
NYC OCME
Dept. of Forensic Biology

About the YFSF

The YFSF is dedicated to the education, enrichment, and professional development of young forensic scientists. YFSF participants can be non-AAFS-members while organizers must be AAFS members from any section within the AAFS. The Forum provides a medium to educate and network with young forensic scientists to facilitate their establishment within the forensic science community. The YFSF is composed of a Special Session, a Poster Session, a Bring Your Own Slides Session, and a Breakfast Session during the AAFS Annual Meeting. Outside the Academy meeting the YFSF works to further the endeavors of young forensic scientists through the YFSF newsletter and the YFSF website (<http://www.aafs.org/yfsf/index.htm>). YFSF President **Allison Curran** (allison.curran@fiu.edu) and YFSF Secretary **Jeannette Perr** (jeannette.perr@fiu.edu) can answer any questions about the YFSF and are looking to many different levels of young forensic scientists participating next year's session.

— *Jeannette Perr, PhD*
YFSF Secretary



The YFSF is looking for a technologically savvy person to help design the new website. If interested, please contact Jeannette Perr (jeannette.perr@fiu.edu). Look for the improved website soon!