

# Young Forensic Scientists Forum *Newsletter*

**AMERICAN ACADEMY OF FORENSIC SCIENCES**

July 2005

Editor: Jeannette M. Perr, BS

## YFSF President's Update

It's that time of year again when the organizing committee for the Young Forensic Scientists Forum begins planning next year's meeting. The 2006 YFSF theme is "Frontiers in Forensic Science," and organizers are busy arranging speakers and timeslots for your enjoyment. Over the years attendance at the both YFSF Special Session and the AAFS annual meeting have been steadily increasing. Hopefully this trend will continue in 2006.

Attending and participating in scientific conferences is an important aspect of becoming knowledgeable and well-rounded in forensic science. Having the opportunity to speak to other professionals within your field can sometimes be an invaluable experience and should be taken advantage of while at the AAFS annual meeting. The AAFS annual meeting also provides attendees with the ability to learn about areas of forensic science which maybe outside of one's expertise through multi-disciplinary presentations and a variety of different sessions throughout the week including Pathology/Biology, Odontology, Engineering Sciences, etc., which run for multiple days. All who are new to the field are encouraged to attend the AAFS meeting and to get the most out of their trip. Attend sessions that are in your field and those which are outside, and don't be afraid to ask questions at the end of a presentation; discussion helps to further science.

Making a presentation at the AAFS annual meeting and sharing your work with the community can be a very fulfilling experience. I gave my first professional presentation at the YFSF Bring Your Own Slides event when I was a junior at the University of New Haven, and coincidentally the AAFS meeting was held in Seattle that year as well. I was a little shaky; it wasn't the best talk I've ever given, and the audience was a little dizzy when I was finished as I clicked through the slides a bit too fast, but it was a good experience and one I encourage more young people to have. Please make the most out of your time at the AAFS meetings, Seattle is a wonderful city with many sites to see, but it is important to return home from the meeting feeling like you learned something while you were there. I hope to see some new faces as well as some old ones in Seattle. The 2006 YFSF program will not disappoint and in the following months I'll keep you posted on our planning progress. See you all in Seattle!

— Allison M. Curran BS, BS  
YFSF President

## YFSF Feature Article

The Feature Article section of the YFSF newsletter is a new section 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 scientists' thirst for knowledge. In this issue we are fortunate to have two different contributing authors: **Michele Yezzo** of the Ohio Bureau of Criminal Identification and Investigation (Ohio BCI&I,) and Sree Kanthaswamy from the University of California, Davis.



### *The CSI Effect - What you Need to Know*

"So how did you get into forensic science?" That's a common question asked whenever I say that I work as a forensic scientist for the Ohio Bureau of Criminal Identification and Investigation. How can I explain that it came about by accident back in an era when very few people had ever heard of forensic science, TV shows about murder mysteries were far less accurate, and *CSI* was not even on the drawing board? I was a chemistry major with a focus toward pharmacy and found something that caught my interest.

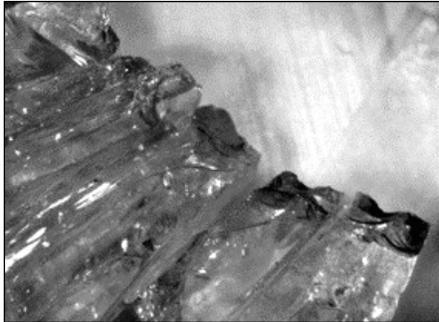
Now, as you all know, there are many forensically-oriented university programs to help you prepare for jobs in the countless fields related to forensic science. Of course you are all aware of the resources of the American Academy of Forensic Sciences and various links. The focus of these educational programs varies a great deal. That should be important to anyone who has a special interest in one area.

So my question to you is, "Why do you want to be a forensic scientist?" If your interest stems solely from what you've seen in the popular media you need to recognize what I call "The Good, the Bad, and the Downright Ugly..."

Yes, there are some great things about working in any of the forensic sciences. It is interesting and no two cases are

quite the same. There are very few fields where a bachelors or masters degree makes it possible for you to have a job this interesting.

It can be tedious. Try finding the right parts and rebuilding the bullet hole area of a vehicular side window from a 5-gallon bucket of glass fragments. Talk about a jigsaw puzzle with no picture! I suspect that the YFSF Secretary probably remembers that one.



Portion of a "reassembled" bullet hole in a vehicular side window from an officer involved shooting

Cases can take a long time - not 43 minutes - to be completed and with the workloads in most laboratories it is not possible to devote all of your time to one case.

Forensic Scientists and Crime Scene Investigators are NOT "Jacks/Jills -of-all trades". Technology has advanced a great deal in my years in this field and it isn't possible to be current in all areas. There are many scientific specialties and in the laboratory we try to correlate our work and communicate with the investigators to solve cases. Those Investigators (*CSI*) need to have enough knowledge to **realistically** decide what to collect and what the lab can do - **not to supervise or conduct the examination**. Most of the technology exists but not necessarily in the form or at the level that it appears on the show (e.g. instant DNA and fingerprint search results).

In many specialties, a lot of "education" is required after you finish school. I currently work in trace evidence analysis but have in the past done serology (for about 20 years into the beginnings of DNA analysis) and bits of other things like toolmarks, serial number restoration, and some drug chemistry. You may think that a particular program prepares you to start working "big cases" -- maybe not on your first day but at least by the end of the week. Some of these areas may seem to be pretty clear-cut, but remember, our regulars don't usually read the script, leave the evidence neatly packaged, and make the right mistakes for us to solve the case in an hour. There are usually nuances that may be important in even the most straightforward case. Remember they watch the shows for pointers on how not to do it!

As for the down right ugly, although few people mention it, you need to realize that there are cases that will really get to you. Things that you handle may be hazardous and/or unpleasant smelling. Imagine that we really do work on cases that involve children or the elderly as victims of violence. As we see in the media, those are hard on everyone but they are especially hard for those of us who need to

know details to work on the evidence. When you work on one of those cases you need to remember that helping to solve it might prevent another incident and might save the life of another person.

As for *CSI*, it may be a good show, BUT remember it is meant to be entertainment. It is not an educational tool! You need to realize that "The *CSI* Effect" is being felt not only at the crime scene and in the laboratory, but also in the courts (just look at the results of a quick web search for *CSI* Effect).

— Michele Yezzo BS  
Forensic Scientist

Fellow, American Board of Criminalistics  
Ohio Bureau of Criminal Identification and Investigation



### Animal DNA Forensics

Courtroom testimony based on animal DNA analysis is increasing in the U.S. Animal bio-material based casework performed at the University of California Veterinary Forensics Laboratory has been used to successfully prosecute individuals in cases of cattle rustling, animal abuse, animal attack, poaching, and to link perpetrators to instances of murder, burglary, and sexual assault since 1996.

Research projects in our laboratory have generated multi-species genetic databanks for performing species-specific statistical analyses of match comparisons and parentage identification. Genetic experiments on which these databases were based upon have also enabled us to design and implement new and improved methodologies in forensic DNA testing. For instance, we have developed an absolute quantification technique that uses a real-time PCR approach for estimating canine DNA in trace amounts. Accurate quantification of target DNA significantly improves genotyping and sequences assays. Similar quantification methods are being developed for the other species tested in our lab as well. Some of these groundbreaking works have paved the way for other funding and research opportunities including one from the U.S. National Institute of Justice to develop and validate a forensic quality canine genetic marker set.

Ultimately, animal forensics is first and foremost dedicated to the increased understanding of and caring for animals. Thus, veterinary forensic genetics has become a part of the University of California Davis School of Veterinary Medicine where students, faculty, and resources are similarly dedicated.

— Sree Kanthaswamy, PhD  
Associate Director  
Veterinary Genetics Laboratory - Forensics  
School of Veterinary Medicine  
University of California, Davis  
<http://vgl.ucdavis.edu/forensics/index.html>

## The Importance of an Internship

The importance of an internship is one of the many points stressed from the first day of your college career to graduation - at least for those pursuing a career in forensic science. However, by the time commencement exercises approach, you will be thankful you acquired an internship and gained the readiness to enter the professional field of which you have spent years in preparation.

As a recent college graduate currently working in the forensic science field, I can attest to the benefits of an internship. Throughout the Winter/Spring semester of 2002, I began to search for an internship via the web for crime laboratories in all fifty states. A list was compiled of each state's crime laboratories, and a series of phone calls or emails inquiring each lab's policy on accepting interns were placed. Most of the labs that did not accept interns were unable to primarily due to a lack of funds. Hence, my list was shortened, narrowing the search for available internship possibilities. The labs remaining on the list requested a cover letter, resume, and college transcripts. I prepared my cover letter indicating my class status and major, area of interest, and why I wanted an internship. After sprucing up my cover letter and resume, I sent the paperwork to the laboratories and waited for replies. A couple of months passed and a few rejections came in, coupled with interviews. Prior to interviews, I studied my resume, making absolutely sure that I was able to explain everything. I thought about what I had to offer and why I wanted an internship with that particular lab. Another waiting period followed the interview process, bringing more anxiousness, but soon after offers were made.

The hardest part became choosing an internship. In the end, I chose the Utah State Crime Lab. Packing my car with the essentials, I set out to take my second step towards becoming a forensic scientist. I was full of excitement and nervousness. I was scared of the expectations the laboratory would hold of me and me of them. I was hoping the education I had received would provide me with the background and knowledge to fully gain all I could from this experience.

While in the Utah lab, I had the opportunity to observe analysts examining evidence from homicide and sexual assault cases, short tandem repeat analysis, and the moot court process that prepares analysts for testifying as an expert. I was able to perform serological tests such as the Kastle-Meyer presumptive test. I also worked on the CODIS database and a validation study of saliva stain mapping. The experience enabled me to understand the science behind the procedures performed made ideas read from a book clearer. Another very important quality of my internship was the many contacts I made in the field along with some very good friendships.

When it came time to leave, I said my goodbyes, obtained contact numbers, packed my car, and set out to return home. I decided that this was what I wanted to do with my life. I had so much fun while learning that I had a great summer far away from home, a sense of being a bit more prepared for the 'real world' and ready for anything.

I was so excited about everything I had learned that I could not wait to graduate and get a job in the field. I felt as if my senior year was going to last forever. Upon my final year of college, I took more forensic classes and made informal presentations about my internship to underclassmen. I also constructed a poster of the validation studies that I presented at the Northeastern Association of Forensic Scientists (NEAFS). Having an internship opens more doors than just gaining experience. My experience was a valuable asset during my interviewing process for jobs. When hired at the New York City Office of Chief Medical Examiner, I was asked questions about my internship during my interview. Even now I look back to my experience in another ASCLD/LAB accredited forensic laboratory to compare how labs differ.

An internship will give you the opportunity to learn a lot about yourself and step forward in your career. By the end of your internship, you will have learned whether the field is truly for you. Either decision steps can be made to progress further or to try something else. The contacts made will be beneficial for job opportunities after graduation and later in your career. The application of the ideas learned from classes is the most important aspect of an internship. It is something to go through the motions of learning the theory, but it is a whole new level of understanding that is enlightening to know how the theories fit into the job you desire to do.

My advice for all students seeking to obtain an internship:

1. Compile a list of labs that offer the area of interest.
2. Contact the lab.
3. Prepare a cover letter and resume and have a professor/ advisor edit it.
4. Send all requested paperwork promptly.
5. Make sure to ask if the lab contact would prefer to have your email, fax, or use U.S. mail.
6. Replies may not come quickly, but be patient.
7. Know your resume inside and out.
8. Be calm and relaxed during your interviews and confident on the answers you provide.
9. Be honest. If you are unsure or do not know the answer to the question, tell the interviewers so.
10. During your internship, do not be afraid to ask questions. Your purpose there is to learn. No matter what task is asked of you, try to learn how it fits into the workings of the lab. Every task is important in some way to a smooth running laboratory.
11. Upon completion of your internship remember to thank the lab staff for taking the time to show you the ropes, so to speak.
12. Most of all...enjoy!

— Melissa Smith  
Forensic Scientist

New York City Office of Chief Medical Examiner

## Young Forensic Scientists in the News!

Young Forensic Scientist extraordinaire and past YFSF Secretary **Sheila Dennis** traveled to Beijing, China, with Dr. Theresa Caragine to identify Thailand tsunami victims using DNA at the Beijing Genomics Institute (BGI) in China.



Front row: Dr. Jian Wong, Sheila Dennis, Dr. Theresa Caragine  
Back row: BGI forensic scientist, Tianyou Man,  
Dr. Yajun Deng, Lilli, and Dr. Jun Yu



Sheila Dennis working hard in the Beijing  
Genomics Institute Laboratory

If you know of something extraordinary that a young forensic scientist has done, please send it in. We might just feature it in the newsletter!

— Jeannette Perr, BS  
YFSF Secretary

## YFSF Bring Your Own Slides

The YFSF Bring Your Own Slides is an excellent opportunity for a young forensic scientist in any field of forensic science to give a short 10 minute or less presentation to a diverse audience of their peers. The request for presenters begins now, so please send an email to [Robin.Bowin@mail.wvu.edu](mailto:Robin.Bowin@mail.wvu.edu) if you are interested in participating. This year we are going to try to accommodate more presentations to make the session even more interesting, diverse, and exciting! Presentations should cover research into forensic science or interesting case work.

— Robin Bowin, BS  
YFSF Program Co-Chair

## YFSF Breakfast Session

It's hard to believe that it's already time to start planning for the next AAFS meeting, but here we are again! I will be taking on the job of Breakfast Session Chair for this year's meeting in Seattle, and I hope it will be one of our best. This year we are planning on expanding the resumé review to include reviewers from a wide variety of state and federal laboratories. We would also like to provide advice from professionals in the field on how to write answers for Knowledge, Skills, and Abilities questions and on how to prepare for interviews. The planning has just begun, so watch for more updates as we count down to Seattle 2006!

— Amanda Frohwein, BS  
YFSF Program Co-Chair

## 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](mailto:allison.curran@fiu.edu)) and YFSF Secretary **Jeannette Perr** ([jeannette.perr@fiu.edu](mailto:jeannette.perr@fiu.edu)) can answer any questions you may have about the YFSF and are looking for many different levels of young forensic scientists to participate in next year's session.

— Jeannette Perr, BS  
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](mailto:jeannette.perr@fiu.edu)).

Look for the improved website soon!