

# Young Forensic Scientists Forum *Newsletter*

**AMERICAN ACADEMY OF FORENSIC SCIENCES**

November 2005

Editor: Jeannette M. Perr, PhD

## **YFSF Special Session**

Everything for the Young Forensic Scientists Forum Special Session 2006 has been finalized. All we're waiting on now is YOU! We hope to see some new faces at this session, and look forward to seeing some old ones as well. "Frontiers in Forensic Science" is shaping up to be one of the best YFSF Special Sessions to date. We're busy putting on the finishing touches. However, there are still a few surprises that are in the works. Here's a breakdown of what is planned. We've assembled eleven presentations from perhaps some of the most diverse and interesting backgrounds in forensic science today. At the end of the academic session there will be a multidisciplinary talk on the Science of Mass Disaster, presented by young forensic scientists who have been involved in situations such as 9-11, the Tsunami, and the recovery of mass grave sites that you won't want to miss. Back by popular demand this year will be the 3rd Annual YFSF Poster Session social which is being held on Tuesday night after the Special Session. The annual breakfast is shaping up to be the best yet which will include a panel discussion on interviewing skills, a resume review, and a presentation on how to approach answering Knowledge Skills and Agility (KSA) questions. Hope to see you in Seattle!

– Allison Curran, BS, BS  
YFSF President

## **YFSF Bring Your Own Poster**

The YFSF is hosting a poster session to be held during the 58th Annual Meeting of the American Academy of Forensic Sciences. This is an excellent chance for students and those new to the field to present their research or work. Also, all levels of education and expertise are welcome to present ongoing research and case studies at the session. Last year's poster session featured a forensic text book giveaway for visitors of the poster session. The textbook giveaway is scheduled to occur again at this year's poster session. Presenters will be able to speak about their work in a comfortable environment while learning about research available at other institutions and meeting other researchers and employers. Students interested in furthering their education in the field of forensics will have

the opportunity to learn more about research at several prestigious institutions which participate regularly at the poster session. Members and affiliates from all levels of the Academy participate and view the poster session held by the YFSF. Last year's posters covered topics such as forensic chemistry studies in explosives, vehicle paint analysis, congenital heart defects caused by the toxicity in ground water contaminants, and a ballistics study. If you are already presenting at another poster session, this is a great opportunity for you to reach another audience. Those interested in presenting a poster should contact Marrah Lachowicz at Gradpath@aol.com or Jennifer Mercer at jwiseman@mix.wvu.edu. We hope everyone has a wonderful Thanksgiving and we are looking forward to seeing you in Seattle in February.

– Marrah Lachowicz  
YFSF Program Co-Chair

## **YFSF Breakfast Session**

Planning is underway for the 2006 YFSF Breakfast Session which will focus on attaining a job in a forensic science field. This year we will continue to offer a résumé 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 KSAs 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

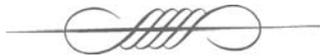
## YFSF Bring Your Own Slides

Presenters are needed for the YFSF Bring Your Own Slides Session! 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 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 Bowin, BS  
YFSF Program Co-Chair

## 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 scientist's thirst for knowledge. In the November issue we are lucky to present a convocation address given by best selling author **Ken Goddard** and Director of the National Fish and Wildlife Forensics laboratory to the SOSC freshman.



### Forensic Pigeonholes

#### A Convocation Speech Given September 19, 1993 to SOSC

I would submit to you that 'eccentric' people, entertaining as they may be, are rarely invited to give convocation addresses. Thus, I owe this privilege to the trust and friendship and good humor of Dr. Joe Cox and Dr. Stephen Reno — both of whom share a trait that is sadly all too rare these days: that is, a cheerful willingness to step outside their fields of expertise and explore. I'll explain the importance of THAT in a moment.

Dr. Reno and I have been seeing a lot of each other recently, going back and forth on the shuttle flights between Medford and Portland. And during those flights, if the seating works out, we often get a chance to sit together and talk — often on topics far away from our own disciplinary fields. I've come to look forward to these conversations; one, because I get very tired of talking with government bureaucrats, and two, because I often leave the airport with a new perspective of what it is I'm trying to accomplish with my life.

One of the things I've come to understand, thanks to Dr. Reno, is that every one of the major successes of our new and unique laboratory — and we've had several over the past four years — have occurred because members of our staff have been willing to do something revolutionary for a scientist ... which is to break through the self-imposed boundaries of their

disciplinary field of expertise, and look at a problem from a different point of view.

You may be wondering, at this point, what in the world I'm talking about. Or more to the point, why should you, as entering freshmen, even be concerned about breaking through boundaries at this point in your lives. After all, you say, you're just starting out here. This is your first day. You don't even have a discipline to break yourselves out of yet. But that's not true, because you do.

Whether you realize it or not, each and every one of you created a nice, roomy — and absolutely imaginary — box for yourselves. You and your parents proudly put a label on that box that says 'college student.' And you've cheerfully hopped inside, all ready to go. For the purpose of this talk, we'll call this box a pigeon-hole.

Some of you may have noticed, when you cheerfully hopped inside that nice roomy pigeon-hole, that you effectively isolated yourself from all of your friends who are not going to college. But if you did notice, you probably didn't worry about it all that much because you figured — rightly so — that there would be lots of people in this new and imaginary pigeon-hole of yours ... and therefore lots of opportunities to make new friends and meet interesting people.

And even when you got that acceptance letter in the mail — which effectively slapped an SOSC College Freshman label on your pigeon-hole, and thereby made it a whole lot smaller — you probably didn't worry about that very much either, because you figured there'd be a lot of freshmen at SOSC just like you. And that's true, there are. Just look around the auditorium here. It's actually a pretty big place, as far as pigeon-holes go. But most of you weren't satisfied, were you? You just had to go and make it smaller.

The School of Arts and Letters, The School of Business. The School of Sciences, The School of Social Science and Education. Most of you have already picked one, haven't you? Oh, and did I mention that the management here is going to be telling you, very soon, that somewhere along the line, you're going to have to select a major? Anybody starting to feel just a little bit isolated, and claustrophobic as the walls of your imaginary pigeon-hole keep closing in? I hope not, because what I'm going to tell you today — advocate, in fact — is that you should resist THAT feeling with every fiber of your being as long as you possibly can.

Now, before President Cox starts reaching for my throat, or a can of mace: I'm not advocating that you rise up in revolt right here in this auditorium and refuse to select a major. There's a purpose — and a value — to selecting a major. Among other things, it helps you to focus on a career.

What I want to point out is a simple fact: that there are only five walls to your imaginary and rapidly-narrowing pigeon-hole. Not six. The front is open. There is absolutely NOTHING to prevent you from getting out of that pigeon-hole and wandering around and looking into some of those other pigeon-holes ANY TIME YOU CHOOSE TO DO SO. And if you do, I would suggest to you that your lives will be immeasurably enriched, far beyond your wildest dreams. Nonsense, you say? Being a white-haired old fart — if you'll pardon the expression — and a self-admitted federal government bureaucrat to boot, how can I possibly imagine your wildest dreams? Well you're

right, I can't ... and I wouldn't presume to try. But what I will presume to do is offer you a vision of what other people – among them, three of your fellow students at SOSC – have done to break away. But before I do, I want to explain my personal interest in this topic, and why Provost Reno's comments on one of those airplane trips touched a nerve:

I pigeon-holed myself early in life: back in junior high school when I realized that I liked science – mostly, I suspect, because I had a real good science teacher that year. By my freshman year in high school, I knew I was going to be a scientist, and thus found myself separated out into the category of 'college bound, future scientist.' By my junior year, I knew that I wanted to be a biologist (I had a real good biology teacher that year), and by my senior year, I had willingly – even, as I recall, enthusiastically – jumped into a much smaller box of college bound, scientist, biochemist! I was on my way! And my own imaginary pigeon-hole was getting smaller and smaller every day.

I was your age when I entered the University of California, still determined to become a biochemist. And it wasn't until my senior year, with two months to go before I graduated, that I realized I'd made a serious mistake – because I knew by then that I really didn't like biochemistry. But, at this point in my life, it simply didn't occur to me that I could break away. From my narrowly focused point of view, from deep inside that self-constructed little pigeon-hole, I felt that I had already chosen my path, and that it was too late to turn around and go back or to break out, and look elsewhere. And besides, I wanted to get married to Gena – still my best friend and wife after all these years – and I needed a job. Therefore, the solution was simple: I had to become a biochemist.

It took a judo accident, two weeks before graduation, to toss me out of that frustrating pigeon-hole. The black belt instructor also happened to be a sergeant on the Riverside County (CA) Sheriff's Department. He took me from the hospital (all taped up and drugged to the gills) to meet the Sheriff. It seemed they were looking for someone to work in their crime lab, but having trouble finding interested candidates (this being the infamous 'sixties'). Two weeks later, I graduated, got married to Gena, drove down to the Sheriff's office, and proceeded to raise my right hand. To my absolute amazement (not to mention Gena's) I was now a deputy sheriff/criminalist.



*Ken Goddard at the National Fish & Wildlife Forensics Laboratory in Ashland, OR*

I won't bother to describe the path that my life took from then on. Suffice it to say that I worked my way up from crime scene investigator to the position of police crime lab director, and then jumped out of my ever-narrowing pigeon-hole again. This time to join the federal government ... and to create, of all things, a national and international wildlife crime lab, the first of its kind anywhere in the world, which ended up being built – of all places – in Ashland, OR. Now it may seem to some of you that I've done exactly what I am advocating you not do; that is, narrowly focused myself into what must sound like a VERY small pigeon-hole. But that's not the case at all. If anything, I've discovered links to literally thousands of fascinating pigeon-holes that I never knew existed; every one of which is accessible right in Ashland, OR, at SOSC ... which means they're accessible to you, also.

Let me tell you about a few. I'm going to start by telling you about a fellow named Dr. Ed Espinoza, the chief criminalist of our laboratory. Ed grew up in Chile, left his country to study in the United States, completed his doctorate in forensic science at U.C. Berkeley, and was described by Dr. John Thornton, his advisory professor, as one of the most impressive PhDs to ever come out of the Berkeley forensic science program. John recommended that we hire Ed immediately, and we did so ... not exactly immediately, but pretty quickly in terms of the federal government hiring process.

The first thing I should tell you about Ed is that he's one of those oddities in science these days: a researcher who has no idea he even has his own pigeon-hole, because he truly loves to explore. Ed, by the way, is responsible for three of the four major discoveries of our laboratory to date.

I asked him to figure out how to distinguish ancient from modern ivory carvings, a problem that has been unresolved for over a hundred years. He started by accumulating and reading every article that has ever been written on ivory over the past 100 years. Four months later, he had solved the problem using a \$250,000 scanning electron microscope, and a 25-cent child's protractor – a wonderfully simple and elegant piece of research for which he won an international forensics award.

I asked him to figure out how to identify bear gal bladders, because bears are being killed all over the U.S. simply for their paws and gal bladders – which are believed to have magical medicinal properties. It's a cultural issue, as much as a law enforcement issue. He solved the problem in six months, and in doing so exposed a fascinating international scam: the fact that a vast majority of the bear gal bladders being sold to the orient are pig. They're fakes. All of which has had a very interesting impact upon Asian 'culture' in the United States. Now I realize this sounds all very nice: discoveries made by a PhD scientist who's being paid to be creative and innovative. But what could this possibly have to do with you, and the reason we are all here today?

Let me give you three examples, three junior and senior SOSC students from the chemistry department who volunteered to work with Dr. Espinoza, and were given a chance to explore. And let me tell you what happened when Ed offered to take them around exploring other pigeon-holes. Now then, do the words Jurassic Park ring a bell?

If there is anyone in the audience who has somehow managed to avoid both the movie and the book, I will sum-

marize the story for you by saying that both involve 1) a man who wanted to create an unusual amusement park; and 2) a DNA-type scientist who isolated some dinosaur DNA from some amber, used some frog eggs as a template, and created – among other things – a Tyrannosaurus Rex, whereupon things started going down-hill at a rather rapid rate. It's an amusing story, and a scary one too, but it also lacks a certain degree of scientific reality. Or, at least, so I thought, until we were asked to work a Tyrannosaurus Rex crime scene.

At his point, you should be a little bit confused, because if nothing else, it's not illegal to kill a Tyrannosaurus these days. In fact, fortunately for us humans, it's downright difficult to do so. So why, you might ask, would a wildlife law enforcement crime lab be working a dinosaur case? Well, it seems there was a dig site – an archeological dig – in the Midwest that had a problem: someone was sneaking in at night and digging up and stealing the Tyrannosaurus bones. So the question posed to us was: can we use our crime scene techniques, and our brand new DNA technology, to match the stolen bones to that specific skeleton? To no great surprise, Dr. Ed Espinoza jumped at the chance.

Now I must tell you that as a crime lab director, I have this reoccurring nightmare that I am rummaging through some bureaucratic paperwork one day and discover that I have allowed Ed and his DNA associates in the lab to purchase a dozen frog eggs and a large choker chain. But in spite of my underlying uneasiness, I did allow Ed to take on the case – which is where SOSC chemistry student Kelli O'Connell comes in. She volunteered to work with Ed, to learn something about the chemistry of dinosaur bones. And the next thing we know, she has fossilized pieces of a Tyrannosaurus in her hands, and is conducting chemical analysis as to what constitutes a dinosaur bone with wide-eyed enthusiasm. Now, for those parents in the audience who have students entering the other three Schools at SOSC, and might be starting to feel a bit concerned about the nature and stability of the people in the School of Science: not to worry. The term 'mad scientist' is just an affective term, not a job description.

However, at this point, Ed realized that he needed to know a lot more about fossils before he could figure out the Tyrannosaurus Rex problem. Enter SOSC students Mike Garen and Ken Sikes. After several weeks of working with Ed, the three of them came up with a technique to make fake fossils (that is using high pressure to infuse minerals into bone), which was done right here in the chemistry labs of SOSC. This work will be published soon, and is likely to have an interesting impact on the field of archaeology.

Now you'd think that all of this research into such fascinating things as dinosaur bones and fossils, along with all of his casework, would keep Ed sufficiently busy that he wouldn't have time to get involved in anything else. But not so. It seems that about three months ago, now, Ed and Mary-Jacque, our senior firearms examiner, got to talking about matching the striations on bullets – an old-fashioned technology in which there have been no significant advances since the 1920s.

You must understand at this point that Ed, in his spare time, had been reading about fractal mathematics and chaos theory. I don't know why; he's just like that. One morning, after

reading some arcane text on the subject, he made the comment to Mary-Jacque: "Gee, it's too bad that the striations in a bullet aren't fractals, because then we could computerize a bullet match, much in the way that we do a fingerprint." Mary-Jacque looked at him and said, "but I think they are."

Ed then ran back into his office, began working frantically, and then ran head-long into an area of mathematics he didn't understand. So he immediately went to Stu Mitchell, our electronics engineer, who happens to be a talented mathematician, but who also knows nothing – and cares even less – about matching bullets. The three of them got together and worked on the project for another couple of weeks – which is where Kelli O'Connell comes in again.

Remember Kelli? The dinosaur bones? Well, Kelli became part of the project, and I can now report to you that they did it: a brand new discovery that is about to revolutionize the science of bullet matching in forensics. Something that has never been done before [note: this occurred before the development of NIBIN, IBIS and DRUGFIRE]. And it happened in our beautiful little part of the world. All because people like Ed, and Mary-Jacque, and Kelli, and Mike, and Ken were all willing to step out of their disciplinary boundaries, and to look at a problem from a different point of view. Because in doing so, these people – your fellow students here at SOSC – made creative breakthroughs in how we, as scientists and as people, understand a few more parts of our very complex world.

I seriously doubt that Kelli, or Mike, or Ken had any idea, when they were freshmen sitting here in this auditorium, that they would be analyzing pieces of real dinosaurs, and making fake fossils, and teaching the FBI lab – and all of the other crime labs in the U.S. – something new about bullets. But they did.

You all are about to start on a fascinating adventure here at SOSC. You're going to be exposed to a multitude of concepts and ideas. You're going to be asked to discipline yourselves and work hard. And you are going to be challenged to think for yourselves, which is the most difficult task of them all.

And while ALL of you are doing that, a few of you – the adventuresome ones – are going to be making creative breakthroughs of your own, because the opportunities will be there. You just have to pull yourself out of your self-created and ever-narrowing pigeon-hole every now and then, and look around.

And if you need help in finding a new and interesting pathway, go to your professors. Talk with them. Ask their advice. That's what they're here for, to guide you to areas and ideas that you've never seen or thought about before.

— Ken Goddard, MS  
Director, National Fish & Wildlife Forensics Laboratory

**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!**

## Educational 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* features two FEPAC accredited universities, West Virginia University and Florida International University.

### Forensic and Investigative Science at West Virginia University

West Virginia University is a public, land-grant institution, and was founded in 1867. WVU is located in Morgantown West Virginia, which was recently rated No. 1 Small City in America for its exceptional quality of life. WVU ranks nationally in the number of students who have garnered prestigious scholarships, including 25 Rhodes Scholars, 16 Truman Scholars, 26 Goldwater Scholars, 2 British Marshall Scholars, 2 Morris K. Udall Scholars, and 5 USA Today All-USA College Academic First Team Members. The university consists of 14 colleges and schools offering 171 bachelors, masters, doctoral, and professional degree programs. WVU's Forensic and Investigative Science program is the fastest growing undergraduate curriculum at the university and is attracting students throughout the nation.

*"WVU's forensic science programs are leading the way in national forensic research, education, training, and academic curriculum development. The Forensic Science Initiative is answering the call for cutting-edge forensic technology and highly-trained forensic specialists. The university's efforts are helping to convict criminals and make America safer,"*

— Senator Robert C. Byrd

The Forensic and Investigative Science Program was established in 1997 through a partnership with the FBI. This program consists of three areas of emphasis including Forensic Biology, Forensic Chemistry, and Forensic Examination. Students choose an area of emphasis at the end of their sophomore year, after having completed a rigorous two-year science curriculum. Students must also partake in an entrance interview with the forensic admissions committee. The purpose of the interview is to expand upon any component of the application packet and to ensure the students can present themselves professionally. Graduates pursuing careers in forensic science will likely have to provide courtroom testimony and the ability to respond to questions is vital to their employment. The forensic curriculum includes a summer internship and/or research project of 140 or more hours. Students utilize laboratory space, otherwise known as 'crime scene houses', advanced equipment, and a diverse range of professors, many of whom have extensive forensic backgrounds. Upon graduation, students have the skills to work in crime laboratories or in other forensic-related settings. If students wish to continue their education, they are well prepared for graduate, medical, law, or dental schools.

Former students have accepted positions in local, state, and federal agencies, as well as the aforementioned postgraduate schools.

West Virginia University offers forensic students a wide range of resources. The most distinctive being the crime scene house complex. This complex is made up of 3 crime scene houses and a forensic garage. Students utilize the facilities in classes such as Bloodstain Pattern Analysis, Crime Scene Investigation, Forensic Photography, and Expert Testimony. In addition to the buildings, students also have access to an Automated Fingerprint Identification System (AFIS), an Integrated Ballistic Identification System (IBIS), and 2 crime scene vehicles. The most significant resource offered to students is a faculty comprised of highly regarded professionals. The current faculty for the program includes Dr. Clifton Bishop (Program Director/Biology), Max Houck (Research Director), Dr. Suzanne Bell (Forensic Chemistry), Dr. Jeffery Wells (Forensic Biology/Entomology), Dr. Keith Morris (Research/Chemistry), Michael Bell (Facilities), Lucy Davis Houck (Quality Assurance), and Ken Bauer (Forensic Photography).



*One of three crime scene houses located on the campus of West Virginia University*

Recently, West Virginia University has also added two new academic programs: Criminology & Investigations and Forensic Accounting and Fraud Investigation. Criminology & Investigations is offered through the Department of Sociology and Anthropology. Criminology focuses on providing an understanding of society as a normative order with ever-changing definitions of conformity and deviance. Investigation focuses on exploring the processes and procedures employed by those individuals and groups in the criminal justice system who seek to establish "truth" in the furtherance of justice. Forensic Accounting and Fraud Investigation recognizes the widespread growth of white-collar crime, including both fraudulent financial reporting and misappropriation of asset schemes. In the past, most practicing forensic accountants developed investigative techniques and skills through on-the-job experience. Because of the growing demand, there is a need for academic programs that help prepare entry-level accountants with the knowledge and skills needed to enter either forensic accounting or fraud investigative careers.

In addition to the coursework offered, WVU also has the Forensic Science Initiative. This program was established for research, professional training, and facilitating novel technologies for the forensic sciences. The Initiative has designed

and delivered innovative solutions for scientific and legal challenges critical to the forensic science community, thereby increasing the quality and professionalism of the discipline. With the use of distance learning program technology, the Forensic Science Initiative has established a curriculum of training and continuing education for forensic professionals.

*“The initiative supports forensic science research and professional training, including WVU’s first-of-its-kind specialized undergraduate degree program; develops new methods for collecting and examining evidence; and provides resources to improve forensic science in crime labs across the nation.”*

— Senator Robert C. Byrd

Current research projects include a method for estimating how long a blood stain has been at a crime scene (at the moment, this method can date a tiny blood speck out to 150 days); working with the FBI’s CJIS in Clarksburg, WV developing software that automatically searches dental x-rays to improve sorting missing persons and in mass disasters; developing specialized evidence processing software to increase efficiency and reduce backlogs at West Virginia State Police Laboratory’s DNA Unit; using fractals to improve fingerprint search algorithms; and digitally watermarking fingerprint files to include images, text, and other information that is secure and visible only to those with the proper clearance — without affecting the file’s integrity.

West Virginia University was granted FEPAC accreditation in 2005. The Forensic Education Programs Accreditation Commission (FEPAC) maintains and enhances the quality of forensic science education through formal evaluation and recognition of college programs. The accreditation will guarantee the public that WVU is being held to the highest standards of forensic science education. To learn more please visit WVU’s website (<http://www.wvu.edu/>) and the Forensic Science Initiative website (<http://www.wvu.edu/~forsci/index.htm>).

— Robin Bowen

*Alumni, West Virginia University, 2003*

*Forensic Resource Assistant, Forensic Science Initiative,  
West Virginia University*

### C.S.I. Miami? Separating Fact from Fiction at FIU

Florida International University (FIU) is located in the vast multicultural hub of Miami, FL. For me, the prospect of leaving cold/rainy Scotland (even in the summer it’s like that) for a stint in the sub-tropics of Miami really seemed quite an attractive proposition. Images of Miami Vice and the hip South Beach lifestyle sprung to mind. What sweetened the deal was the realization that FIU offers one of the best graduate programs in Forensic Science.

FIU was inaugurated in 1972 and in the past 3½ decades has rapidly grown into one of the nation’s most successful public universities. FIU has currently 35,000 students, 1,000 full-time faculty, and 110,000 alumni, making it the largest university in South Florida and placing it among the nation’s 25 largest colleges and universities. FIU has also been ranked in the top 100 national public universities in U.S. News and World Report. As far as research, FIU shares the State University System 1 (SUS1) research rating (Doctoral/Research

Universities—Extensive) with only 3 other Florida schools, USF, UF, and FSU. The Department of Chemistry and Biochemistry is home to the International Forensic Research Institute (IFRI), a multidisciplinary research center that combines faculty from chemistry and biology, with select professors from physics, engineering, and the arts. IFRI is partnered with several professional bodies, like Quality Forensic, Inc., the Drug Enforcement Administration, Miami Dade Police Department, the Dade County Medical Examiner’s Office, and the Broward Sheriff’s Office, to name a few. FIU has offered a Masters in Science in Forensic Science for some time, and began their Doctorate of Philosophy in Chemistry with an emphasis Forensic Science in 2004. Before the Forensic Science Ph.D., doctoral students could enroll in the Doctorate of Philosophy in Chemistry and conduct forensic science research. In 2004, the Forensic Science graduate program at FIU was one of the first five in the United States to be accredited by the AAFS. There is also a Certificate in Forensic Science available to undergraduate students.

The course menu at FIU is extensive; it includes core subjects in chemistry and biology, in addition to the forensic specialties of toxicology, forensic chemistry, DNA, forensic biology, drugs of abuse, and explosives. There are also classes offered that study the criminal justice aspects of a degree in forensics and practical hands-on workshops by expert forensic scientists in the field; both ensuring a well rounded and comprehensive degree experience. Practicing forensic scientist also attend FIU’s workshops increasing student exposure to current practicing scientists. The core ingredient of the forensic science graduate programs is the research requirement. Students are expected to produce their own proposals and conduct independent research with the goal of producing the required thesis/dissertation. Faculty support at FIU makes the whole process about as painless as graduate school can be. Research includes detector dog research, improved explosive detection, mtDNA analysis, human scent analysis, trace elemental determination, molecular and chemical characterization of soil, blood alcohol analysis, and post mortem interval determination, to name a few.

School spirit and amity amongst the graduate student population is high, with regular social activities planned by the school’s Graduate Student Association and Chemistry Graduation Student Organization. The GSA and GSO also provide funds towards individual research and conference travel. The opportunity to travel to a conference to present some of your work is of course, often the highlight of conducting your own research. Conference attendance is actively encouraged by IFRI, who has maintained a heavy presence at the AAFS Annual Meetings for some years now. Additionally, with money from grants, and university sources, many of the graduate students have attended several other conferences both in the USA and abroad. In the course of a 4 year study at FIU, I’ve traveled to Chicago, IL; New Orleans, LA; Portland, OR; Dallas, TX; Portland, ME; Orlando, FL, and Ft Lauderdale, FL not to mention internationally to Ottawa, Canada; Edinburgh, Scotland; Montpellier, France; and London, England.

Of course all work and no play makes for a dull graduate school experience, and Miami is the ideal base camp for

kayaking in the Keys, canoe trekking the 10,000 islands in the Gulf, camping in the Everglades, catching sun on South Beach, taking road trips to visit Mickey Mouse in Orlando, or simply the challenge of dodging hurricanes, all of which I can proudly stake my claim to in the past four years.

Florida International University offered me the opportunity to study at one of the leading forensic science teaching institutions in the United States, to conduct my own research project under the supervision of expertly trained and highly experienced faculty, and to travel to various meetings to present my research findings. All this, and the experience of living in one of the country's most vibrant and multicultural cities leads me to one conclusion; booking the one-way ticket from Glasgow to Miami back in 2001 was the best decision I ever made. To learn more please visit FIU's website ([www.fiu.edu](http://www.fiu.edu)) and the IFRI website (<http://www.ifri.fiu.edu/index.htm>).

— Ross J. Harper PhD  
 Alumni, Florida International University, 2005  
 Lead Scientist, Nomadics Inc, Stillwater OK

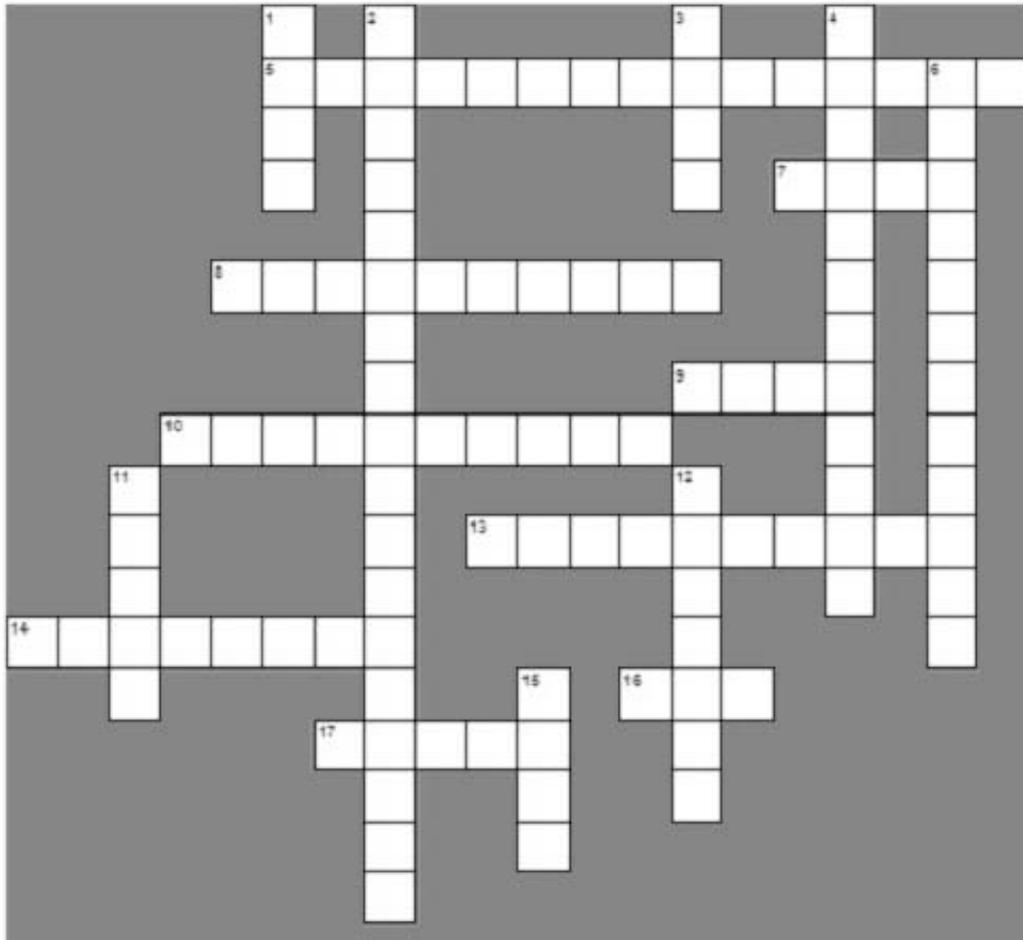
## About the YFSF

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 about the YFSF and are looking to many different levels of young forensic scientists participating next year's session.

— Jeannette Perr, PhD  
 YFSF Secretary

Rack your brain and see if you can solve the first ever YFSF crossword by Melissa Smith of the NYC OCME Department of Forensic Biology. The January newsletter will contain the answers.

### The Forensic Science Crossword



#### Across

5. Applicable science of biological fluids
7. Disintegrated rock and humus
8. Study of physiological effects of toxins
9. Home of national and international wildlife crime lab
10. Obtaining high standards of forensic science
13. Narrow vision (according to Ken Goddard)
14. Illegal hunting of animals
16. Located in Miami (abv.)
17. Maternal inheritance

#### Down

1. Fingerprint system (abv.)
2. Examination of deceitful acts (2 words)
3. Like AFIS (abv.)
4. Amount of -OH in blood
6. Organ typically poached
11. Evaluations of educations institutions
12. Dr. Ed Espinoza-Tyrannosaurus
15. You belong to this (abv.)