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Wisconsin Department of Justice

Crime Laboratory Bureau

Bureau Technical Bulletin

Third Quarter 2016

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To promote excellence in analysis, training and service to the community and our organization with integrity and uncompromising quality.

Many Thanks

The Employee Recognition Program provides staff the opportunity to internally recognize the outstanding work efforts of the team and individual achievements that occur within the Crime Laboratory Bureau. Recently, Dan Haase (right), Lisa Gordee (below), and Kathy Mahnke (not pictured) were recognized by Administrator Brian O'Keefe as recipients of the semi-annual award.

For more information on their individual achievements refer to the first/second quarter newsletter. Below are the third quarter nominees, the laboratory is very fortunate to have such dedicated, experienced, and passionate employees.

Third Quarter Employee Recognition Nominees

Michelle Burns	Becky Ciske	Samantha Delfosse
Patty Dobrowski	Jennifer Honkanen	Melissa Graf
Laura Hedden	Deb Kaurala	Jan Maly
Laura Matson	Nick Marquardt	Angela Schroeder
Lisa Treffinger	Amanda Wiltzius	

New Employees

Please join in welcoming the new staff to the CLB!

Nita Bolz Laboratory Manager-Wausau	Alyssa Byers Office Associate - Milwaukee	Lauren Evenstone Databank - Madison	
Traci Graves DNA - Madison	Jennifer Hostert Databank - Madison	Katie McCoy Imaging - Milwaukee	Tricia Reshel Databank - Madison

Transfers and Promotions

Please join in congratulating the internal transfers and promotions!

Tim Erlandson AFIS TUL - Madison	Jessica Lieske Firearms - Milwaukee	Jenna Scheidt Identification - Madison

Current Recruitments

Here is a status update on open CLB recruitments:

AFIS Entry (Madison): recruitment pending
Controlled Substance (Madison): recruitment pending
Deputy Director (Bureau): recruitment closed, interviews pending

Celebrating 25 Years of Service

Article Written by Fran Lutz, Justice Supervisor

On September 13, the Madison Crime Laboratory celebrated JoAnn Sams' 25 years of service. JoAnn is a very hard worker assisting daily with office duties for the laboratory. In honor of her achievement, Director Jana Champion awarded JoAnn a certificate and challenge coin. To commemorate the achievement JoAnn's sister, [redacted] brother-in-law, [redacted], job coach, [redacted] and a few of JoAnn's past co-workers were all in attendance. In addition, since no celebration would be complete without food, Community Work Services provided a cake, JoAnn's family brought pink lemonade and the Sunshine Club added ice cream to the festivities. JoAnn is very proud of her accomplishment and wore a big smile on her face for the entire day.

Coming Soon: BEAST.NET

Article Written by Fran Lutz, Justice Supervisor

Porter Lee, the vendor for BEAST, has redesigned and rebuilt Beast using the more modern .NET framework. This framework primarily runs on Microsoft Windows and allows for broader programming flexibility. The Wisconsin State Crime Laboratory is currently working on purchasing this upgrade titled: BEAST.NET. While the look of BEAST.NET will be different the basic concepts will be very similar to our current BEAST server allowing for an easy transition. Some of the benefits of BEAST.NET are standardization of all units in the laboratory, updated software, increased user configuration, and modular program. Modular programs mean that each individual unit can update the receive.exe without impacting the entire laboratory. This will hopefully allow for updates to be released more efficiently in the future. The timeline of the new LIMS system is currently unknown but as the project gets underway frequent updates will be provided. In conclusion, while this is a large project that will require everyone's assistance to be successful the new and improved BEAST.NET will be a benefit to everyone and is definitely something to be excited about.

QUALITY CORNER

Hello quality staff

2017 Assessment

We have a date! Our full assessment is occurring the week of February 6th 2017. For those of you who have not experienced a full assessment here is an overview.

ASCLD/LAB assigns us a Lead Assessor (Harry Fox) who reviews our management system (APM, QPM, SPM) verifying we meet requirements. Once we pass this "gap analysis", ASCLD/LAB will start building a team of technical assessors for our accredited disciplines. About 4 weeks before the assessment, each technical assessor (TA) will be sent the appropriate unit procedure manual.

After the team arrives there will be an opening meeting for introductions and to establish laboratory contact personnel. At the end of each day, the Lead Assessor will meet with the Lab Manager to discuss ongoing concerns. There will be an exit meeting on the last day with a reading of findings/concerns. This assessment should take a full week and will likely involve ~20 assessors.

Onsite the assessment team will review case/management records in addition to performing other tasks. The Lead Assessor will work with the LM/LQM/QAC for management document reviews, building security and key logs. The TA assignments include analyst interviews, active testing observations and an *Audit Trail*. The interviews help gauge the effectiveness of the management system and generally 'talk shop'. Observed testing allows the TA to see us in action. The Audit Trail is a tour, with the case analyst escorting the TA through the building 'following the case evidence' from intake to return. Audit Trails give the TA a chance to review security, evidence handling and ask other questions along the way to assess as many requirements as possible.

That's it. This will be fun.

Qualtrax Day ☺

Please select at least one day each week to log into Qualtrax and attend to your QT items.

Statement of Qualifications in Qualtrax

The quality team is working to get the statement of qualifications (SoQs) into Qualtrax. The analyst will be the document manager (i.e. controller) for their SoQ and can update it as needed. This year's quality training will provide instructions for this process. Over time we will be putting more documents (e.g. Job Descriptions) and processes (e.g. Validations) into Qualtrax to centralize and increase visibility for these items.

Nonconformances

Speaking of visibility, the nonconformances from the second and third quarters of 2016 are listed at the end of the newsletter. This list is offered for your information and to help prevent recurrences.

That it for now. Thanks for all your quality work!

Casey Collins, Quality Assurance Coordinator

CRIMINALISTICS

AFIS Unit

Article Written by Tim Erlandson, AFIS Technical Unit Leader

It has been a busy time for the AFIS unit. Many of the changes the unit has undertaken have been in preparation for ASCLD-LAB accreditation by the end of 2016. All AFIS training and procedure manuals are now in Qualtrax, and the unit has also completed the first of two rounds of proficiency tests. Additionally, AFIS is preparing to accept submissions from agencies requesting comparison between tenprint cards and records stored in our system. This new process, starting within a month, kicked off a round of training for technicians in areas such as: evidence, report writing, and courtroom testimony. Other recent trainings include: Advanced Comparison training with the FBI in West Virginia, LPO, the MorphoTrak conference, and Evidence Technician School. The AFIS staff has also worked with CIB and BCS to update the ARMS fingerprint record removal process, and with Adrianna Bast to update chapter 13 of the evidence handbook. Looking forward, the AFIS unit aims to update the existing training program, provide continuing training to all technicians, and to hire a new AFIS technician after Jenna Scheidt's promotion to the Identification unit. The AFIS unit looks forward to the upcoming challenges, and to another opportunity to review a quarter's accomplishments.

Identification Unit

Article Written by Karley Hujet, Identification Technical Unit Leader

- Jenna Scheidt is transferring from the AFIS Unit to the Identification Unit in Madison on October 17, 2016.

- Chuck Cates will be retiring from the Identification Section in Madison this fall. Chuck has been at the lab since 1997 and previously worked as a Detective/Crime Scene Technician/Latent Print Examiner at the Cheyenne Police Department. In addition to working in the Identification Unit, while at the WSCL Chuck was a part of the Crime Scene Response Unit & the Field Response/Training Coordinator. His vast knowledge in the fields of fingerprints, footwear, and tire tracks and his unique sense of humor will be greatly missed.

- Jace Klimeck completed validations of two new versions of Physical Developer (PD) which is a process which reacts with the water insoluble, sebaceous portion of latent print residue on porous surfaces. PD is particularly useful on porous items that have been wet because the sebaceous portion of a print can remain after the amino acid components are washed away.

  The first version is a pre-mixed version which will be quicker to prepare than our current version and the second version uses a substitute detergent (Tween-20) in place of Synperonic-N, which is the detergent we had been using. Due to environmental concerns, many companies have discontinued selling Synperonic-N and Tween-20 has been validated and is currently being used by the U.S. Secret Service.

- As part of his latent print training, Jace is also working on a study comparing the three main amino acid processing techniques that we currently have in our manual for porous items (DFO, Indanedione-Zinc Chloride, and Ninhydrin). The goal is to learn which techniques generate the best results and which processing sequence will yield optimal results so that it can be implemented by all analysts.

CRIMINALISTICS

Forensic Imaging Unit

Article Written by Aaron Matson, Forensic Imaging Technical Unit Leader

The F.I.U. is always trying to explore additional methods to obtain the most visual information from the evidence submitted to the unit. Sometimes the most fascinating results are those outside of the visible spectrum. It's pretty humbling if you stop to think about how little, we humans, can actually see.

Taking photographs outside of the visible spectrum is nothing new as it has been done for many years with film. The beauty of our digital realm is that we can see outside of our visual limitations in real time! For a simple example of this, did you know that if you look at a remote control through your cell phone's camera, it will see the IR being emitted when you push one of the remote's buttons?

(assuming you have functioning remote with working batteries)

What you see ↑

What your digital camera sees ↑

So back to what that does for us at the lab… using specialized/modified imaging equipment, well beyond that of our cell phones, we are able to see even more into the IR spectrum as well as the UV spectrum. With UV/IR imaging we are able to separate many stains from fabrics, drop patterns in some fabrics, detect counterfeit currency , enhance gunshot residue and enhance bruises to name just a few applications.

In this example, through IR imaging, we can better visualize the blood stains on this jacket ↓

CRIMINALISTICS

Here we can see a more of a tattoo through an injury ↓

Or through obliterated writing ↑

Another tool available at all three labs is the RUVIS system.

The RUVIS (Reflective Ultra Violet Imaging System) allows the detection of latent prints, prior to treatment. This is possible on surfaces that reflect light and do not absorb prints. Untreated sweaty prints show as white reflective ridges on a black background. Untreated oily prints appear as strong, black ridges on a shiny background. This system is portable and designed to be used in the field, or in the lab. The RUVIS requires the use of shortwave UV, and from personal experience, you'll want to protect your eyes and skin when using it.

CRIMINALISTICS

Evidence Technician School

All Evidence Technician Schools for 2016 have been completed. The 2017 calendar is still pending.

Training Opportunities

A First Hand Experience: Evidence Technician School

Article Written by Dan Reed, Senior AFIS Technician

I had the opportunity to attend the Evidence Technician School September 12-16, 2016 in Chippewa Falls. Instructors throughout the week consisted mainly of employees from all three Crime Labs, and the course was attended by law enforcement personnel from around the state, plus a few of us employed at the Madison Crime Lab; one is a DNA analyst, another an Evidence Specialist and I work as an AFIS Identification Technician. I have been on the Crime Scene Response team as a videographer and photographer for a year or so. Not only have I received a lot of training working up to that, but I also have attended many different evidence collection courses in my past employment in the law enforcement field. This course is required to be attended by all CSR members, so I was going to attend whether I thought I needed it or not. I have to admit, I was very impressed with the professionalism and thoroughness of the instructors and assistants, as this course was “top-notch”!

I also heard great feedback from other attendees of the course, as they were impressed with the quality of the training they received. Processing the mock crime scenes near the end of the course was challenging, and it forced me to work with non-CSR team members plus I was not allowed to simply serve as a photographer. It was nice to see the impact this course is making in the law enforcement community first-hand. Many of the officers walked away from the course with the confidence to either know how to process a scene, or to acknowledge when they were over their heads and needed assistance (which is something not easy for many law enforcement officers to admit).

In the future, I hope to help teach portions of this course. Many thanks to Nick Stahlke and his team of instructors and assistants for providing such a great hands-on, instructional course to the law enforcement community!

CRIMINALISTICS

Crime Scene Response Call Outs (July through October)

This was another busy one for the individuals who volunteer for the Crime Scene Response Unit. Here are the response call-outs:

DATE	AGENCY ASSISTED	SCENE TYPE
07/01/2016	DCI - Madison	OIS
07/01/2016	DCI - Milwaukee	OIS
07/06/2016	Brown County SO	Homicide/shooting
07/12/2016	Roberts PD	Suspicious Death
07/12/2016	DCI - Milwaukee	Suspicious Death
07/18/2016	Sheboygan PD	OIS
07/23/2016	DCI - Milwaukee	OIS
07/26/2016	DCI - Wausau	OIS
07/26/2016	DCI - Wausau	OIS and Autopsy
07/28/2016	Sawyer County SO	Homicide/shooting
08/05/2016	Dane County SO	Vehicle Processing
08/05/2016	DCI - Milwaukee	OIS
08/13/2016	DCI - Milwaukee	OIS
08/19/2016	DCI - Appelton	OIS
08/19/2016	DCI - Milwaukee	OIS
08/29/2016	Brown County SO	Homicide/shooting
08/29/2016	Brown County SO	Vehicle Processing
09/01/2016	Prescott PD	Homicide/shooting
09/15/2016	DCI - Wausau	Homicide/shooting
09/15/2016	DCI - Wausau	Shooting and Autopsy
09/22/2016	Vilas County SO	Autopsy

Controlled Substance Unit

Article Written by Sandy Koresch, Controlled Substance Technical Unit Leader

Retirement

In October, controlled substance analyst Dr. Joseph Wermling stepped into the world of retirement after twenty years at the Madison Crime Laboratory. Joseph started his college career at the age of 16 and received his BS at the age of 19 from Thomas More College! He received his PhD from the University of Cincinnati in 1986 in Physical Biochemistry. He has a published doctoral dissertation and twenty papers/abstracts in biochemistry, toxicology, and trace evidence. Joseph taught chemistry and biochemistry at the University of Cincinnati, UW-Madison, and UW-River Falls before coming to work at the Madison Crime Laboratory in the CS unit. Additionally, he has had four research grants funded by the Midwest Forensic Resource Center. He spent time in both the CS unit and the trace unit. [redacted] We will miss Joseph's knowledge and experience and wish him the best in retirement.

Internship

Trevor Christenson from the University of Wisconsin – Madison participated in the internship program in the CS unit this summer. He worked on projects including the use of solid phase extraction of marijuana laced candies and cookies, derivatization of standards for GC-MS, and organization of the Chemistry section SDS documents.

Heroin Project

In the fall of 2015, the Wisconsin Department of Justice was notified it was one of six agencies nationwide selected to receive funding through the U.S. Department of Justice's Community Oriented Policing Services (C.O.P.S.) Anti-Heroin Task Force Program. A portion of these funds are currently being utilized to conduct additional testing on randomly selected heroin samples that have been submitted to the CS unit for analysis. These samples are being tested for their heroin purity levels and other major adulterants present. This data is provided to the Wisconsin Statewide Intelligence Center (WSIC) with the intent that law enforcement agencies across the state may utilized this intelligence information to better understand regional and statewide heroin trends. All three laboratories are involved in collecting heroin samples for the project; however, the analysis of these samples will be performed at the Milwaukee laboratory. Following method validation, the analysis of the first batch of samples was completed in September. Currently, the second batch of samples are in the process of being analyzed.

New Instrumentation

This year the CS unit acquired four new GC/MS systems, two at the Milwaukee laboratory and two at the Wausau laboratory. The Wausau laboratory also acquired a new GC system. Performance evaluations for each of the new systems have been completed and all are being utilized for casework.

Additionally, the Wausau CS unit has acquired the Bureau's first GC-FTIR system. Currently, site preparations are being completed before instrument validation can be completed. The CS unit is very excited to see how this new instrumentation will be able to assist in identification of controlled substances especially with respect to isomers.

Fentanyl and Fentanyl Analogs

All of the labs have seen an increase in fentanyl and fentanyl analogs this year. Due to the high potency of these substances and the possibility of accidental exposure to analysts and evidence specialists, each of the laboratories have secured doses of Narcan® for use in an accidental exposure. Training was mandatory for the CS unit and evidence specialists. Training is recommended for anyone who may be exposed to controlled substance evidence. If you have any questions or concerns about exposure to fentanyl/fentanyl analogs and the use of Narcan®, don't hesitate to contact me.

CHEMISTRY

Training Opportunities

2016 Midwestern Association of Forensic Scientists Review

Article Written by Jennifer Burnside, Toxicology Analyst

The rising trend in heroin overdoses, fentanyl analogues and synthetic cannabinoids were among a variety of topics discussed at the 2016 Midwestern Association of Forensic Scientists Fall Meeting in Branson, Missouri this month. Nationally, heroin overdose fatalities have tripled since 2010 and geographically condensed in the Northeastern and Midwestern regions of the United States. Sara Schreiber, Forensic Technical Director with the Milwaukee County Medical Examiner's Office, presented briefly on the increasing heroin-related cases in Wisconsin since 2013. Additionally, synthetic opioid-related deaths involving fentanyl and fentanyl analogues have increased nationally by 79 percent since 2013. Among the newest of fentanyl analogues is carfentanil; with a potency 10,000 times greater than morphine, safety is a growing concern for law enforcement officers, medical responders and forensic chemists. Personnel who may have exposure to carfentanil were strongly encouraged to become trained in naloxone administration.

The increasing abuse and evolving variety of synthetic cannabinoids was also heavily discussed by Kayla Neuman of the Wisconsin State Laboratory of Hygiene and Tracey Durbin, Missouri State DRE/SFST Coordinator. Demographically targeting males ages 16-58, synthetic cannabinoids are now being considered a "gateway drug" for young users. By stimulating the cannabinoid receptors within the brain, the drug mimics the psychoactive effects of marijuana. However, because the synthetic chemical concentrations are unreliable, users risk psychophysical impairment, respiratory depression, decreased body temperature and fatal overdose.

Looking towards the future, Timothy Rohrig of the Regional Forensic Science Center in Wichita, Kansas and Jarrad R. Wagner, Professor of Forensic Sciences at Oklahoma State University have begun preliminary validation on a portable drug screening device – the Alere DDS®2. The DDS®2 is capable of detecting six drug classes: amphetamines, benzodiazepines, cocaine [BE], methamphetamine, opiates [opioids] and THC. Using oral fluids, law enforcement officers can complete on-site presumptive and evidentiary collection analysis within minutes. Rohrig and Wagner have seen good to moderate correlation so far when comparing DDS®2 results to lab-based analytical testing, but additional field studies are still needed.

26th Annual Clandestine Laboratory Investigating Chemists Association Training Meeting

Article Written by Marty Koch, Senior Controlled Substance Analyst

The 26th annual training conference of the Clandestine Laboratory Investigating Chemists Association was held the week of Labor Day, 2016, in historic, sunny downtown Charleston, South Carolina. Better known by its acronym, C.L.I.C., the Clandestine Laboratory Investigating Chemists Association is the premier international training organization for Forensic Chemists involved in on-site clandestine lab support to law enforcement, and post clandestine lab examination of evidence. I had the opportunity to attend this conference from the Madison Crime Lab, along with three of my colleagues from the Controlled Substances Unit in the Wausau Crime Lab. I have been to one prior C.L.I.C. conference in 2008 in San Antonio, TX. This conference began with an optional workshop entitled "Sharpening the Saw". Professors from the College of Charleston were invited to give 45 minute lectures on a variety of chemistry topics. Presented were reviews of stereochemistry, mass spectrometry fragmentation, infrared spectral interpretation and acid/base chemistry. The daylong workshop concluded with refreshers on the two most common syntheses of Methamphetamine.

Day 2 through day 5 of the conference covered a wide variety of topics in Forensic Chemistry. The highlights of the main conference were presentations on the DEA's Methamphetamine Profiling Program, the use of iodine in the manufacture of methamphetamine in New Zealand, fentanyl analogs, root cause analysis, the DEA's Level A clan lab response, bench top NMR, hand held Raman/FTIR, syntheses of novel designer opioids, citric acid quenching of one-pot meth labs, and novel syntheses to produce amphetamine.

The DEA Methamphetamine profiling program has been active since 1998. The program examines samples of Methamphetamine for artifacts and byproducts of synthesis. This information is utilized to determine how Methamphetamine is manufactured. Enforcement pressure by police agencies leads to shortages in critical reagents for methamphetamine manufacture. The clandestine chemist endeavors to innovate new ways to circumvent these restrictions. As recent as 2014, the DEA Methamphetamine Profiling Program identified a new method of illicit production of methamphetamine.

Ben Bogun, of ESR Ltd, New Zealand's national forensic service, gave a presentation on the use of iodine in the manufacture of methamphetamine. Known as the HI Reduction reaction to manufacture methamphetamine, this reaction combines iodine and hypophosphorous acid. Monitoring the sale and use of iodine has been an effective means to suppress methamphetamine production in New Zealand. However, the ever enterprising clan lab chemist, discovered ways of circumventing monitoring by developing new methods of extracting iodine from tinctures. Tinctures of iodine are widely available over-the-counter for medical use, and especially large quantities can be purchased from livestock suppliers. Though not a common way to manufacture methamphetamine in the Americas, the ingenuity of the clan lab chemist is demonstrated.

The presentations on fentanyl analogs and designer opioids were both enlightening, and also quite troubling. As the illicit drug market shifts more deeply into replacing heroin with fentanyl analogs and designer opioids, there is great concern, not only for the victims, those addicted to opiates, but also for the forensic laboratory and law enforcement personnel involved in intake, processing and testing of these materials. The DEA presented strategies for handling these materials. Level A containment is the same precaution that the CDC utilizes for extreme biohazards, such as anthrax and Ebola. The DEA personnel now wear these completely self contained yellow level A suits whenever they investigate a possible fentanyl/designer opioid clandestine laboratory. The DEA laboratories utilize a separate room, with independent ventilation, whenever significant quantities of suspected fentanyl, fentanyl analogs, or designer opioids are examined. Narcan is available in both the laboratory and field should an accidental exposure occur.

I highly recommend this training to all forensic chemists who either have the responsibility to participate in field investigations of clandestine laboratories, or who are tasked with analyzing evidence collected from clandestine laboratories.

DNA

DNA Databank Unit

Article written by Amanda Hahn, Advanced DNA Analyst

In 2017 the DNA Databank will introduce a new collection kit to Wisconsin law enforcement agencies. This kit will simplify the collection process for law enforcement, while simultaneously allowing for increased stability of DNA in long-term storage. The new kit will consist of an EasiCollect device, a collection envelope and mailing envelope. The collection agency simply swabs the mouth of an offender, folds and closes the EasiCollect device, and places the device and the submission form in an envelope to be shipped to the lab. The EasiCollect device appropriately positions the swab end in contact with the FTA card, ensuring successful transfer of the biological material. The FTA card lyses cells, denatures proteins and protects DNA from degradation, allowing for long-term storage of DNA samples. Additionally, the FTA cards used are indicating, so it will be easy for the analyst to determine where on the card to sample because the card changes color when used. The first pass success rate of obtaining a usable DNA profile using the EasiCollect device is expected to be better than our current methodology.

Current Kit:

EasiCollect Kit:

To prepare for the new kit and further increase efficiency, the DNA Databank is in the process of completing numerous validations.

- GMIDX as an Expert System using Traditional Amplification of PowerPlex Fusion, drastically decreasing the review time for samples processed by the vendor laboratory and using traditional amplification methods in house. *Recently Completed*
- Direct Amplification of PowerPlex Fusion 6C to include GMIDX as an Expert System, optimized for both our current and future collection methods. This will allow for concordance with evidentiary profiles processed by the DNA Analysis Unit and further decrease processing time. *In Progress*
- Direct Amplification of PowerPlex Y23, optimized for both our current and future collection methods. This will increase efficiency of Familial Searching, and allow for samples collected on EasiCollect devices to be processed using the same workflow. *In Progress*
- Semi-Automated Punching using the BSD600+ robotic instrument. This is a semi-automated sampling method for the FTA cards collected using the EasiCollect device. This system will decrease analyst handling time for FTA card processing. *In Progress*
- Additionally, the Databank is currently researching the fully-automated Hamilton easyPunch STARlet system, which integrates the FTA card sample collection punching and the liquid handling (currently performed by a Tecan robotic system), further decreasing analyst handling time.

DNA

Sexual Assault Initiative

Article written by Nikki Roehm and Dan Campbell, Forensic Scientist Supervisors

AG SART and Sexual Assault Kit Initiative (SAKI) grant work continues. The DNA Analysis outsourcing bid received from Bode Laboratory in Virginia is almost finalized. It is anticipated that the CLB will be able to send kits to Bode starting in November for DNA analysis. DNA Bureau Technical Unit Leader Gretchen DeGroot will work to establish the required site visit completion for Bode, which is due to be completed this fall, allowing the CLB to take ownership of any CODIS suitable DNA profiles developed to be uploaded and searched. Outsourcing teams from both the Milwaukee and Madison Labs are being assembled to assess and review cases/data received back from Bode. The case review teams will be based in the DNA Analysis Units and led by the Local CODIS Administrators.

The SAKI team has been working with the grantors to allow the Statewide inventory to be certified in a phased approach, which will allow DOJ to begin spending the money necessary to have the sexual assault kits analyzed. The State will be divided into four phases, with phase one being the southernmost quarter of the State. As the Bureau of Justice Information and Analysis (BJIA) group completes their work on each law enforcement agency's inventory they will send the list of kits to Dan Campbell and Nikki Roehm. Dan or Nikki will then be issuing a letter to the law enforcement agency specifying the date and time in which the law enforcement agency is expected to submit the listed sexual assault kit(s) to the CLB. The inventoried sexual assault kits submitted to the CLB will be packaged and shipped to Bode for analysis.

Training Opportunities

2016 Midwestern Association of Forensic Scientists Review

Article Written by Denise Jones, Senior DNA Analyst

WSCLB employees from both the Madison and Milwaukee Laboratories had to the opportunity to attend the 45th annual Midwestern Association of Forensic Scientists (MAFS) from October 3rd to 7th held in Branson MO. Over the course of the week several individuals attended workshops and scientific sessions ranging from Y-STR stats to PLM for Drug Chemists. Brian C. Hamlin from the US National Fish and Wildlife Forensics Laboratory discussed wildlife forensic science and Ted R. Hunt from the Johnson County DA office discussed the creation of the Missouri Crime Review Commission at the plenary session. Sandy Koresch and Laura Hedden presented a talk titled "Drug Trends in Wisconsin" which included the latest trends for opiates and new synthetics, counterfeit tablets, the heroin quantitation project and an interesting death investigation involving U-47700. Jennifer Greene presented a talk titled "Effect of Centrifugation Time on Preparation of Whole Blood Samples for Drug Screen by ELISA." The next annual MAFS meeting is September 16-22nd, 2017, in Cincinnati, OH.

DNA

2016 International Symposium on Human Identification

Article Written by Zak Lee, DNA Analyst

Analysts from the Milwaukee and Madison labs were given the opportunity to travel to Minneapolis, MN for the International Symposium on Human Identification (ISHI) from September 25th – 29th. ISHI is a conference where the Impact of forensic science is shared, new trends in forensics are explained, and new technologies are announced. The keynote speaker, David O'Shea, spoke about how DNA has helped to identify children taken from their families in the 1970s in Argentina, and raised by the leaders of a military dictatorship. More than 100 of these children have been identified and reunited with their extended families. Many of the workshops and presentations focused on Massively Parallel Sequencing (MPS) or as it is more commonly known Next Generation Sequencing (NGS) and is considered by many to be the next step forward in forensics. With the new kits and instruments presented for MPS, more tests can be performed on a sample, such as Phenotyping, and all on the same instrument. These presentations and many others can be found at http://ishinews.com/ishi-27-handouts/ , and accessed using the password [redacted]

"Getting to Know"

Nita Bolz
Laboratory Manager-Wausau

[redacted]

1. What is your current title? **Wausau Laboratory Manager**

2. When did you start at the laboratory? **August 2016**

3. Have you held any other positions in a forensic laboratory?
Yes, I started my forensic career in April of 1996 at the Florida Department of Law Enforcement. Over 12 plus years I worked in the Jacksonville, Fort Myers and Pensacola laboratories. I was a controlled substances analyst and then for the last 4 years a supervisor. In August of 2008 I moved to Anchorage Alaska. I worked for 7 and half years at the Alaska Scientific Crime Detection Laboratory as a chemistry supervisor, quality assurance manager and the scientific director over the Alaska blood and breath alcohol program.

4. If you were not working at the laboratory what would you be doing (no limitation for money/family etc.)

[redacted]

5. Do you have any pets? If so, what kind and what are their names?

[redacted]

6. Describe yourself in three words.

[redacted]

7. What is your favorite holiday?

[redacted]

8. Do you have any hobbies?

[redacted]

7. Do you cook and what is your favorite food?

[redacted]

8. What is the most adventurous thing that you have ever done?

[redacted]

Happy Halloween!

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WSCL NCIs completed in April 2016 through September 2016

ID	Cat.	Unit	NCI Description and Initial Actions	Preventative Steps
9535	2	AFIS	Error in processing Print-to-Print verifications.	Analyst will undergo supervised casework for a period of time.
9971	3	AFIS	Error in processing Print-to-Print verifications.	Analyst will eliminate distractions and focus when doing comparisons.
10366	3	AFIS	SID not verified on DNA submission form by technician during identification process.	Analyst implemented changes to process to ensure review of all information on forms.
10691	3	AFIS	SID not verified on DNA submission form by technician during identification process.	Analyst to do remedial training.
10455	3	CS	Report faxed to wrong agency.	None.
10092	3	CSR	Negative controls not run for presumptive test at a crime scene.	Analyst will follow procedure of running positive and negative controls.
10293	2	DB	A vendor batch was not reviewed prior to being uploaded to SDIS.	TUL notified staff of new requirements when reviewing vendor batches.
10304	2	DB	Robot script changed and not performance checked before use on casework.	New channel for communication made between robot operators and robot administrators.
9706	3	DB	Casework performed with reagent that was not QC'd prior to use.	Analyst reminded about QC policy and how to tell if a reagent has been QC'd.
9750	3	DB	No place holder in files for expunged samples.	Manual updated to contain a checklist for this process.
9768	3	DB	Contaminated reagent blank.	Reminded to use proper clean technique.
9769	3	DB	Arrest sample was entered into CODIS without having probable cause.	Manual was revised to include more specific details to complete sample intake properly.
9981	3	DB	Contaminated reagent blank.	Recommend analysts discontinue putting a spin basket in the RB tube to decrease the number of times the tube is opened.
10049	3	DB	Two of the same offender profiles were processed for the first time in the same batch.	FPTs will verify that samples have been previously processed.
10083	3	DB	Contaminated reagent blank.	Robot and amp room cleaned thoroughly.
10321	3	DB	Partial profile entered into CODIS prior to being re-amplified.	Analysts will take more caution when uploading to CODIS.
10417	3	DB	Contamination of sample by another sample on the same plate.	Robot script modified because hanging droplets are suspected to be the cause.
10665	3	DB	Report faxed to wrong agency.	Fax numbers will be more carefully reviewed prior to sending faxes.
10308	NI	DB	QC of kit showed contamination in reagent blank, therefore cannot be used in DB work.	None. Caught by internal processes already in place.
10384	O	DB	An Offender vs. Offender search caught mis-entered SID from 2004.	None. Caught by internal processes already in place.
10511	O	DB	It was discovered that arrest sample destruction could happen prior to one year after receipt.	Process modified to prevent early destruction.
10367	1	DNA	Conclusions in report found to be incorrect.	Technical reviewer and analyst are making changes to their processes.
8919	2	DNA	Contamination of an entire amp plate due to mix up of tips on instrument.	Robot operators reminded to double check their extraction deck maps.
9494	2	DNA	Subdesignation barcodes not placed on outer packaging causing custody error.	Incident discussed with analyst.

ID	Cat.	Unit	NCI Description and Initial Actions	Preventative Steps
9658	2	DNA	Contaminated reagent blank.	Analyst to employ more vigilant processes to prevent contamination.
10137	2	DNA	Small drops of liquid were hanging onto the bottom of the tips after samples were dispensed into the amp plate…dropped into other wells.	Robot script modified.
10430	2	DNA	Incorrect program selected on thermal cycler.	Robot operators reminded to double check program selected.
10533	2	DNA	Contaminated reagent blank.	Analyst to use bleach wipe between each tube opening during extractions.
10669	2	DNA	Individual aliquots not labelled with required information.	Manual revised to provide clarity.
10847	2	DNA	Analyst profile found on evidence.	Clean technique was discussed with analyst.
9516	3	DNA	Mislabeling of samples between two cases extracted in the same set.	Analyst informed to be more careful when applying barcodes.
9537	3	DNA	Contaminated reagent blank (label switch).	Analyst will ensure that the correct labels are placed on the correct tubes.
9763	3	DNA	Contaminated reagent blank.	Analyst read/signed DNA Appendix T.
9875	3	DNA	Case samples/reagent blank switched.	Read/signed DNA 5.1 Clean Technique and cleaned work area.
9876	3	DNA	Reagent blank discarded during pipette transfer.	Analyst will pay closer attention during extraction process.
10004	3	DNA	Evaporation of sample due to faulty strip cap.	Analyst will ensure the plate is properly sealed and check liquid levels in plate before and after amplification.
10058	3	DNA	Analyst profile found on evidence.	Clean technique was discussed with analyst.
10086	3	DNA	DNA analyst did not document all literature review articles in calendar year.	TUL discussed with analyst.
10231	3	DNA	Use of expired reagents on casework.	Analyst reminded to check reagent expiry dates prior to use.
10237	3	DNA	Incubator temperature log missing.	The log will be kept on a clipboard hanging near the incubator until the temp monitoring system is up.
10292	3	DNA	DNA extract and reagent blank missing from case worked in 2014.	Analyst will better organize evidence/work product return process with close supervisory oversight.
10315	3	DNA	Analyst profile found on evidence.	Clean technique was discussed with analyst.
10317	3	DNA	Analyst profile found on evidence.	Clean technique was discussed with analyst.
10383	3	DNA	Contaminated reagent blank.	Analyst reviewed DNA UPM 5.1 Clean Technique.
10488	3	DNA	Sample switched with reagent blank.	Analyst will be more diligent to keep reagent blank labelled differently than samples.
10537	3	DNA	Contaminated reagent blank.	Clean technique was discussed with analyst.
10550	3	DNA	Contaminated reagent blank.	Clean technique was discussed with analyst.
10637	3	DNA	Contaminated reagent blank.	Clean technique was discussed with analyst.
10644	3	DNA	Sample switched with reagent blank.	Analyst will be more diligent to keep reagent blank labelled differently than samples.

ID	Cat.	Unit	NCI Description and Initial Actions	Preventative Steps
10804	3	DNA	High concentration DNA sample extracted with low concentration DNA sample from same case.	Analyst read DNA UPM 5.1.10.
10819	3	DNA	Expired reagents used on casework.	Analyst reminded to check reagent expiry dates prior to use.
9674	NI	DNA	DNA extracts not sent back with rest of extracts in packet; sent at a later date.	Analyst informed of issue.
9701	NI	DNA	Labels on extraction tubes switched. Caught and remedied by robot operator prior to running.	None. Caught by internal processes already in place.
9748	V	DNA	CE instrument issues with new capillaries.	None (work with vendor).
10538	2	DNA & DB	Robot script error masking the IPC shift flag of the reagent blanks.	More rigorous oversight/review to be employed when changing robot scripts.
10668	2	DNA & DB	Critical reagents not defined in procedures.	Manuals updated to reflect information.
10645	3	DNA & DB	A mis-entry of an allele was discovered which when corrected resulted in a moderate stringency match.	CODIS software has safeguards now to prevent this
9059	1	ES	Missing Evidence.	Storage bins have been placed on GoBack shelves to secure the position/location of items of evidence.
10072	2	ES	Two cases receipted by ES staff for ID work did not record the presence of drugs in description.	Supervisor discussed with staff
9653	3	ES	Firearms evidence not stored in the proper location.	It will be made clear that ALL firearms need to be treated as if they are loaded.
10099	3	ES	Separate items were packaged together and not given appropriate item designations.	ES given additional training on items packaged together.
10638	3	ES	Report was faxed to DA's office without designee's signature on it.	Staff reminded to ensure reports are signed prior to sending out of the lab.
10509	O	ES	Freezer noticed to be outside acceptable range and was monitored.	None.
10124	3	FATM	Reagent logbook did not include lot numbers of components.	Unit is now aware of policy and will log this information or buy prepared reagents.
9776	2	FI	Case related data and images are not properly archived.	New staff have been trained on proper file retention.
9081	2	FI	Label on disc did not contain all of the required information.	Templates have been updated to include all required information; staff have been reminded of policy.
10085	3	FI	Label on disc did not contain all of the required information.	Templates have been updated to include all required information; staff have been reminded of policy.
9605	1	ID	Footwear cases do not identify what items are being used to reach conclusions.	Policy added to the FW manual (Section 1) to require that standard footwear test impressions be treated as evidence.
9607	1	ID	Work product not treated as evidence.	QPM and ID manuals were edited to require the treatment of some work product as evidence. Training on establishing a chain of custody for digital evidence was completed.
9540	2	ID	Personal evidence locker left unlocked after they left for the day.	The Unit was reminded of the policy.
10022	2	ID	Suitable FRD not imaged prior to lifting the prints.	Unit reminded of policy.
10027	2	ID	Lack of notes regarding for another analyst to be able to repeat testing in a tire case.	Analyst will present notes in a clearer layout.
10023	3	ID	Insufficient notes to allow another analyst to repeat testing (processing) an item of evidence.	Unit reminded of policy.

ID	Cat.	Unit	NCI Description and Initial Actions	Preventative Steps
10025	3	ID	Critical reagent logbook did not state what was used to test the positive control.	Unit will now record what was used for pre-testing.
10029	3	ID	Items not properly subdesignated.	More care will be taken in the future.
10102	3	ID	Reagents marked with "indefinite" expiration date.	Unit will add retest dates to reagents and logbook.
10128	3	ID	Piece of evidence damaged during analytical handling.	Discussed with analyst.
9437	2	QPM	FBI letter received questioning their hair analysis training and its impact on CLB reporting/testimony.	None needed.
10199	3	QPM	Hand written notes containing obliterations were to be transcribed and destroyed.	Analyst reminded that all notes are official and to follow documentation policy.
8713	3	TR	Evidence worked by an analyst created a situation where analysis in another unit was compromised.	More diligent checking to see what other units need to work the evidence.
8939	2	TX	Unacceptable instrument performance checks not noticed prior to running cases on the instrument.	GC/MS autotunes need to be examined more thoroughly and technically reviewed.
9573	2	TX	Use of expired reagents on casework.	Unit will track all expiry dates and decide on Bureau-wide policy for kit expiry.
10130	2	TX	One negative control was positive in Elisa assay.	Raw data will be reviewed with case sample reports.
9702	3	TX	Missed PT answer (BAC was 0.001 out).	Analyst will reanalyze old PTs to show competence in the method.
10217	3	TX	Samples rerun outside of acceptable time limits.	Analysts advised to follow manual as written. Manual to be revised for clarity.
10218	3	TX	No negative control was run after the highest calibrator or control (to demonstrate no carryover).	Analyst requested to re-read procedure and that procedure is to be revised for clarity.

S Safety Incident

V Vendor Incident

NI Non-Incident

O Other Incident