



# Crime Lab News

Volume II, Issue II

Summer 2018

## A Note from Our Director

The mission of the Arkansas State Crime Laboratory is to provide the highest quality scientific services to the criminal justice community. Although our services are of high quality, our timeliness of issuing reports of analysis to the criminal justice community has not been adequate and has caused bottlenecks in the criminal justice system.

As most of you are aware, the opioid epidemic facing the nation is directly impacting the Arkansas State Crime Laboratory. Over the last 2 years, the Drug section has experienced a 22% increase in drug cases, receiving over 22,000 cases in 2017. Based on cases received thus far this year, we are projecting to receive over 23,600 drug cases in 2018, a 7.4% increase.

You can be assured that I am addressing this issue by placing more chemists on the bench and streamlining our services.

## The Drug Backlog... How Did We Get Here, and How Are We Addressing It?

As we look back to 2013, our turnaround time in the Drug Section was the lowest it had ever been, 14 days. Since then, drug submissions have increased by 31%, but adequate staffing was not added to meet the demand.

Year	Annual Cases Received	Backlog (12/31)	TAT (days) 12/31	# Analysts
2013	16,836	684	29	11
2014	17,446	2,278	19	11
2015	18,075	2,524	43	12
2016	21,150	5,166	84	13
2017	22,011	8,532	161	14
2018*	9,852	10,967	171	17**

\* Through May 30, 2018

\*\* 2 Forensic Chemists of the 17 completed training in April; currently have 4 additional chemists in training

The ASCL is a Lean Six Sigma laboratory, and strives to be proactive in working smarter, with continuous improvement as our mindset. It is important to compare our productivity and fiscal management to other crime laboratories to ensure that we are good stewards of funding. Foresight 20/20 provides a mechanism to do just that, as summarized in the table on the following page. This shows that we are very productive, and increased staffing is needed to handle the demand.

### Mission

To provide the highest quality scientific services to the criminal justice community and the State of Arkansas. This is accomplished through a team of skilled and dedicated employees utilized scientific equipment and appropriate validated methodologies. The laboratory strives to provide these services in a timeframe amenable to our customers.

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## The Drug Backlog (Continued)

	Cost to Analyze a Drug Case	Cases Completed Analyst/Month
ASCL (2017 data)	\$126/case	98
Foresight Labs (2016 data)	\$313/case	35

To address this issue, we have (and will continue to) increase staffing. We currently have 4 Chemists in training and plan on hiring 6 additional Chemists. Once these Chemists complete training (Jan 2019), we predict to reach a 30 day turnaround time in 12 months.

As seen in the picture to the right, the drug backlog is also affecting storage in Evidence Receiving. Please make sure and pick up your evidence once the analysis is complete so that we maintain adequate storage for new cases.



## Section Focus—Toxicology

The mission of the Forensic Toxicology section is to provide timely, reliable and appropriate toxicology services to its customers. These customers include Medical Examiners, Coroners, Law Enforcement Personnel and the Criminal Justice System as a whole. These services include toxicological analysis, consultation and expert testimony.

Breakdown in cases received – In 2017, we received 4,880 cases: 56% DWI/DUI Law Enforcement; 30% Medical Examiner; 30% Coroner. The top drugs detected from these cases are: 1. Methamphetamine 2. Diphenhydramine, 3. Amphetamine 4. Hydrocodone 5. Alprazolam

The Arkansas State Crime Laboratory experienced a record year in 2017 for autopsy submissions. Of the 1,563 autopsies performed, 258 were drug overdose cases. This represented a 25% increase in overdose cases from the previous year. In an effort to keep up with the rise in drug overdose testing, we have implemented new instrumentation, methodologies and streamlined workflows. This will help keep turn-around times at a minimum while simultaneously expanding our testing capabilities. If you have any questions regarding Toxicology, please contact the Toxicology Section Chief, Kristen Mauldin, at (501) 683-6212.



## GHB Testing

GHB ( $\gamma$ -Hydroxybutyric acid) is typically associated with sexual assault or as the 'date rape' drug due to its severe hypnotic and sedative effects. GHB has been a difficult drug to detect due to rapid elimination via urine in the human body. The body naturally produces some GHB which is detectable by testing, so urine is the preferred specimen of choice over blood samples for the Arkansas State Crime Laboratory Toxicology Section.

Delays in obtaining samples from victims further limit the chance of detecting GHB in a forensic setting. GHB has an elimination half-life within the range of 20 to 60 minutes when ingested orally. This is an extremely short half-life compared to other medications. Depending on the dose given, we can expect GHB to be completely eliminated from a victims system within 2 to 5.5 hours. Additional studies have shown that alcohol consumption with GHB can significantly increase the elimination half-life by as much as 29%. This decreases the window of detection down to 26 minutes to 1.3 hours.

## Current Turn Around Times

- **Digital Evidence**
  - Computers: 56 days
  - Mobile devices: 49 days
- **Firearms**
  - Comparisons: 16 months
  - (Homicides): 4 months
  - NIBIN: 30 days
- **Latent Prints**
  - Homicide: <30 days
- **Drug Analysis** 9 months
- **Toxicology** <30 days
- **Physical Evidence—Trace**
  - Arson: <30 days
  - All other: 6 months
- **Physical Evidence—Serology**
  - Homicide: <30 days
  - Sexual Assault: <30 days
  - Property/other: 4 months
- **DNA**
  - Homicide: 60 days
  - Sexual Assault Kit: 6 months

## VIDEO TESTIMONY

In 2017, our Forensic Chemists traveled to court 144 times, driving 15,659 miles, which took the Forensic Chemists 280 hours off the bench from processing cases.

In 2015, the ASCL developed a process so that we could offer video testimony to courtrooms across the state, primarily for Forensic Chemists and Toxicologists. This process has prevented our analysts from traveling to court in various locations across the state 78 times.

**DID YOU KNOW?**  
Our analysts have testified 19 times using video testimony

**DID YOU KNOW?**  
We have 14 court locations using video testimony—5 circuit, 9 district

Cost Savings Summary			
Total Miles Saved	13326	Fuel Savings	\$ 1,785.68
Hours Saved	280.0	Salary Savings	\$ 6,470.03
		Total Savings	\$ 8,255.71

*Please contact Kristen Mauldin for questions or to get set up!  
501-683-6121 or [Kristen.mauldin@crimelab.arkansas.gov](mailto:Kristen.mauldin@crimelab.arkansas.gov)*

## Staffing Updates

Since the publication of our Spring 2018 newsletter, we have hired a few new employees:

- Ashley McElroy, Drug Technician
- Ashley Stuck, Drug Chemist
- Andrea Henrichs, Drug Chemist
- Harrison Dale, Latent Prints Examiner
- Charlette Parnell, Drug Chemist
- Angelyn Hercules, DNA Analyst
- Hunter Wayland, Drug Chemist
- Emma Fort, DNA Analyst

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## Arkansas State Crime Laboratory Performance Survey

The Arkansas State Crime Laboratory Performance Survey is located on the Law Enforcement page (iResults) of the ASCL website. We welcome your feedback so that we can continue to improve and meet your needs.

Please contact Cindy Moran regarding any questions at:  
[cindy.moran@crimelab.arkansas.gov](mailto:cindy.moran@crimelab.arkansas.gov)  
or 501-683-6190



## Is Your Agency Signed Up to Track Sexual Assault Kits

The ASCL is now using a Sexual Assault Kit program to track all kits distributed. This program is very easy to use and has several benefits:

- This program helps to comply with the inventory required in Act 1168 of 2015
- The health care provider or law enforcement agency can see all their kits and the progress of testing
- The victim can see the progress of their kit through the Criminal Justice System

## Sexual Assault Kit Tracking Website now live

*Click here for details!*



### How To Sign Up:

- **Click on the SA Kit Banner on the ASCL website ([www.crimelab.arkansas.gov](http://www.crimelab.arkansas.gov))**
- OR
- **Call Beverly Pannell 501-683-0470**

## ASCL Training Opportunities

**ASCL Law Enforcement Training—Sept. 27, Dec. 13, 8:00-12:00** Over the last 2 years, the ASCL has been offering training opportunities for Law Enforcement Agencies and Court Officials. This training is led by the Section Chiefs for each of the forensic disciplines. This training will take you through a few case scenarios to emphasize our current capabilities, best samples for testing, how to package evidence, and understanding the results. There is also time for questions and a tour of the facility after the training. All trainings will be held at the Arkansas State Crime Laboratory in Little Rock. Seats are limited to 35 for each session. Please go to our website ([www.crimelab.arkansas.gov](http://www.crimelab.arkansas.gov)) to register for this training.

### **CODIS Collection Training—Thursday, July 26<sup>th</sup> 10:00 – 12:00, ASCL**

This training is open for any agency that collects DNA Database offender and arrestee samples. The training will cover instructions on the kit collection process as well as information on our Remote Collection website. This new process allows collection sites to verify if a sample is needed from an individual which will help reduce duplicate and non-qualifying submissions. The training provides 2 CLEST hours. Please call 501-227-5747 and ask for the CODIS section to register.