



# BETWEEN the Lines

## UPCOMING TRAININGS & CONFERENCES

NDAA is making its National Courses available virtually in light of health and safety concerns over COVID-19. Check out a full list of NDAA's virtual learning sessions at [ndaa.org/training-courses/](https://ndaa.org/training-courses/).

**NDAA's Mastering Masking Digital Course/ On Demand Training**  
[ndaa.org/training/mastering-masking-2/](https://ndaa.org/training/mastering-masking-2/)

**NDAA's Human Trafficking and the Impact on Commercial Driver's Licenses/On Demand Training**  
[ndaa.org/training/human-trafficking-and-the-impact-on-commercial-drivers-licenses/](https://ndaa.org/training/human-trafficking-and-the-impact-on-commercial-drivers-licenses/)

**NDAA's Prosecuting DUI Cases Online Course/ On Demand Training**  
[ndaa.org/training/prosecuting-dui-cases/](https://ndaa.org/training/prosecuting-dui-cases/)

**NDAA's Ethical Issues in Charging Considerations**  
March 10, 2021 @ 1:00-2:00 pm (ET)

**NDAA's Threat Assessment for Prosecutors: Protecting the Community from Dangerous Defendants**  
March 12, 2021 @ 2:00-3:00 p.m. (ET)

**NDAA's Discovery: Stay Out of Trouble—Knowing the Rules and Ethical Considerations**  
March 22, 2021 @ 1:00-2:30 p.m. (ET)

## RESOURCES

**Impaired Driving Resources**  
[ndaa.org/programs/ntlc/impaired-driving/](https://ndaa.org/programs/ntlc/impaired-driving/)

**CDL-Related Resources**  
[ndaa.org/programs/ntlc/commercial-drivers-license/](https://ndaa.org/programs/ntlc/commercial-drivers-license/)

### NDAA STAFF

**Executive Director** Nelson O. Bunn, Jr.  
**Chief Operating Officer** Christine Mica

### THE NATIONAL TRAFFIC LAW CENTER

**Director**  
Joanne E. Thomka [jthomka@ndaajustice.org](mailto:jthomka@ndaajustice.org)

**Senior Attorneys**  
M. Kimberly Brown [mkbrown@ndaajustice.org](mailto:mkbrown@ndaajustice.org)  
Romana Lavalas [rlavalas@ndaajustice.org](mailto:rlavalas@ndaajustice.org)

**Staff Attorneys**  
Erin Inman [erinman@ndaajustice.org](mailto:erinman@ndaajustice.org)  
Jim Camp [jcamp@ndaajustice.org](mailto:jcamp@ndaajustice.org)

The National Traffic Law Center is a division of the National District Attorneys Association. This document was prepared under Cooperative Agreement Number 693JJ91950010 from the U.S. Department of Transportation National Highway Traffic Safety Administration. Points of view or opinions in this document are those of the authors and do not necessarily represent the official positions or policies of the Department of Transportation or the National District Attorneys Association.



Volume 29, Issue 2 | February 2021



## Responsibility.org and the Wisconsin State Laboratory of Hygiene Partner to Create New Resource for Toxicologists—The National Resource Toxicologist

By Amy Miles

**Editor's Note**—*Responsibility.org and the Wisconsin State Laboratory of Hygiene have collaborated to create the first National Resource Toxicologist position. Through this position, Responsibility.org hopes to improve impaired driving enforcement by gaining a better understanding of the needs of forensic toxicology laboratories across the country relating to chemical testing protocols, equipment and resource issues such as funding and staffing. Amy Miles is the Director of the Forensic Toxicology Program at the Wisconsin State Laboratory of Hygiene and is the first National Resource Toxicologist.*

Meet our Driver. On a Thursday evening, our Driver leaves a local tavern. Our Driver has had enough to drink that he is swerving all over the road. His ability to operate a motor vehicle safely is compromised. Fortunately, the Driver is stopped by a law enforcement officer before anyone is hurt. The officer smells the odor of alcohol and proceeds to investigate and

document the impairment. This officer has investigated over 100 impaired drivers and while running our Driver through the Standardized Field Sobriety Tests (SFSTs), notices the impairment seems greater than the preliminary breath test result of a 0.110%. The officer proceeds to obtain a warrant, requests the Driver's blood be drawn and the sample is sent to a local laboratory. Knowing the impairment observed is greater than the Blood Alcohol Concentration (BAC) indicates, the officer requests the laboratory test for alcohol and drugs.

Fast forward a week, our Driver decides to enjoy his after-work beverages at a tavern just across the state line. Remembering what occurred last week, our Driver feels this is the safest way to avoid interaction with law enforcement again. However, our Driver again consumes a bit too much alcohol and as he is driving home, swerves all over the road, rolls through a stop sign and is stopped by law enforcement again. Same scenario as a week ago, but this time the blood sample is sent to a laboratory in the neighboring state for alcohol and drug testing. Laboratory #1 reports a BAC of 0.109% from the first impaired driving investigation but will not perform drug testing due to an internal policy stemming from a lack of resources. As for the sample that was sent to Laboratory #2, it reports a BAC of 0.112%. However, due to Laboratory #2's capabilities and resources, it tests the sample for drugs in addition to alcohol. In doing so, along with the BAC of 0.112%, Laboratory #2 detects marijuana and flualprazolam, a central nervous system depressant. Were those drugs also present in the first sample from a week ago? Very possibly. Will our Driver receive similar case assessments due to the two separate laboratory results? Doubtful.

Laboratories are doing the best they can with resources available, but no two labs are doing the same testing in the same manner on similar instrumentation. Funding sources to forensic toxicology laboratories vary and while some can take advantage of certain grants, others are not due to their jurisdiction. Sometimes laboratories located in the same state are not equal in terms of the scope of testing and limits at which they report drugs positive and negative. The incongruous testing between forensic toxicology laboratories is not only a concern from an adjudication and highway safety standpoint, but it is also a grave disservice to overall public health. Many of our partners such as the National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS), State Departments of Health and the Drug Enforcement Agency use the data produced by forensic toxicology laboratories to make statements about the trends in drug and alcohol detection, including policy decisions, without considering the often-vast differences in testing each laboratory performs.

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In 2007, the National Safety Council's Alcohol, Drugs and Impairment Division (NSC-ADID) began surveying forensic toxicology laboratories across the country which perform testing in traffic fatality and drug impaired driving casework. Since 2007, the NSC-ADID has repeated the survey a number of times and provided laboratories with guidelines for testing scope and cutoff concentrations (► [pubmed.ncbi.nlm.nih.gov/29186455/](https://pubmed.ncbi.nlm.nih.gov/29186455/)). Despite the efforts of the NSC-ADID to align laboratories across the country, major gaps still exist in testing. Is it due to lack of instrumentation? Not enough personnel? Are there statutes in place that dictate the scope of testing? These are important questions that remain unanswered.


Responsibility.org has partnered with the Wisconsin State Laboratory of Hygiene—UW Madison (WSLH) to identify specific needs of each public forensic toxicology laboratory in the country. Through their work on identifying high risk impaired drivers, Responsibility.org has developed recommendations for DUI system reforms and has recognized forensic toxicology as an area requiring assistance (► [www.responsibility.org/wp-content/uploads/2020/05/FAAR\\_4037-HRID\\_Critical-DUI-System-Reforms-Toxicology\\_V1.pdf](https://www.responsibility.org/wp-content/uploads/2020/05/FAAR_4037-HRID_Critical-DUI-System-Reforms-Toxicology_V1.pdf)). The collaboration between the WSLH and Responsibility.org has created a National Resource Toxicologist pilot program (NRT) which will focus on identifying the specific needs of forensic toxicology laboratories and provide resources

to overcome obstacles. If a lack of instrumentation is identified, the NRT will assist the lab in locating resources to procure the needed instrumentation. If it is a statutory or policy issue, advocates and partners will be identified that can help make the necessary changes. The need for this resource has been a long time coming, and the time has come to help forensic toxicology laboratories grow in unison.

In addition to supporting the forensic toxicology laboratories, the NRT will collaborate with partners to determine how laboratory results are used in their operations. As described above, programs such as NHTSA and FARS have used data from the forensic toxicology laboratories for years to present national statistics and report on, for example, various alcohol and drug trends in fatal crashes. Ensuring data used by FARS is comprehensive will be an important component to this pilot program. Many other partners and programs look at data forensic laboratories produce, and it is important for everyone to understand the limitations of current data and determine where improvements must occur.

Training and the continuation of educating program partners and liaisons on the role of forensic toxicology is also a major component of the NTR. As the needs of laboratories across the US are assessed, the NTR will also work with state, local and national partners to ensure each is understanding the other. Knowing what each group does and how we impact one another is vital to realizing the gaps that exist and how best to close them. The NTR will work to foster communication between laboratories and other vested groups in their states. To create stronger partnerships, there needs to be a seamless sharing of knowledge.

The work in supporting forensic laboratories and their partners has been in great demand for many years. Working together, Responsibility.org and the WSLH strive to better identify and characterize impaired driving and create solutions to harmonize the forensic toxicology laboratories across the country. For questions about the National Resource Toxicologist pilot program, please contact Amy Miles at ► [amy.miles@slh.wisc.edu](mailto:amy.miles@slh.wisc.edu).



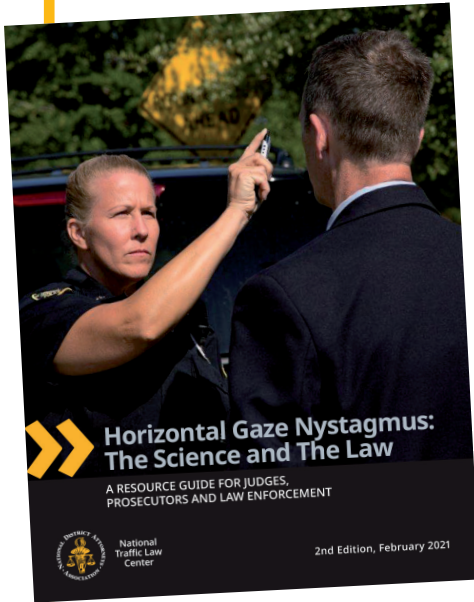
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### About the Author

Amy Miles is the Director of the Forensic Toxicology Program at the Wisconsin State Laboratory of Hygiene (WSLH) and has over 20 years of experience in forensic toxicology. In addition to managing the Forensic Toxicology Program, Ms. Miles provides expert court testimony and interpretation of laboratory reports for coroners, medical examiners, attorneys and law enforcement officers. She also provides expert consultation for drug impaired driving cases both locally and nationally. Ms. Miles attended the Drug Recognition Expert (DRE) school held in Wisconsin in 2004 and provides training and support for the DRE program not only in Wisconsin but all across the country. Ms. Miles is the immediate past toxicology representative on the International Association of Chiefs of Police (IACP) DRE Technical Advisory Panel.

Ms. Miles has given hundreds of presentations on the topic of drugs, alcohol and human performance and public health at state and national conferences and in-service trainings and has contributed several articles to national publications. She is a member of several professional organizations and committees that pertain to alcohol, drugs and human performance and public health. Ms. Miles is the President of the Society of Forensic Toxicologists. In 2019, she received the Public Service Award from the National Highway Traffic Safety Administration and in 2020 she received the IACP DRE ambassador award.



## Horizontal Gaze Nystagmus: The Science and The Law, A Resource Guide for Judges, Prosecutors, and Law Enforcement

Consumption of alcohol or certain other drugs hinders the ability of the brain to correctly control eye muscles. The resulting abnormal eye movements are readily observable and identifiable by properly educated and trained observers, such as law enforcement officers. These observations form the basis of some of the key assessments of impaired drivers that officers conduct at roadside during traffic stops, including the Horizontal Gaze Nystagmus (HGN) test. The HGN test is one of three tests that comprise the Standardized Field Sobriety Test (SFST) battery; the other two tests are the Walk-And-Turn (WAT) and One-Leg-Stand (OLS) tests.

Legal and law enforcement communities need to better understand that the HGN test is the most reliable and effective indicator of impairment by alcohol and certain other drugs, and that ample evidence is available to prove that reliability. The challenge is in conveying to the factfinder the strong correlation between the HGN test and impairment and showing how to effectively use the available evidence to prove the HGN test's validity and reliability in court. First published approximately 30 years ago, the [Horizontal Gaze Nystagmus: The Science and The Law, A Resource Guide for Judges, Prosecutors, and Law Enforcement](#) monograph received necessary updates to the scientific research and case law upon which it is based.

With support from the National Highway Traffic Safety Administration and significant contribution from Dr. Karl Citek, the National Traffic Law Center updated this guide to assist judges, prosecutors, and law enforcement officers in gaining a basic understanding of the HGN test, its correlation to alcohol and certain other drugs, other types of nystagmus, the HGN test's scientific validity and reliability, its admissibility in jurisdictions in the US, and the purposes for which it may be introduced. The goal of this guide is to assist prosecutors and law enforcement officers in every jurisdiction to lay the foundation for the admissibility of the HGN test, and to encourage judges to accept the results of a properly administered HGN test as relevant evidence of impairment.

This monograph is available for free to download by clicking on the hyperlink above or from the NDAA website by clicking on Publications & Videos on the Resources tab.