STATEMENT OF
THE ILLINOIS FORENSIC SCIENCE COMMISSION
REGARDING THE 2-HOUR SAMPLE COLLECTION TIME
IN 625 ILCS 5/11-501(A)(7)

This statement responds to requests by the DUI Cannabis Task Force and the Illinois State Police for the Illinois Forensic Science Commission to examine scientific research relevant to Illinois laws addressing driving under the influence of cannabis ("DUI-cannabis"). This statement addresses the issue of whether a scientific basis for supporting a change to the 2-hour sample collection time in 625 ILCS 5/11-501(a)(7) was identified by the Commission.

Background

Prior to the passage of Public Act 99-697 (eff. 7-29-16), Illinois's DUI statute provided, in relevant part, that "[a] person shall not drive or be in actual physical control of any vehicle within this State while: *** there is any amount of a drug, substance, or compound in the person's breath, blood, or urine resulting from the unlawful use or consumption of cannabis listed in the Cannabis Control Act ***." 625 ILCS 5/11-501(a)(6) (2015).

Following the passage of legislation in Illinois allowing for the medicinal use of cannabis and the decriminalization of possession of small amounts of cannabis, the General Assembly enacted amendments to Subsection (a)(6) of Illinois's DUI statute and added Subsection (a)(7) to 625 ILCS 5/11-501.[i] Subsection (a)(7) of the DUI statute currently provides:

> "A person shall not drive or be in actual physical control of any vehicle within this State while: *** the person has, within 2 hours of driving or being in actual physical control of a vehicle, a tetrahydrocannabinol concentration in the person's whole blood or other bodily substance as defined in paragraph 6 of subsection (a) of Section 11-501.2 of this Code ***." 625 ILCS 5/11-501(a)(7) (2024).

Subsection (a)(7) of the DUI statute is commonly referred to as the *per se* DUI-cannabis provision because the subsection requires the presence of a threshold amount of delta-9 tetrahydrocannabinol ("delta-9 THC") in a person's whole blood or other bodily substance as defined by the Illinois Vehicle Code.[ii] [iii] [iv] Subsection (a)(7) of the DUI statute also requires that the sample of whole blood or other bodily substance subjected to toxicological testing be collected within 2 hours of when the person drove or was in actual physical control of a vehicle.[v]

In Public Act 101-27, the General Assembly enacted the Cannabis Regulation and Tax Act which, beginning on January 1, 2020, generally legalized the recreational use of cannabis by adults in Illinois.[vi] Public Act 101-27 also created the DUI Cannabis Task Force to study the issue of driving under the influence of cannabis.[vii]

In its August 3, 2022 Report, the DUI Cannabis Task Force did not reach a consensus on recommendations for legislative amendments to the DUI-cannabis sections of the DUI statute (625 ILCS 5/11-501(a)(4) and (a)(7)). The Task Force, however, "identified challenges with the existing driving under the influence of cannabis statute[,]" specifically Subsection (a)(7), and noted that "[t]he Illinois Forensic Science Commission is expected to continue to analyze *** research and make recommendations for ongoing changes to the law as supported by science." [viii]

Consistent with the DUI Cannabis Task Force Report and the Illinois Forensic Science Commission's statutory charge,[ix] the Public Policy Subcommittee of the Illinois Forensic Science Commission began studying scientific issues related to the *per se* DUI-cannabis provision of the Illinois Vehicle Code in December of 2022.

To obtain a comprehensive understanding of the metabolism of delta-9 THC and how toxicological analysis of biological samples are used in the investigation and prosecution of DUI-cannabis cases in Illinois, the Public Policy Subcommittee heard presentations from and engaged in robust discussion with subject matter experts in forensic toxicology from agencies including the Illinois State Police and the Northeastern Illinois Regional Crime Laboratory, and Regional Toxicology Liaisons supporting the National Highway Traffic Safety Administration (NHTSA).

The subcommittee also heard presentations from law enforcement professionals and prosecutors, including Illinois State Police Troopers and one of Illinois's Traffic Safety Resource Prosecutors (TSRP). Additionally, the subcommittee examined sample collection and testing practices and DUI laws in Illinois and in other states. Finally, the subcommittee reviewed forensic toxicology standards, studies, peer-reviewed journal articles, and secondary sources related to cannabis impairment.

The Commission acknowledges that there are non-scientific challenges for law enforcement related to the collection of biological samples and the investigation of suspected DUI-cannabis incidents. The challenges identified include issues related to law enforcement sample collection, such as the availability of electronic search warrants, the availability of drug recognition experts (DREs) used when prosecuting DUI-cannabis under an impairment theory pursuant to 625 ILCS 5/11-501(a)(4),[x] and the shortage of law enforcement phlebotomists, as well as a need for increased training opportunities for DUI-cannabis prosecutors. The Commission's Statement does not address these challenges, but rather is limited to the issue of whether a scientific basis exists to support a legislative change to the 2-hour sample collection time in 625 ILCS 5/11-501(a)(7).

On December 16, 2024, the Public Policy Subcommittee presented its findings to the Illinois Forensic Science Commission and the Commission voted to issue this Statement regarding whether the current state of scientific research and the sound practice of forensic science support a legislative change to the 2-hour sample collection time in Subsection (a)(7) of Illinois's DUI statute.

Statement

The Illinois Forensic Science Commission has not identified a scientific basis for supporting change to the 2-hour sample collection time in 625 ILCS 5/11-501(a)(7).

Findings

A simplified description of delta-9 tetrahydrocannabinol ("delta-9 THC") metabolism is that once smoked or ingested, delta-9 THC enters and leaves the bloodstream because of distribution into other bodily tissues such as the brain.[xi] The metabolism of delta-9 THC is completed via conversion to other currently non-controlled compounds excreted in feces and urine. As such, blood should be collected in addition to urine in Illinois during DUI investigations because urine is not an appropriate matrix for detecting delta-9 THC.[xii] [xiii] [xiv] [xv]

Delta-9 THC concentrations in blood typically peak during the act of smoking, decline rapidly, and often fall below 5 ng/mL less than three hours after smoking.[xvi] [xvii] Following oral administration (a.k.a. consumption), delta-9 THC concentrations peak at one to three hours and generally are lower than after smoking.[xviii] [xix] An individual's intake frequency, metabolism, and personal elimination rate impact the delta-9 THC concentration in blood. [xx]

Unlike alcohol (ethanol), toxicologists cannot conduct back extrapolations for delta-9 THC concentration based on delta-9 THC levels detected after an elapsed time. As such, toxicologists cannot determine based on toxicological testing of a blood sample (1) how much delta-9 THC a person smoked or consumed prior to driving or being in actual physical control of a vehicle, or (2) how much delta-9 THC was present in a person's blood when they drove or were in actual physical control of a vehicle.

Through the standards development process, the scientific community has provided guidance to forensic toxicologists and users of their data on what is scientifically appropriate to address in written opinions and testimony. Notably, per ANSI/ASB Best Practices Recommendation 037 "Guidelines for Opinions and Testimony," "[a] toxicologist should not perform extrapolation calculations for drugs other than ethanol[,]" and, "[a] toxicologist should not imply impairment of an individual based on analytical findings from urine, hair or other matrices unless supported by the literature." [xxi] [xxii] [xxiii]

The Forensic Science Commission will continue to monitor new scientific studies and publications related to cannabis impairment and forensic toxicological testing and will issue additional or revised statement(s) if warranted.

[i] See P.A.99- 697 (eff. 7-29-16) and P.A. 101-363 (eff. 8-9-19).

[ii] 625 ILCS 5/11-501(a)(7) (2024) (available at: https://www.ilga.gov/legislation/ilcs/documents/062500050k11-501.htm).

[iii] 625 ILCS 5/11-501.2(a)(6) (2024)
(available at: https://www.ilga.gov/legislation/ilcs/fulltext.asp?DocName=062500050K11-501.2).

[iv] DUI Cannabis Task Force Report at pp. 12-13 (available at:
https://www.ilga.gov/reports/ReportsSubmitted/3545RSGAEmail7140RSGAAttach1-308 8-22.pdf).

[v] 625 ILCS 5/11-501(a)(7) (2024).

[vi] See 410 ILCS 705/10-5(a)(1) (2024); DUI Cannabis Task Force Report at p. 5; see also *People v. Redmond*, 2024 IL 129201, ¶¶27-43 (discussing evolution of cannabis law in Illinois) (available at: https://ilcourtsaudio.blob.core.windows.net/antilles-resources/resources/cfb29889-7e60-4ac0-91a1-6992011d8fd3/People%20v.%20Redmond,%202024%20IL%20129201.pdf).

[vii] See 625 ILCS 5/11-501.10; P.A. 101-27; P.A. 101-593; DUI Cannabis Task Force Report at pp. 1, 3.

[viii] DUI Cannabis Task Force Report at pp. 12-13.

[ix] The Illinois Forensic Science Commission was established in 2021 by the Illinois General Assembly under Public Act 102-523. Members of the Forensic Science Commission include crime lab directors, forensic scientists, law enforcement officials, attorneys with experience in the use of forensic evidence in criminal cases (judicial, prosecutorial, and defense), a member of academia with experience in forensic science, a medical examiner, and community representatives. 20 ILCS 2605/2605-615(a) outlines the purpose and duties of the Forensic Science Commission, and provides that the Commission shall:

> "Collect and analyze information related to the impact of current laws, rules, policies, and practices on forensic crime laboratories and the practice of forensic science; evaluate the impact of those laws, rules, policies, and practices on forensic crime laboratories and the practice of forensic science; identify new policies and approaches, together with changes in science, and technology; and make recommendations for changes to those laws, rules, policies, and practices that will yield better results in the criminal justice system consistent with the sound practice of forensic science." 20 ILCS 2605/2605-615(a)(6) (2024).

[x] See, i.e., *Vill. Of Lincolnshire v. Olvera*, 2024 IL App (2d) 230255, ¶¶74-81, 84-89 (available at: https://ilcourtsaudio.blob.core.windows.net/antilles-resources/resources/e69391a5-69d8-4ff2-b689-531bad478325/Village%20of%20Lincolnshire%20v.%20Olvera%202024%20IL%20App%20(2d)%20230255.pdf). See also *People v. Zinelli*, 2022 IL App (2d) 210424-U, ¶¶41, 45-57 (cited as persuasive authority consistent with Ill.Sup.Ct. R. 23) (available at: https://ilcourtsaudio.blob.core.windows.net/antilles-resources/resources/1710017e-b3f8-4466-a16b-a065e5f81efe/People%20v.%20Zinelli,%202022%20IL%20App%20(2d)%20210424-U.pdf).

[xi] "Drug Toxicology for Prosecutors, 2023 Edition." National District Attorney's Association, National Traffic Law Center, National Alliance to Stop Impaired Driving, pp. 20-21 (available at: https://ndaa.org/wp-content/uploads/Drug-Toxicology-for-Prosecutors-2023_compressed.pdf).

[xii] Huestis, M.A. (2005). "Pharmacokinetics and Metabolism of the Plant Cannabinoids, Δ^9-Tetrahydrocannabinol, Cannabidiol and Cannabinol." *Handbook of Experimental Pharmacology*. **168**: 657–90.

[xiii] ANSI/ASB Best Practice Recommendation 037, "Guidelines for Opinions and Testimony in Forensic Toxicology," First Edition 2019 (available at: https://www.aafs.org/sites/default/files/media/documents/037_BPR_e1.pdf).

[xiv] ANSI/ASB Standard 120, "Standard for the Analytical Scope and Sensitivity of Forensic Toxicological Testing of Blood for Impaired Driving Investigations," First Edition 2021 (available at: https://www.aafs.org/sites/default/files/media/documents/120_Std_e1.pdf).

[xv] "4: Cannabis-Impaired Driving Detection & Toxicology." Cannabis & Driving, International Council on Alcohol, Drugs & Traffic Safety, p. 3 (available at: https://www.rsa.ie/docs/default-source/road-safety/campaigns/icadts-cannabis-4-impaired-driving-detection-_-toxicology.pdf?sfvrsn=9d9fe2c6_3).

[xvi] NHTSA "Drugs and Human Performance Fact Sheets," Revised April 2014, pp. 7-12 (available at: https://www.nhtsa.gov/sites/nhtsa.gov/files/809725-drugshumanperformfs.pdf).

[xvii] Hartman, R. (2016). "Effect of Blood Collection Time on Measured d9-THC Concentrations: Implications for Driving Interpretation and Drug Policy." *Clinical Chemistry* 62:2, 367-377.

[xviii] NHTSA "Drugs and Human Performance Fact Sheets," Revised April 2014, pp. 7-12 (available at: https://www.nhtsa.gov/sites/nhtsa.gov/files/809725-drugshumanperformfs.pdf).

[xix] Zhao, S., Brands, B., Kaduri, P., et al. "The effect of cannabis edibles on driving and blood THC," *J Cannabis Res* **6**, 26 (2024); available at: https://doi.org/10.1186/s42238-024-00234-y.

[xx] Hartman, R. (2016). "Effect of Blood Collection Time on Measured d9-THC Concentrations: Implications for Driving Interpretation and Drug Policy." *Clinical Chemistry* 62:2, 367-377.

[xxi] ANSI/ASB Best Practice Recommendation 037, "Guidelines for Opinions and Testimony in Forensic Toxicology," First Edition 2019 (available at: https://www.aafs.org/sites/default/files/media/documents/037_BPR_e1.pdf).

[xxii] Miles, A., Jones, S., Heartsill, C., Burke, K. "Forensic Toxicology: A Primer," *Highway To Justice* ABA Journal, Summer 2024 (available at: https://www.americanbar.org/content/dam/aba/publications/judicial_division_record/2024sum-hwtj.pdf).

[xxiii] Limoges, J. "Forensic Science Standards Development-Get Informed & Get Involved," Between the Lines, National Traffic Law Center, Vol 29, Issue 10 (Oct. 2021), pp. 4-5. (available at: https://ndaa.org/wp-content/uploads/BTL-Vol29-No10-Oct21-Forensic-Science-Standards.pdf).