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Re: Public Hearing on Certain Next-Generation Sequencing Technology and Potential Use in Laboratories Accredited by the New York State Commission of Forensic Science

Dear New York State Commission of Forensic Science and DNA Subcommittee:

Thank you, Chairwoman Rosado, the Commission of Forensic Science (“Commission”), Chairman Coble, and the DNA Subcommittee (“Subcommittee”), for the opportunity to present testimony on this topic. New York State Defenders Association (“NYSDA”), founded in 1967, is a not-for-profit membership association of public defenders, legal aid attorneys, assigned counsel, and private practitioners throughout the state. NYSDA operates the Public Defense Backup Center, a centralized resource which offers legal consultation, research, and training to the thousands of lawyers who serve as public defense counsel in criminal and family cases across New York State. In addition to providing training and legal support to public defenders, NYSDA advocates for causes critical to the missions of the public defense community.

As part of its mission, NYSDA also presents information to the Legislature, the Executive, and the public about the changes to our state’s laws and policies that are necessary to ensure high-quality representation, transparency, fairness, due process, and equal protection. With our role within these communities in mind, we offer these comments on the Commission’s adoption of new scientific methods within the New York State Police (“NYSP”) Lab.

NYSDA submits this written testimony, presented by its Executive Director, Susan C. Bryant, and Staff Attorney of the Discovery and Forensic Support Unit, Ashley M. Hart. NYSDA welcomes the opportunity to testify orally, if selected by the Commission.

Very truly yours,

Susan C. Bryant
Executive Director

Ashley M. Hart
Staff Attorney

**Testimony of New York State Defenders Association
Presented by Susan Bryant, Executive Director,
and Ashley Hart, Staff Attorney, Discovery and Forensic Support Unit**

Approving the New York State Police Forensic Investigation Center Lab (“NYSP Lab”) to perform Next Generation Sequencing (“NGS”) would implicitly and without scrutiny authorize every downstream process that NGS makes possible. This includes Investigative Genetic Genealogy (“IGG”), which the NYSP Lab specifically states it does not perform. This is a marked departure from the current methods of Familial Searching, which is completed in-house at the NYSP Lab and involves STR DNA analysis and CODIS searching.

When NYSDA offered written testimony to the Commission on the use of Familial Searching (FS) in 2017, we objected to its use. NYSDA continues to object to that use and to the newly proposed technologies and methods at issue today.

At this point, there are more questions than answers. NGS and IGG are not governed by any statute or regulation in New York, and IGG operates nationally in a largely unregulated environment. Without a pause to develop legislation or regulation, NYSDA is deeply concerned about the downstream effects on equity, privacy, and the risk of wrongful convictions.

Request: NYSDA urges the Commission to reconsider approving or permitting the NYSP Lab or any New York State lab to use Next Generation Sequencing/Investigative Genetic Genealogy (“NGS/IGG”) methods, technologies, kits, and equipment (“Methods/methods”) or contract with agencies who utilize these methods unless and until statutory and regulatory guardrails are in place.

Transparency Matters

The public hearing notice posted on the Division of Criminal Justice Services (DCJS) website on behalf of the Commission and the Subcommittee states that the hearing is intended “to gather information on certain next-generation sequencing technology that may be used to support investigative genetic genealogy within public forensic laboratories in New York State.” The notice does not provide any indication that the DNA Subcommittee already made a recommendation to the Commission to approve the NYSP Lab’s use of this technology and the Commission’s June 2026 vote to approve that recommendation. The subject matter of the hearing and its purpose were the subjects of much debate at the last Commission Meeting on September 18, 2026. Statements by at least two commissioners illustrate the lack of clarity and transparency regarding whether members of the public will be meaningfully heard on this topic, which will have broad impact across the entire state. At that meeting, one commissioner asked “Isn’t that happening at the public hearing? Aren’t we going to hear from people that they’ll talk about how it’s been used, etc.?”¹ From another commissioner: “Can I just remind as a Commission, we already voted New York State Police in to use this technology.... And then after the fact, we said

¹ Commission of Forensic Science Meeting, September 18, 2026 <https://www.youtube.com/watch?v=-cdWHYWXJU&t=3916s>, approximately 00:58:24.

‘Oh, oops. We didn’t have this this hearing, this vote.’”² This dialog about a proceeding initiated by the Commission does not instill confidence in how the public hearing will be conducted or in its outcome.³

The use of NGS by public labs arose when the NYSP Lab sought approval from the Commission for its use of the Methods. However, neither the Commission nor the NYSP Lab have provided the public with a summary of the NYSP Lab validation study, let alone the study itself. No plan for implementing the method and integrating with outside FIGG agencies has been disclosed. No written policies from the NYSP Lab have been disclosed. The only thing that has been disclosed is the August 2026 NYSP Lab “Next Generation Sequencing/Investigative Genetic Genealogy” frequently asked questions sheet (“NYSP Fact sheet”).⁴ How can any member of the public be expected to submit a thoughtful response or testimony in the absence of this information? NYSDA has attempted to obtain this information via FOIL requests, but the requests were denied after months of delay. Stakeholders in the criminal legal system and information privacy spaces are not being given a meaningful opportunity to be heard on this matter when so little information has been disclosed, and a decision has already been made.

**NGS/IGG is Not Equivalent to STR/FS and Should Not
Be Casually Regarded as Similar Simply to
Fit into the Current Statutory and Regulatory Framework**

Attempting to shoehorn the new NGS/IGG technology and methods into our existing statutory and regulatory framework is insufficient. As we understand it, the NYSP Lab has validated the ForenSeq Kintelligence Kit, the MiSeq FGx® Sequencing System, and has created protocols/methods for using the kit with the sequencing system, and (if any) associated analytical software (“Method(s)”). This inquiry into the genome, isolating and sequencing single nucleotide polymorphisms (SNPs), is dramatically different than the current method, which utilizes short tandem repeats (STRs). The new Method reveals more sensitive health information about the individual(s) contributing to an evidentiary or reference sample.

To quote the manufacturer of the MiSeq FGx® Sequencing System, “NGS detects the full spectrum of genetic variation in a DNA sample compared to only size-based analysis of short tandem repeats (STRs) using capillary electrophoresis (CE). Inherently sensitive, NGS technology goes beyond fragment size to identify underlying sequence variation.”⁵ A comparison of the brochures for the NYSP Lab’s GlobalFiler PCR Amplification Kit (“GlobalFiler”) with Verogen’s ForenSeq Kintelligence Kit (“ForenSeq”) makes it clear on its face that the two methods are markedly different. GlobalFiler analyzes 24 STR markers while ForenSeq analyzes

² *Id.*

³ NYSDA first learned about the hearing from someone who received an email from DCJS about it. The Commission notice on the DCJS website did not appear until sometime around mid-September.

⁴ “Next Generation Sequencing/Investigative Genetic Genealogy” New York State Division of State Police Forensic Investigation Center, August 2026 https://troopers.ny.gov/system/files/documents/2026/08/ngs_igg-fact-sheet.pdf

⁵ Qiagen MiSeq FGx® Sequencing System Technical Information <https://www.qiagen.com/en-US/resources/download/validationAndTechnicalDocument/qpro-6229-ti-hid-miseq-fgxsequencingsystem-0424-ww>, p. 1.

10,230 SNP markers. The latter markers are not publicly disclosed—or if they are—Verogen has made this information difficult to obtain. The State Police Lab fact sheet comparison of IGG and FS, “Both IGG and FS use known patterns of similarities between the DNA of related individuals and database searches as a tool to generate investigative leads,” is simplistic.

The next bullet points on the NYSP Lab fact sheet are disingenuous. They equivocate a more secure procedure and upload to CODIS with a procedure that could be conducted wholly by contractors in the IGG field with data uploaded to an easily accessible, privately owned database:

“How does IGG compare to Familial Searching (FS)?

- FS searches the STR (Short Tandem Repeat) DNA profiles uploaded by forensic labs into CODIS (Combined DNA Index System) to identify potential relatives of an unknown perpetrator
- IGG requires SNP (Single Nucleotide Polymorphism) data, which is used in genealogical research after the SNP profile is entered into genealogy databases to search for potential relatives”⁶

There is no mention of who has access to CODIS. “The computer terminals/servers containing the CODIS software are located in physically secure space. Access to these computers is limited to only those individuals authorized to use CODIS and approved by the FBI. Communications between participating federal, state, and local laboratories occur over a wide area network accessible to only criminal justice agencies approved by the FBI.”⁷

Compare this with who has access to GEDmatchPRO: “Anyone authorized to upload law enforcement kits and perform forensic genealogy comparisons can register for an account.”⁸ Once obtained internally by the NYSP Lab, the SNP data is then sent to an external provider, GEDmatchPRO, in the wholly unregulated and unscientific field of investigative genetic genealogy (IGG, also known as forensic investigative genetic genealogy or FIGG). GEDmatchPRO and similar databases are becoming national and international databases where consumers are sharing their private genetic information. Law enforcement agencies now want to capitalize on that. Consumers were not aware of this possible use at the creation of these databases. They have been subsequently able to opt-out or opt-in, depending upon the company. These policies vary depending upon the company and will continue to change over time.

Under this framework, any law enforcement agency in New York can have any criteria or none at all to authorize an entity to perform these comparisons in GEDmatchPRO. Who oversees this? Not the Commission. Not the Subcommittee. Because no information on this has been made publicly available, this will presumably be governed by private contracts between law enforcement agencies and unaccredited third-parties. The Commission, Subcommittee, and NYSP Lab have no control over or process to audit the downstream application of IGG and no control over who accesses GEDMatch’s database.

⁶ “Next Generation Sequencing/Investigative Genetic Genealogy” New York State Division of State Police Forensic Investigation Center, August 2026 https://troopers.ny.gov/system/files/documents/2026/08/ngs_igg-fact-sheet.pdf

⁷ “FAQ on CODIS and NDIS” <https://www.fbi.gov/how-we-can-help-you/dna-fingerprint-act-of-2005-expungement-policy/codis-and-ndis-fact-sheet>

⁸ GEDmatch PRO “About” <https://pro.gedmatch.com/about>

When the Commission and DNA Subcommittee authorized the state lab system to perform familial searches, it promulgated new regulations under the New York State Code of Rules and Regulations § 6192, Policy for Establishment and Operation of a DNA Identification Index, and § 6193.2, Use and Dissemination Agreements. These only address STRs and CODIS. They do not address SNPs. At a minimum, new regulations specifically regarding SNPs must be proposed and adopted if methods utilizing SNPs are implemented.

Even if there are regulations, the NGS/IGG method should not be implemented without statutory guardrails in place to ensure constitutional and ethical application of this method. Executive Law Article 49-B (“Article 49-B”) never contemplated and does not adequately address these Methods.

Implementing This Method in the Absence of Guardrails Will Lead to Unchecked and Unjust Outcomes

Article 49-B was last amended in 2012. Forensic DNA technology and analysis have advanced exponentially since this time. NYSDA respectfully submits that additional regulations and legislation must be implemented to address these advancements. Executive Law § 995-d governs the confidentiality of DNA analysis results and all records and expressly prohibits disclosure to GEDmatch and other private entities which would perform downstream IGG analysis:

“Such records, findings, reports, and results shall not be released to ... agencies or services, private investigation services, and may not be disclosed in response to a subpoena or other compulsory legal process or warrant or upon request or order of any agency, authority, division, office, corporation, partnership, or any other private or public entity or person” unless it is a subpoena on behalf of the subject of the DNA record or for “civil proceeding where the subject of such DNA record has put such record in issue.”⁹ (emphasis added).

The records and results other than those in the state DNA identification index “may be disclosed in a criminal proceeding to the court, the prosecution, and the defense” per section 2 of the same law. Disclosure to a private party—GEDmatch—is prohibited under the law.

Further, the Commission’s regulations do not account for this new type of testing, and it is unclear how SNP profiles would fit into the current regulatory framework. As outlined above, forensic SNPs are not part of a system like CODIS. The DNA data is compared directly to DNA data housed in private company GEDmatch. And GEDmatch is owned by Verogen, the manufacturer of the ForenSeq Kintelligence Kit.¹⁰ New York regulations and statutes have no say in what private companies do with their databases. To safeguard the genetic data of New Yorkers, the regulatory structure must come from our statutes and adhere to our Constitution. It is irresponsible to tackle one part of the process with NGS with complete disregard for how the IGG portion will be carried out. How will stakeholders like criminal defendants obtain private

⁹ New York State Executive Law § 995-d(1).

¹⁰ “GEDmatch” entry in International Society of Genetic Genealogy Wiki <https://isogg.org/wiki/GEDmatch>

contract information? Will specific terms in contracts be in place at all for each individual case? Or will there be a general memorandum of understanding between the NYSP Lab and external agencies? Will the Commission get around this issue by NYSP Lab disclosing SNP data to police who contract with private companies?

It is our understanding that, as a result of a trial court decision in *People v. Heuermann*, the New York State Department of Health has given private labs carte blanche to conduct NGS/IGG, a departure from its formal vetting process. State forensic labs are the last line of defense to possibly ensure accurate, reliable, and safe methods using NGS/IGG are implemented in New York.

Not only are there gaps in our current state legislation, but federal safeguards are also lacking in the Health Insurance Portability and Accountability Act (HIPAA) and the Genetic Information Nondiscrimination Act (GINA). These acts do not typically apply to private direct-to-consumer companies like GEDmatch or biotechnology companies like Verogen.¹¹

The scope of proposed testing is unknown. The same NYSP Lab fact sheet which overly simplifies the similarities and differences between NGS/IGG and familial searches states, “Unsolved homicides, sexual assaults, aggravated assault, and unidentified human remains with a complete DNA profile are good candidates for NGS / IGG consideration[.]”¹² (emphasis added) But what types of samples will be processed in this way? Who decides what types of alleged crimes utilize these new methods? How does that change over time with changes to technology or within a particular case if no leads are generated at the initial stage? And will any of that information be formalized or be disclosed? Too many questions remain due to the lack of transparency from the NYSP Lab, this Commission, and Subcommittee. According to the NYSP Lab’s own documentation, “Currently, only single source samples can be considered for NGS at the NYSP FIC.”¹³ Many evidentiary samples are mixtures. This language makes it seem like the NYSP Lab is primed to use its new method on surreptitiously obtained genetic materials and purported suspect reference samples, reinforcing suspicions that SNPs will be used in genetic fishing expeditions.

The Current Framework Does Not Adequately Address Privacy Concerns

Present objections remain the same as they did when Article 49-B was implemented in 1994:

“DNA identification involves sensitive privacy and confidentiality issues. Accordingly, this legislation could raise concerns from the perspective of individuals opposed to governmental intrusion into individual privacy rights. DNA identification also involves the

¹¹ “Addendum to 23 and You: The Privacy and National Security Implications of the 23andMe Bankruptcy” <https://www.govinfo.gov/content/pkg/CHRG-119shrg61889/pdf/CHRG-119shrg61889-add1.pdf>

¹² “Next Generation Sequencing/Investigative Genetic Genealogy” New York State Division of State Police Forensic Investigation Center, August 2026 https://troopers.ny.gov/system/files/documents/2026/08/ngs_igg-fact-sheet.pdf

¹³ *Id.*

merging of rapidly developing health and science technology with traditional law enforcement practices.”¹⁴

Further, digital technology, cybersecurity, and associated questions about privacy are not adequately addressed in Article 49-B.

The United States Supreme Court recently held in *Chatrue v. United States* that “[a]n individual has a reasonable expectation of privacy in records about his cell phone’s location, and police intrude on that constitutionally protected interest when they demand the information—even though for only a limited time, and from a third-party tech company.”¹⁵

Cell phone location data was the subject at issue in *Chatrue*. This type of data reveals less about an individual than their private, sensitive genetic data contained in SNPs and their linkage to family genetic data contained within GEDmatch. *Chatrue* has strengthened the *Carpenter* line of U.S. Supreme Court cases, such that the concerns expressed by the Electronic Frontier Foundation (EFF) in 2019 when Verogen acquired GEDmatch, are even more pronounced today; “Because genetic data is so sensitive, we have an expectation of privacy in it, even if other people can access it.”¹⁶ *Chatrue* was remanded for consideration of whether the search in question, which involved an “uncommon, multi-step” process, was reasonable. This remains an unanswered question. Let us not wait and see New York litigants address this question without state legislation, let alone answers from the U.S. Supreme Court.

Genetic data housed within direct-to-consumer (DTC) genetic genealogy companies including GEDmatch has also been exposed in security breaches.¹⁷ There is no proposal to safeguard this genetic data or to mitigate consequences of breaches the Commission, Subcommittee, and State cannot control. The lack of consideration for and lack any communication about the privacy of genetic information is troubling.

Unanswered Questions that Need Consideration

The Commission and Subcommittee should require clear answers to at least the following:

Due Process and the Defense

- What will be disclosed to the defense under Criminal Procedure Law (CPL) Article 245, including raw data, software, genealogy trees, and the investigative steps between a "lead" and an arrest?

¹⁴ L. 1994, Ch. 737, § 1, Bill Jacket, p. 9, <https://digitalcollections.archives.nysed.gov/Detail/objects/99422>

¹⁵ *Chatrue v. United States*, 609 U.S. ___, 146 S.Ct. 2193 (2026), https://www.supremecourt.gov/opinions/25pdf/25-112_0am4.pdf

¹⁶ Jennifer Lynch, Electronic Frontier Foundation “Genetic Genealogy Company GEDmatch Acquired by Company With Ties to FBI & Law Enforcement—Why You Should Be Worried”, December 10, 2019 <https://www.eff.org/deeplinks/2019/12/genetic-genealogy-company-gedmatch-acquired-company-ties-fbi-law-enforcement-why>

¹⁷ “Massive GEDmatch Security Breach Exposes 1.2 Million Users' DNA Profiles To Law Enforcement Agencies” CBS News, July 22, 2020, <https://www.cbsnews.com/sanfrancisco/news/massive-gedmatch-security-breach-exposes-1-2-million-users-dna-data-to-law-enforcement-agencies/>

- Will the defense have access to the same NGS and genealogy tools, or to independent labs capable of reviewing the work?
- How will reliance on proprietary software and private companies' trade-secret claims affect a defendant's right to confront and challenge the evidence?

Oversight

- What body will audit NGS and IGG use, and how often? Will those audits be made public?
- What remedies exist if the methods are misused or the policies are violated?

Other jurisdictions have enacted statutes that specifically govern the use of IGG before using it, with provisions such as judicial authorization, case-type limits, and data-destruction requirements. New York has none. Until these questions are answered in statute and regulation, approval is premature.

Equity

- Genealogy databases do not reflect the population evenly. How will the Commission evaluate disparate impact on communities that are over- or under-represented?
- How will the State make sure these methods are not deployed in a way that deepens existing disparities in policing and prosecution?

Scope and downstream use

- If NGS is approved, what prevents NGS-generated profiles from being sent to private labs or genealogy companies for IGG?
- What written policy, if any, limits how and when NYSP may contract with outside entities that perform IGG?
- Who decides when a case qualifies for NGS or IGG, and under what criteria? Will use be limited to specific offense categories, and after what other investigative steps?

Validation and reliability

- What internal and external validation has been done on the specific NGS kits, instruments, and bioinformatics software the Lab proposes to use?
- How will the Lab interpret mixtures, degraded samples, and low-template samples with NGS? What thresholds apply?
- Is there an accepted body of peer-reviewed research establishing these methods' error rates?

Privacy and consent

- Genealogy databases hold the genetic information of people who never consented to law enforcement searches, and their relatives certainly did not. How will New York protect those third parties?

- Will searches be limited to databases whose users have expressly opted in to law enforcement use?
- NGS can reveal far more than identity, including ancestry, health predispositions, and physical traits. What limits the information that is generated, retained, or used?
- How long will profiles, SNP data, and genealogy search results be retained? Who has access, and how will they be destroyed?