

No. 103030

IN THE
SUPREME COURT OF ILLINOIS

THE ILLINOIS STATE POLICE,)	On Motion for Supervisory Order to
ILLINOIS FORENSIC SCIENCE)	the Circuit Court of Cook County,
CENTER, and JAN L. JOHNSON,)	Illinois, Criminal Division, No. 02
Director, Illinois State Police, Illinois)	CR 15439.
Forensic Science Center,)	
)	
Movants,)	
)	
vs.)	
)	
The Honorable VINCENT M.)	
GAUGHAN, Judge of the Circuit Court of)	
Cook County, and JUAN LUNA,)	
)	
Respondents.)	

MOTION FOR SUPERVISORY ORDER

Pursuant to Supreme Court Rule 383, the Illinois State Police, Illinois Forensic Science Center ("ISP"), and Jan L. Johnson, Director of the Illinois State Police, Illinois Forensic Science Center, move this Court to exercise its supervisory authority against the Honorable Vincent M. Gaughan, Judge of the Circuit Court of Cook County, in *People v. Degorski & Luna*, No. 02 CR 15439. For the reasons set forth in the attached explanatory suggestions, the movants request that this Court enter an order vacating Judge Gaughan's order of July 11, 2006, in which he required the ISP to analyze its database containing DNA profiles of convicted felons to determine the number of matches among the various

profiles.

Respectfully submitted,

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SUGGESTIONS IN SUPPORT OF MOTION FOR SUPERVISORY ORDER

Background

After gathering evidence and talking to witnesses following a multiple homicide in 1993 at a Brown's Chicken restaurant in Palatine, Illinois, police identified Juan Luna as a suspect. Luna and James Degorski were indicted for murder in *People v. Degorski & Luna*, No. 02 CR 15430 (Cook County). Luna provided police with a saliva swabbing taken from his cheek. (SR25). The swabbing was sent for DNA testing to the Illinois State Police, Illinois Forensic Science Center (ISP), which found that Luna's sample matched DNA found on a chicken bone taken from the crime scene. (*Id.*). The laboratory report stated that, of 9 specific "loci" tested from the crime-scene DNA, a match at all of those loci would be expected to

occur randomly in approximately 1 in 2.8 trillion Hispanic unrelated individuals.

(*Id.*).

DNA Evidence

The use of DNA evidence to identify individuals is well established. *See, e.g.*, 155 Ill. 2d R. 417 (DNA Evidence). The science is based on the discovery that human cells contain 23 pairs of chromosomes, which are bundles of genes. Genes vary from person to person and are pieces of DNA, or "deoxyribonucleic acid." (SR4). On the chromosomes are "alleles." National Human Genome Research Institute, *Allele*, at <http://www.genome.gov/glossary.cfm?key=allele> (last visited July 20, 2006). An allele is a variant form of a gene at a particular location (or "locus") on the chromosome.

Id. Forensic scientists scan alleles at 13 DNA regions, or "loci," and use the data to create a DNA profile of the specific individual from whom the DNA sample was taken. Human Genome Project, *DNA Forensics*, at http://www.ornl.gov/sci/techresources/Human_Genome/elsi/forensics.shtml#l (last updated June 14, 2006).

The Illinois offender database

Illinois law requires that persons convicted of certain qualifying offenses submit blood, saliva, or tissue to the ISP for analysis and categorization into genetic groups. 730 ILCS 5/5-4-3(a)(1) (2004). The ISP must then maintain the genetic marker groupings. 730 ILCS 5/5-4-3(e). This information is made confidential. 730 ILCS 5/5-4-3(f). Illinois law specifies that this data may be used *only* for the following

enumerated purposes:

- valid law enforcement identification and as required by the FBI for participation in the National DNA database;
- technology validation;
- a population statistics database;
- identifying and assisting in the prosecution of a person who is suspected of committing a sexual assault;
- quality assurance if personally identifying information is removed; or
- assisting in the defense of the criminally accused pursuant to Section 116-5 of the Code of Criminal Procedure of 1963.

730 ILCS 5/5-4-3(D) (2004).

Luna's subpoena and ISP's motion to quash

On May 16, 2006, Luna subpoenaed Jan L. Johnson, the Director of the ISP's Forensic Science Center. (SR24). The subpoena demanded that Johnson, on behalf of the ISP, a non-party to the underlying criminal proceedings, produce "all DNA profiles, showing the actual STR Allele numbers in the Illinois Offender database." (*Id.*). An "STR Allele" is material from a specific DNA "loci" used to create an individual's genetic profile. (SR4).

On June 9, 2006, the ISP filed a motion to quash the subpoena. (SR3-SR39). The ISP pointed out that under state and federal law, there are strict limitations on the disclosure of genetic marker groupings or genetic profiles in the state database

and in the corresponding national database, referred to as "NDIS" (National DNA Index System). (SR5). Further, like other States, Illinois is required to enter into an agreement with the FBI, which binds it to the statutory disclosure restrictions (42 D.S.C. § 14132) to prevent unauthorized use of CaDIS software.¹ *Id.* The ISP explained that since Luna's DNA had been an "exact match" with the 9 loci that were available from the chicken bone, it was statistically invalid to compare that direct match to "multiple comparisons across" the Illinois database having nine (of 13 possible) common loci. (SR3-SR4).

On June 21, 2006, Luna responded to the ISP's motion to quash. (SR40-SR47). He acknowledged that his reason for the subpoena was that he learned that in an Arizona study, 144 pairs of profiles stored in an Arizona offender database matched at nine or more loci, and asserted that he was not asking the ISP to do any original research, but rather provide raw Illinois data from the felony database without its associated identifying information, so that defense experts could do the same calculations. (SR41). He said the resulting information might provide jurors help in understanding the meaning of the match between two individual profiles. (SR42).

¹ "CaDIS" is an acronym for "Combined DNA Index System" and refers to the software used to process DNA profiles.

The hearing on the motion

On July 6, 2006, the trial court held a hearing on the ISP's motion to quash. Counsel for the ISP emphasized that Luna's test was a "direct match" with the evidence found at the crime scene, and that the state's database had not even been used in the analysis of Luna's DNA. (SR62). This meant that the statistical analysis suggested by Luna's counsel, namely, running the state database "against itself," was invalid. (*Id.*). Counsel also noted that there were strict statutory limits placed on the way the ISP's data could be used, and that the conditions required for use by a criminal defendant, such as Luna, had not been met. (SR67). Because, counsel argued, Luna could make whatever point he wanted by accessing public DNA data, the ISP's statutorily-protected database should not be violated. (SR74).

Luna's counsel responded that the data he needed was vital to the defense because Arizona's offender data showed that a pair of DNA matches at a level of nine loci was relatively common. (SR75-SR76). This, he claimed, countered the prosecution's suggestion of a very low random chance of Luna matching the profile of the DNA found at the crime scene. (SR77). With regard to the limitations placed on the data's use by statute, Luna's counsel acknowledged that there was a statutory prohibition on using the data, and that he did not have "the strongest argument in the world" in this regard. (*Id.*; *see also* SR82). He said, however, that the Illinois statute allowed the data to be used for "quality control purposes if personally identifying information is removed," and that his client had a constitutional right to

the information. (SR85-86).

Mter the close of argument, the court, in a verbal order, denied the motion to quash. (SR89).

The second hearing

On July 11, 2006, the parties appeared before the circuit court seeking clarification. (SR93-SRI04). Counsel for the ISP stated that she was unsure whether the court wanted ISP to turn over the raw data from the database, or run the same type of study that had been done in Arizona. (SR93). She further indicated that the ISP wanted the opportunity to pursue emergency appellate review. (SR96). She asked the court to stay its order, which the court denied. (SR98). The court clarified that it wanted the ISP to "do the search for the nine. . . matches," not turn over the individual data. (SR99). Counsel for the ISP said that it was her understanding that running the search itself would take 2 weeks because it required not just running a single search against the individuals in the database, but running each individual against every other individual. (SR99-SRI00). The court said that it wanted more than counsel's guesses on how long the search would take; instead, it ordered an affidavit from the ISP saying how long it would actually take to run the program demanded by Luna. (SRI03).

The court entered two orders that day. The order regarding the affidavit says:

[T]he Illinois State Police Forensic Science Center shall file an affidavit that states how long it will take to analyze all the DNA

profiles. . . to determine the number of pair-wise combinations to 9 loci and what it entails to do this search, including type of computers and data processing.

(SRI). The order pertaining to the subpoena states:

1. The Illinois State Police, Illinois Forensic Science Center shall analyze all the DNA profiles in the Illinois Offender database. . . to determine the number of pair-wise comparisons that may or may not exist at 9 loci.
2. Compliance with the terms of this Order shall be effectuated by July 18, 2006.

(SR2). Trial is set for September 12, 2006.

This Court's stay of the circuit court's orders

On July 14, 2005, the ISP filed with this Court an emergency motion for stay. (SR204-SR223). The motion argued that preserving the *status quo* pending the ISP's request and consideration by this Court of a supervisory order was needed to preserve the fruits of the appeal, that the ISP was likely to succeed on the merits, and that the balance of hardships favored the ISP. (SR209-SR219). The motion pointed out that the ISP would have to run approximately 25 billion DNA profile comparisons if it were to comply with the circuit court's order (*i.e.*, to compare each profile against every other profile), that the ISP would have to violate state and federal law in doing so, and that the database would be unavailable to law

enforcement during the search and that the information sought by Luna was irrelevant. (*Id.*). This Court granted the ISP's request on July 19, 2006.

The ISP runs the test

While this Court was considering the ISP's emergency motion, the ISP, erring on the side of caution, ran the test ordered by the circuit court in order to be ready to comply with the circuit court's order, if it were not stayed. (SR226). The test took over 43 hours to complete. (SR226). The ISP did not excluded associations between duplicate samples. (*Id.*).

Degorski subpoenas the raw data

On July 18, 2006, Luna's co-defendant, Degorski, also demanded information from the ISP. In his subpoenas, Degorski sought not the number of matches at 9 loci that existed within the ISP's offender database, as the circuit court ordered for Luna, but raw data: "a set of *all* DNA profiles showing the actual STR allele numbers." (SR223-SR224) .

This Court Should Exercise Its Supervisory Authority

This Court exercises its supervisory authority where "exceptional circumstances" are present, *Statland v. Freeman*, 112 Ill. 2d 494,497,493 N.E.2d 1075 (1986), where "the normal appellate process will not afford adequate relief and the dispute involves a matter important to the administration of justice," *People ex rel. Birkett v. Bakalis*, 196 Ill. 2d 510, 513, 752 N.E.2d 1107 (2001), and "when the issues involved are of great importance," *People ex rel. Carey v. Strayhorn*, 61 Ill. 2d

85, 92, 329 N.E.2d 194 (1975).

Although supervisory relief generally is not generally available in discovery matters, this Court has intervened to correct erroneous discovery orders. *See Balciunas v. Duff*, 94 Ill. 2d 176,446 N.E.2d 242 (1983) (vacating trial court's reconsideration and modification of predecessor judge's discovery order); *Marshall v. Elward*, 78 Ill. 2d 366,399 N.E.2d 1329 (1980) (supervisory powers used to direct the trial court to examine documents to determine applicability of federally codified privileges); *People ex rel. Carey v. Strayhorn*, 61 Ill. 2d 85,329 N.E.2d 194 (1975) (vacating portion of trial court order which denied the disclosure of alibi witnesses). Exceptional circumstances warranting supervisory relief exist here because discovery orders are not appealable and the circuit court's order involves matters there are important to the administration of justice. In particular, a supervisory order should be granted because:

- (1) the order requires the ISP to violate state and federal law;
- (2) the order requires the ISP to violate its agreement with the FBI, on the permissible uses of the database, thereby running the risk of losing access to CODIS and the national offender database;
- (3) making the ISP produce the information required by the circuit court's order of July 11, 2006 will result in *additional* demands for access to information in the Illinois offender database;
- (4) permitting this type of use of the database will establish a precedent

that will result in the database being used for non-law enforcement purposes in *other* cases, thus repeatedly depriving the ISP of access to the database for its intended law enforcement purpose; and

- (5) the order requires the ISP to produce information that is irrelevant to whether Luna is guilty or innocent of the Brown's Chicken murders.

1. *The order requires the ISP to violate Illinois and federal law.*

The circuit court's order of July 11, 2006 directs the ISP to violate Illinois and federal law. State and federal law specify limited purposes for which information in the ISP database may be accessed and used. None of these purposes consists of helping defense counsel with general research into the validity of random match probabilities.

Illinois, like every other state and the District of Columbia, *see People v. Garvin*, 349 Ill. App. 3d 845,853,812 N.E.2d 773 (2ndDist. 2004), *aff'd on other grounds*, 219 Ill. 2d 104 (2006), has enacted a genetic marker testing statute. Illinois law requires that persons convicted of certain qualifying offenses shall be required to submit blood, saliva, or tissue to the ISP for analysis and categorization into genetic groups. 730 ILCS 5/5-4-3(a)(I) (2004). The ISP must then maintain the genetic marker groupings. 730 ILCS 5/5-4-3(e) (2004). This information is confidential, 730 ILCS 5/5-4-3(f) (2004), and is to be used only by law enforcement officials, *Doe v. Gainer*, 162 Ill. 2d 15, 18,642 N.E.2d 114 (1994). Illinois law specifies that this data may be used *only* for:

- valid law enforcement identification purposes and as required by the **FBI** for participation in the National DNA database;
- technology validation purposes;
- a population statistics database;
- identifying and assisting in the prosecution of a person who is suspected of committing a sexual assault;
- quality assurance purposes if personally identifying information is removed; or
- assisting in the defense of the criminally accused pursuant to Section 116-5 of the Code of Criminal Procedure of 1963.

730 ILCS 5/5-4-3(f) (2004).² Of these permissible uses, the one that would seem to be most applicable is "assisting in the defense of the criminally accused pursuant to Section 116-5 of the Code of Criminal Procedure of 1963." But an examination of that provision shows that it does not apply. Section 116-5 allows a defendant to

² The federal law establishing the National DNA Index System authorizes similar uses, allowing disclosure of DNA samples or analyses *only*:

- (A) to criminal justice agencies for law enforcement identification purposes;
- (B) in judicial proceedings, if otherwise admissible. . .;
- (C) for criminal defense purposes, to a defendant, who shall have access to samples and analyses *performed in connection with the case in which such defendant is charged*; or
- (D) if personally identifiable information is removed, for a population statistics database, for identification research and protocol development purposes, *or for quality control purposes*.

42 V.S.C. § 14132 (emphasis added).

petition the court to order certain DNA profiles searches. 725 ILCS 5/116-5 (2004). Among other permissible searches, Section 116-5 allows a criminal defendant to obtain a search of the ISP database comparing the defendant's genetic profile or the genetic profile from forensic evidence secured for the trial against the genetic profile of any offender in the ISP database. *Id.*³ Clearly, the circuit court's order of July 11, 2006 does not require a search of the ISP database comparing Luna's genetic profile or the genetic profile from the chicken bone against the genetic profile of an offender

³ Section 116-5 provides:

(a) Upon motion by a defendant charged with any offense where DNA evidence may be material to the defense investigation or relevant at trial, a court may order a DNA database search by the Department of State Police. Such analysis may include comparing:

(1) the genetic profile from forensic evidence that was secured in relation to the trial against the genetic profile of the defendant,

(2) the genetic profile of items of forensic evidence secured in relation to trial to the genetic profile of other forensic evidence secured in relation to trial, or

(3) *the genetic profiles referred to in subdivisions (1) and (2) against:*

(i) *genetic profiles of offenders maintained under subsection (f) of Section 5-4-3 of the Unified Code of Corrections [730 ILCS 5/5-4-3], or*

(ii) genetic profiles, including but not limited to, profiles from unsolved crimes maintained in state or local DNA databases by law enforcement agencies.

(b) If appropriate federal criteria are met, the court may order the Department of State Police to request the National DNA index system to search its database of genetic profiles.

(c) If requested by the defense, a defense representative shall be allowed to view any genetic marker grouping analysis conducted by the Department of State Police. The defense shall be provided with copies of all documentation, correspondence, including digital correspondence, notes, memoranda, and reports generated in relation to the analysis.

725 ILCS 5/116-5 (2004) (emphasis added).

in the ISP database. Instead, the court ordered something much different and much more involved: a comparison of each profile in the database with every other profile in the database. Thus, the "assisting in the defense" provision does not apply.

In any event, Luna's counsel disavowed any reliance on that provision. (SR82). Instead, he argued improbably to the circuit court that he was seeking the information "for quality control purposes" (SR85), as permitted by both state and federal law. Counsel acknowledged that he did not have "the strongest argument in the world" in this regard. (SR82). He was correct because his argument was, in fact, without any merit whatsoever.

A use of the database is for "quality assurance purposes," 730 ILCS 5/5-4-3(f) (2004), or for "quality control purposes," 42 D.S.C. § 14132(D), if the use assures the database can meet its intended purpose. The purpose of the ISP database is as an investigative tool, allowing, for example, law enforcement agencies to compare forensic evidence found at crime scenes with DNA profiles of convicted felons, thereby excluding a large number of individuals as suspects. (SRI15). The circuit court's order requiring the ISP to compare each DNA profile in its database with every other DNA profile in the database - so Luna's counsel could use the results to "help [jurors] in understanding the meaning of the match between two individual profiles" (SR42) - is certainly not "quality control" or "quality assurance" and bears no relation to the database's law enforcement purpose. Thus, the court's order mandates a use of the database not permitted under either state or federal law.

Finally, the state and federal limits on the permissible uses of the ISP database entirely comport with Luna's due process rights. Even with these limits, state and federal law specifically *accommodate* a defendant's due process rights to exculpatory information. Section 5-4-3(f) of the Unified Code of Corrections allows a defendant to petition the court under Section 116-5 of the Code of Criminal Procedure for an order directing the ISP to conduct certain DNA profile searches. 730 ILCS 5/5-4-3(f) (2004) (referencing 725 ILCS 5/116-5 (2004)). Section 116-5 allows, for example, a criminal defendant to obtain a search of the ISP database comparing the defendant's genetic profile or the genetic profile from forensic evidence against the genetic profile of any offender in the ISP database. 725 ILCS 5/116-5 (2004). In this way, Illinois law allows criminal defendants to have appropriate access to the ISP sufficient to lead to exculpatory information.

The circuit court's order of July 11, 2006, however, goes further. It requires the ISP to provide Luna with the number of matches among DNS profiles in the ISP database. Due process does not require that Luna be afforded this information. The Due Process Clause merely forbids the prosecution, upon receiving a request for exculpatory information, from suppressing "evidence favorable to the accused. . . . where the evidence is material either to guilt or punishment, irrespective of the good faith or bad faith of the prosecution." *Brady v. Maryland*, 373 U.S. 83, 87, 83 S. Ct. 1194 (1963). Evidence is "material" under *Brady* "only if there is a reasonable probability that, had the evidence been disclosed to the defense, the result of the

proceeding would have been different. A 'reasonable probability' is a probability sufficient to undermine confidence in the outcome." *United States v. Bagley*, 473 U.S. 667, 682, 105 S. Ct. 3375 (1985).

Under *Brady*, the information the circuit court ordered the ISP to produce is not material. First, Luna is unable to show that the results of the ISP's analysis would be favorable to him. In fact, he does not even claim that the court-ordered analysis will show that his DNA profile does not match the DNA profile of the sample from the chicken bone.

Instead, Luna speculates that if the analysis reveals many matching profiles in the ISP database (out of the *billions* of comparisons), this might "help the jurors understand the meaning of a match." (SR42). This is double speculation—speculation about what the ISP's analysis of its database might show and speculation about whether a juror might find the results helpful. But speculation that the evidence might be favorable to the defense does not establish that the evidence is material. *People v. Foggy*, 121 Ill. 2d 337, 349, 521 N.E.2d 86 (1988) ("[t]he vague assertion that the victim may have made statements to her therapist that might possibly differ from the victim's anticipated trial testimony does not provide a sufficient basis to ignore the victim's right to rely upon her statutory privilege") (quoting *People v. District Court*, 719 P.2d 722,726 (Colo. 1986)); *People v. Crisp*, 242 Ill. App. 3d 652,666,609 N.E.2d 740 (1st Dist. 1992); *People v. Velez*, 123 Ill App. 3d 210,218,462 N.E.2d 746 (rt Dist. 1984); *see infra* Part 5 (explaining that the

information ordered to be produced is irrelevant).

Second, even if the result of the analysis *were* favorable to him, Luna could not show a reasonable probability that disclosure would change the outcome of the proceeding. This is because Luna can obtain comparable evidence from DNA databases that are *publicly available*. The following are several such sources:

- <http://www.fbi.gov/ha/lab/fscbackissu/julvI999lbudowle.htm> (visited July 20,2006) (FBI publication containing link to 959 13-locus genotypes for various population groups);
- Einum & Scarpetta, *Genetic Analysis of Large Data Sets of North American Black, Caucasian, and Hispanic Populations at 13 CODIS STR Loci* (Nov. 2004) J. Forensic Sci., Vol. 49, No.6 (indicating the availability of at least 17,000 13-locus genotypes);
- Weir, et al., *Allele Frequency Data for Profiler Plus Loci in Australia* (Sept. 2004) J. Forensic Sci., Vol. 49, No.5 (indicating the availability of more than 12,000 9-locus genotypes).

Because Luna has available to him alternate databases in which he may look for DNA profiles that match each other, he cannot show that depriving him of access to the ISP's database would undermine confidence in the outcome of the proceeding. Hence, *Brady* does not require disclosure of the number of matches among DNA profiles in the ISP's database.

In sum, the circuit court's order of July 11, 2006 allows the ISP's database to

be used in a way not allowed by state or federal law.

2. *The order imperils the ISP's access to CODIS, which enables Illinois law enforcement agencies to compare DNA evidence with the national DNA database.*

The circuit court's order requires the ISP to violate both federal law and the agency's agreement with the FBI concerning the permitted uses of the database. In complying with the circuit court's order, the ISP runs the risk of losing access to CODIS, the national database of DNA profiles of convicted felons. If this were to happen, the ISP and other Illinois law enforcement agencies would lose a valuable investigative tool.

As explained in the previous section, the federal law establishing the National DNA Index System authorizes the disclosure of DNA samples or DNA analyses in four limited circumstances, none of which apply here. *See* 42 U.S.C. § 14132(b). Unauthorized disclosures may result in the federal government cancelling a state's access to the national database. 42 U.S.C. § 14132(c); *see also* 61 Fed. Reg. 37497 (July 18, 1996) ("[C]riminal justice agencies with direct access to NDIS must agree to national quality assurance standards for DNA testing, undergo semi-annual external proficiency testing, and restrict access to DNA samples and data. The NDIS will not accept DNA analyses from those agencies and/or DNA personnel who fail to comply with these standards and restrictions. The NDIS Custodian is authorized to restrict access to and delete any DNA records previously entered into the system.").

On top of the statutory requirements is the ISP's agreement with the FBI. That agreement provides that the FBI may terminate the State's license to use CaDIS software and prevent the state from accessing NDIS if the State violates any contractual provision. (SR32). Among other things, the agreement provides that the State will abide by the disclosure restrictions of 42 D.S.C. § 14132. So if the State discloses a DNA analysis for a use that Section 14132 forbids, as the circuit court's order requires, then the FBI may terminate the State's access to the national database.

This would deal a significant blow to law enforcement agencies throughout Illinois. Access to the national database enables Illinois law enforcement agencies to compare DNA evidence from crimes committed in Illinois with DNA offender profiles gathered by the federal government and every state in the country. Because individuals convicted in other jurisdictions sometimes commit crimes in Illinois after their release, this is a highly valuable investigative tool. The circuit court's order places the state's access to the national database at risk.

3. *Requiring the ISP to report the number of pair-wise comparisons that match at 9 loci will result in additional demands for access to information in the Illinois offender database.*

Not only did the circuit court's order of July 11, 2006 require the ISP to violate state law, federal law, and its agreement with the FBI, the order will inevitably lead

to still more violations if allowed to stand. If this Court declines to exercise its supervisory authority and the ISP is required to report the number of matches among DNA profiles in its database, it is reasonable to assume that the People will seek access to the raw data used to calculate the number in order to counter any arguments suggested by the result. For example, the People would likely want to determine if the number reported by the ISP includes matches from duplicate DNA profiles or DNA profiles of closely related individuals. And if the People are allowed access to the raw data to rebut the significance of the number reported by the ISP, then, under *Brady*, Luna would be allowed access to the data as well.

Turning over the raw data would constitute an even more serious violation of state law than reporting the number of matches. Under state law, "[t]he genetic marker grouping analysis information obtained pursuant to this Act shall be confidential." 730 ILCS 5/5-4-3(f) (2004). Therefore, if the ISP is required to provide access to the raw data itself, it will be violating state law in two ways: (1) it will be using the database for an unlawful purpose, and (2) it will be violating the statutorily-mandated confidentiality of every DNA profile in the database.

4. *Allowing the circuit court's order to stand will invite future violations of the law by encouraging other defendants to request access to, or use of, the database.*

Permitting the database to be used as ordered by the circuit court will establish a precedent that will result in the database being used for non-law

enforcement purposes in *other* cases, thus repeatedly depriving the ISP of access to the database for its intended law enforcement purpose. If Luna is entitled to have the ISP report the number of matches among the hundreds of thousands of DNA profiles in the database, then so is Luna's co-defendant, James Degorski. Indeed, on July 18, 2006, Degorski served subpoenas on the ISP demanding that it turn over "a set of *all* DNA profiles showing the actual STR allele numbers" from the ISP database. (SR224-SR225). And if Luna and Degorski are entitled to access to the database, then presumably other criminal defendants in other cases where the People intend to introduce DNA evidence will be entitled to similar access.

Allowing defendants to routinely compel searches of the Illinois offender database for pair-wise matches would threaten public safety in Illinois. Once such a search begins, the database is unavailable to law enforcement agencies throughout the State. (SR227). This is because the search ties up the database. (SR227). Here, the search occupied the database for over 43 hours. (SR226). Moreover, during the search, the server is disconnected from the national database system, the NDIS. (SR227). Thus, while a search of the type ordered by the circuit court proceeds, the ISP and other Illinois law enforcement authorities cannot compare the DNA profile of evidence found at a crime scene with the DNA profiles of convicted felons in either the Illinois database or the national database. *Cid.*). Indeed, here, the unavailability of the database for almost 44 hours delayed 10 remote searches and 3 uploads from the Crime Labs within Illinois, thus potentially impairing the ability of investigative

agencies to apprehend dangerous criminals. *Cid.*)

5. *The information ordered is irrelevant and otherwise not discoverable.*

As shown above, the circuit court's order violates state and federal law, will lead to further violations, and invites future demands for access to the database that will impede the ISP's ability to use the database for its intended law enforcement purpose. To top it all off, the information the court ordered the ISP to produce is entirely irrelevant to whether or not Luna is guilty of the murders with which he is charged.

"Discovery procedures in criminal cases shall be in accordance with Supreme Court Rules." 725 ILCS 5/114-13 (a). Supreme Court Rule 412, "Disclosure to Accused" and Supreme Court Rule 417, "DNA Evidence," guide discovery in criminal proceedings. Supreme Court Rule 412(c) provides that "the State shall disclose to defense counsel any material or information. . . which tends to negate the guilt of the accused as to the offense charged." S. Ct. R. 412(c); *see also* 725 ILCS 5/114-13 (b) (2004); *Brady*, 373 U.S. at 87.

The information that the circuit court ordered the ISP to produce is irrelevant to the issue of Luna's guilt or innocence. The ISP anticipates that at trial the People will introduce evidence regarding the match between the DNA profile of Defendant Luna and the DNA profile from the chicken bones found at the crime scene. The evidence is that Luna's DNA profile perfectly matched at the 9 loci found on the DNA

sample. CSR25). The ISP further anticipates that the People will present evidence regarding the frequency with which this profile would be expected to be selected at random from the Black population, the Caucasian population, and the Hispanic population. In particular, the evidence is that the profile would be expected to occur in 1 in 130 trillion Black, 1 in 8.9 trillion White, and 1 in 2.8 trillion Hispanic individuals. (*Id.*). Nothing in the ISP database was used to analyze Luna's DNA sample, to analyze the DNA sample taken from the crime scene, or to calculate the probability of a match between Luna's DNA profile and that of the sample from the crime scene. CSR25-26, 62,69-70,78).

The number of matches between DNA profiles in the Illinois offender database - which is essentially what the circuit court ordered the ISP to calculate - has no bearing on the accuracy of the frequency statistics that the People will introduce in this case. The People's frequency statistics are relevant to the probability that a random individual will possess the specific DNA profile found at the crime scene. In contrast, the number the circuit court ordered the ISP to calculate relates to the probability that any 9 out of 13 loci in two DNA samples in the database will match.

An example helps to illustrate the difference. There is a lot of 365 chance that any two people chosen at random will have birthdays that match. In other words, all birthdays have a rarity of 1/365. But that is very different from the probability that two or more people in a group will share *any birthday*. Determining whether two or more people in a group share a birthday involves comparing the

birthday of every person in the group with that of every other person in the group. It turns out that in a group of just 23 people, there is a better than 50% chance that at least two of them will share a birthday. (SR117; *see also* <http://mathforum.org/dr.math/faq/faq.birthdayprob.html> (visited July 20, 2006). Nonetheless, the *rarity* of any particular birthday remains $1/365$.

The same distinction applies here. The probabilities that the 9-loci DNA profile from the sample found on the chicken bone would perfectly match a randomly selected black, Caucasian, or Hispanic person, is 1 in 130 trillion, 1 in 8.9 trillion, and 1 in 2.8 trillion, respectively. (SR25). But these random match probabilities fall into an entirely different category than the probability that two or more DNA profiles in the very large ISP database will match at any 9 of 13 loci. With around 220,000 DNA samples in the database, it would not be surprising that there are *some* DNA profiles that match at 9 loci. Indeed, given that the database has hundreds of thousands of DNA profiles of convicted felons, it is unavoidable that it will have duplicate profiles and profiles of relatives, thus ensuring such matches. But the existence of any such matches would not change the probability that a random person would have the same DNA profile as the sample taken from the chicken bone at the crime scene. (*See* SR115). Nothing in the ISP database was used to implicate Luna in the murders and no amount of matching DNA profiles in the database against each other will change the fact that the odds that a random individual's DNA profile would match the DNA profile found at the crime scene are infinitesimal.

Luna does not contend that match information from the database would directly undermine the random match probability that the People intend to introduce at trial. Rather, Luna argued to the circuit court that the match information was relevant for two reasons: (1) to show the jury that there is the possibility that two individuals will have matching profiles, thereby "help[ing] the jurors understand the meaning of a match" (SR42); and (2) to show the jury that the "theoretical random match probability is lower than the true random match probability of finding matching profiles in the general population" (*id.*).

Luna's reasons do not withstand scrutiny. There is no reason to believe that informing the jurors about the number of matches among DNA profiles in the ISP's database will significantly help them understand the meaning of a match. Indeed, a far more straightforward way to do that would be to introduce expert testimony about what a match means. Given that the information Luna seeks from the ISP is an odd way to explain to jurors the meaning of a match, it seems likely that Luna has a different reason for seeking the information. Luna's counsel's statements to the circuit court suggest that it might be to attack the People's random match probability evidence. Counsel stated that:

- he believed the Arizona information showed that "there is something wrong with the statistical model" (SR77); and
- the presence of matching profiles in Arizona's database meant that there was a 1 in 700 chance of finding a matching pair, and that there is a "vast,

vast difference" between this figure and the People's report that the statistical chance of finding someone with the profile in as the DNA on the chicken bone is 1 in 1.8 trillion Hispanic individuals (SR76).

It is apparent, then, that Luna's real purpose in seeking this evidence is to support an argument to the jury that it not particularly remarkable that Luna's DNA profile taken from his cheek swab matches that of the sample taken from the crime scene. But as already noted, the number of matches among the approximately 220,000 DNA profiles in the Illinois offender database simply does not address the likelihood that a random individual will possess the specific DNA profile found on the chicken bone.

Luna's second reason fares no better. Luna argued to the circuit court that the random match probability estimate applies only to unrelated individuals and that "[s]ince everyone has (or had) relatives, jurors may conclude, on learning of the existence of many 9-locus matches when the possibility of relatives is not excluded, that the theoretical random match probability is lower than the true random match probability of finding matching profiles in the general population." (SR42). This argument is deeply flawed. For it assumes that the ISP database is *more* representative of the general population than the DNA database from which random match probabilities are calculated. Nothing in the record supports this assumption. And, in fact, this assumption is false. (SR115). Bruce Budowle, Senior Scientist at the FBI Laboratory, avers that:

Because of their nature and design, United States Convicted Felon

databases, such as that in Illinois, are an inappropriate source for DNA data for assessing DNA profile rarity, and no valid statistical analyses using such a repository can be carried out regarding the reliability of current statistical practices. Any results obtained from studies using such data would not be relevant and would be misleading for either supporting or refuting current forensic DNA statistical practices. Among the criteria that define the evaluation of the statistical legitimacy of using allele frequency estimates under current forensic practices are that the databases contain little or no duplicate profiles or profiles of close relatives. Therefore, before any legitimate statistical frequency inferences can be drawn from such databases, it would be imperative to remove as many as possible of the duplicates or profiles contributed by close family members. It is widely known that the current felon DNA databases unavoidably contain duplicate profiles and profiles of relatives. Maintaining such profiles in a Convicted Felon database does not compromise its use for developing investigative leads. However, removal of such profiles would be a monumental task and such expenditure of resources would gain little insight into the intricacies of forensic statistics.

CSR115-116).

As for Rule 417, which governs DNA evidence, it does not assist Luna, either.

Rule 417(b) identifies 11 circumstances in which the prosecution has an obligation to produce DNA-related evidence, but none of them involve comparing DNA profiles in a database to each other. Not surprisingly, in the trial court Luna did not rely on any of these 11 circumstances as a basis for the information sought in the subpoena. Instead, Luna noted that the Committee Comments said that the rule was designed to encompass "future techniques" that maybe developed in DNA testing. (SR43). Trying to get mileage out of that comment, Luna argued that "[t]he discovery of numerous 9-loci matches in the Arizona database may be viewed as one of the future developments contemplated by the rule." (*Id.*). But clearly the ability to search for 9-loci matches among DNA profiles is not a new technique for testing of DNA evidence. So Rule 417 did not apply.

The information that the ISP was ordered to produce is not relevant to whether Luna is guilty of the Brown's Chicken murders. This case involved a direct match between Luna's DNA sample and that taken from the chicken bone. The ISP database was not involved in identifying Luna as a suspect. Any attempt to use the results of the court-ordered analysis of the ISP database to attack the direct match is flawed. (SRI15-SRI17). For the same reason, then, there is no obligation under *Brady* to turn over the information. *See supra* Part 1.

* * *

In sum, the circuit court's order requires the ISP to create and produce irrelevant information in violation of state law, federal law, and the ISP's agreement

with the **FBI**. **If** allowed to stand, the order threatens to impede the administration of justice due to additional demands for access to the database and due to the possible denial of access to the national offender database.

. . .

CONCLUSION

The Illinois State Police and Jan L. Johnson, Director of the Illinois State Police, Illinois Forensic Science Center, respectfully request that this Court exercise its supervisory authority and vacate the circuit court's order of July 11, 2006 directing the ISP to analyze its database of DNA profiles to determine the number of matches at 9 loci.

July 21, 2006

Respectfully submitted,

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