No.

IN THE

SUPREME COURT OF THE UNITED STATES

MANUEL ARZOLA, PETITIONER

V.

COMMONWEALTH OF MASSACHUSETTS, RESPONDENT

ON PETITION FOR A WRIT OF CERTIORARI FROM THE MASSACHUSETTS SUPREME JUDICIAL COURT

Orin S. Kerr
2000 H Street, NW
Washington, DC 20052
(202) 994-4775

Katherine C. Essington
190 Broad St., Suite 3W
Providence, RI 02903
(401) 351-2889 phone
katyessington@me.com
Counsel of Record

QUESTION PRESENTED

When the police lawfully seize a bloody article of clothing during a criminal investigation, they may wish to run a DNA test on the blood. DNA testing can reveal the DNA profile of the person whose blood was found on the clothing. The police can then try to match that DNA profile with profiles from other samples to prove identity.

Lower courts have divided on whether the practice of removing blood from lawfully-seized clothing and testing it to obtain a DNA profile is a Fourth Amendment "search" of the owner's effects. The Fourth Circuit has held that it is a search. The Maryland Court of Appeals (the state's highest court) has disagreed. In the case below, the Massachusetts Supreme Judicial Court agreed with the Maryland Court of Appeals and disagreed with the Fourth Circuit. The question presented is the following:

> Whether a Fourth Amendment "search" occurs when government agents remove blood from a person's lawfully-seized clothing and conduct a DNA test that generates a DNA identity profile.

LIST OF ALL PARTIES

The petitioner is Manuel Arzola. The respondent is the Commonwealth of Massachusetts.

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PETITION FOR A WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

Manuel Arzola respectfully petitions this Court for a writ of certiorari to review the judgment and opinion of the Massachusetts Supreme Judicial Court (SJC) affirming his convictions.

OPINION BELOW

The decision of the SJC is published and can be found at *Commonwealth v. Arzola*, 470 Mass. 809 (2015).

JURISDICTION

The SJC rendered its decision on March 4, 2015. The petitioner submits this petition for a writ of certiorari to appeal the SJC's decision and invokes this Court's jurisdiction under 28 U.S.C. § 1257(a).

CONSTITUTIONAL PROVISION INVOLVED

The Fourth Amendment states: "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

STATEMENT OF THE CASE

On August 23, 2010, Manuel Arzola was suspected of stabbing Mauricio Arevalo with a knife. Arzola was arrested on an unrelated

outstanding warrant and taken into custody. A booking officer noticed blood stains on the left sleeve of Arzola's shirt. The officer seized the shirt as potentially relevant evidence for the stabbing of Arevalo. At the time the shirt was seized, Mr. Arzola was under investigation for the stabbing of Areval but was not yet charged.

A few months later, on January 11, 2011, a grand jury indicted Manuel Arzola for armed robbery, aggravated assault with a dangerous weapon, and assault and battery for the stabbing offense. Nearly a year later – and about 18 months after the shirt had been seized – the government removed the blood from the shirt and submitted the blood sample to DNA testing. Mr. Arzola was in custody at the time.

An analyst for the Massachusetts State Police Crime Laboratory examined Mr. Arzola's shirt for blood stains and saw two stains, one on the sleeve and one on the back of the shirt. He tested both stains for the presence of human blood. Only the stain on the sleeve tested positive. He then scraped and swabbed the area and sent the swab to another analyst in the lab for DNA testing.

The DNA testing examined 16 loci. The 16 loci consisted of the standard 13 loci used for inclusion in the FBI's Combined DNA Index System (CODIS) database, together with 3 additional loci. 470 Mass. at 815, fn. 8. One of the additional loci tested the Amelogenin gene, which determines the sex of the individual whose DNA is found in the sample. *Id.*

The government did not obtain a warrant or other process before removing the blood from the shirt and conducting the DNA test. In contrast, a court order was obtained to scrape DNA from inside Mr. Arzola's cheek (a so-called "buccal swab") and to analyze the DNA found there to obtain an additional profile and seek a profile match.[1]

At trial in the Suffolk Superior Court, Kara Tremblay, the chemist who analyzed the defendant's shirt for the government, testified for the prosecution that the DNA profile obtained from Arzola's shirt was a match with the victim and not Mr. Arzola. *Id.* at 812. The jury found Mr. Arzola not guilty of armed robbery and aggravated assault but guilty of the lesser included offense of assault with a dangerous weapon, as well as simple assault and battery. The trial court sentenced Mr. Arzola to a term of five to seven years in prison. *Id.* at 810, fn. 1.

On appeal, Mr. Arzola argued that the warrantless extraction and testing of the blood on his shirt violated his rights under the Fourth Amendment. Acting on its own accord, the Supreme Judicial Court transferred the case from the Court of Appeals before argument to address the important question of whether DNA collection, extraction, and analysis of a seized sample is a Fourth Amendment search.

In a published opinion, the SJC held that DNA collection, extraction, and analysis from a seized sample in order to determine identity is not a

[1] In this petition, Mr. Arzola is not challenging the constitutionality of the buccal swab and analysis.

Fourth Amendment search. *Id.* at 816. According to the SJC, whether a search occurred hinged on whether the government's conduct violated a reasonable expectation of privacy. *Id*. at 816-17. Although "the DNA found in the bloodstain could potentially reveal more information than the identity of the source, including the source's ancestry and predisposition to medical or psychiatric conditions," no search occurred because the DNA analysis for identity purposes "does not show more far-reaching and complex characteristics like genetic traits." *Id*. at 816 (quoting *Maryland v. King,* 133 S.Ct. 1958, 1966–1967 (2013)).

Because the analysis only revealed the sex and identity of the person whose blood was obtained, the SJC held the government's conduct was not a search:

> Apart from the source's sex, the DNA analysis of the unknown sample taken from the defendant's lawfully seized shirt revealed nothing more than the identity of the source, which is what an analysis of latent fingerprints would have revealed (albeit with less accuracy) had they been found on the clothing. Therefore, the DNA analysis was no more a search than an analysis of latent fingerprints would be.

Id. The SJC acknowledged that "[a] defendant generally has a reasonable expectation of privacy in the shirt he or she is wearing." *Id*. Nonetheless, the court ruled that testing the DNA found on the shirt was not a search so long as the analysis was only used for the purpose of determining "whether blood found on it belonged to the victim or to the defendant." *Id*. at 816-17.

The SJC recognized that the Fourth Circuit had held in *United States v. Davis*, 690 F.3d 226 (4th Cir. 2012), that extracting DNA from blood found on lawfully seized clothing is a Fourth Amendment search. The SJC first suggested briefly that *Davis* may be distinguishable because the extraction and testing in *Davis* was for a different purpose than in Mr. Arzola's case. *Id.* at 819. In Mr. Arzola's case, the purpose of the DNA testing had been to find out whose blood was on the clothing. In *Davis*, the government had a belief about whose blood was on the clothing, and the purpose was to obtain a profile about that known person's DNA. *Id.*

Second, the SJC expressly disagreed with the reasoning of the Fourth Circuit in *Davis*:

> [W]e doubt that the Fourth Amendment reasoning of the Davis court will be adopted by the United States Supreme Court. The Davis court never fully addressed the limited scope of the DNA analysis: to develop a DNA profile that would serve as a genetic fingerprint to be compared with unknown DNA profiles. . . . The Supreme Court's subsequent opinion in *King*, 133 S.Ct. at 1979, noted that the loci that comprise a DNA profile "come from noncoding parts of the DNA that do not reveal ... genetic traits," and that the sole purpose of DNA profiling is to generate "a unique identifying number against which future samples may be matched." Although the Court was addressing the suspicionless *collection* of a DNA sample through a buccal swab of certain arrestees, rather than the analysis of such a sample, we think it is likely that the limited information provided by a DNA profile and the limited purpose of identification will lead the Supreme Court to reach a conclusion that is different from that of the *Davis* court.

Id. at 819-20 (emphasis in original). Having ruled that no search occurred, and that therefore the Fourth Amendment could not be violated, the SJC affirmed Arzola's convictions.

REASONS FOR GRANTING THE WRIT

This petition raises an important question that arises frequently when the government seeks to use a DNA match to prove identity in a criminal case: Is the collection of DNA from a blood sample on a person's lawfully seized clothing, and its subsequent analysis to obtain an identity profile, a Fourth Amendment "search"? The Court should grant the writ of certiorari to resolve the disagreement in the lower courts about the answer to this important question.

I. THE LOWER COURTS ARE DIVIDED ON WHETHER DNA COLLECTION AND ANALYSIS FROM BLOOD SAMPLES ON LAWFULLY SEIZED CLOTHING IS A FOURTH AMENMDENT "SEARCH"

The SJC ruled in this case that the collection of blood from lawfully seized clothing and its subsequent testing to obtain an identity profile is not a Fourth Amendment search. As the SJC recognized, however, the Fourth Circuit reached a contrary conclusion in *United States v. Davis*, 690 F.3d 226 (4th Cir. 2012). In *Davis*, the police seized the defendant's bloodied clothing from the hospital room without a warrant and without his consent. *Id*. at 230. The defendant had been admitted to the hospital as the victim of a shooting. *Id*. at 230-1. For four years, his clothing remained in the custody of the police, and was thereafter submitted for DNA testing as part of a later murder investigation. *Id*. His DNA profile was entered into the database at

that time. *Id*. He was subsequently charged with a murder based on a "cold hit" from the database. *Id*. at 231-2.

In finding that the warrantless DNA testing of Davis' clothes violated his Fourth Amendment rights, the Fourth Circuit held that Mr. Davis had a reasonable expectation of privacy in his clothes and the DNA material on them even after the police lawfully seized his clothes from the hospital pursuant to the plain view exception. *Id.* at 244-7. The Fourth Circuit specifically rejected the government's contention, based on *United States v. Edwards*, 415 U.S. 800 (1974), that once police have lawful custody of evidence, they may conduct any type of scientific examination of that evidence without a search warrant. *Id.* at 243-4. *Davis* noted that in *Edwards*, this Court left open the possibility that a warrant might be required for forensic testing of clothing under certain circumstances. *Id*. at 243.

Davis drew a distinction between the paint chips found on the defendant's clothing in *Edwards*, *supra*, and biological samples at issue in that case, stating,

> [B]ecause the analysis of biological samples, such as those derived from blood, urine, or other bodily fluids, can reveal physiological data and a host of private medical facts, such analysis may intrude upon expectations of privacy that society has long recognized as reasonable.

Id. (internal quotations omitted). Thus, *Davis* concluded that DNA testing of clothing taken by the police in a criminal case, because of the vast amount of

private information it can reveal, is substantively different from other types of laboratory testing and constitutes a Fourth Amendment search.

In the decision below, the SJC recognized the disagreement with *Davis* but predicted that its view, rather than the Fourth Circuit's view, "will be adopted by the United States Supreme Court." *Id.* at 819-20. The SJC explained that "we think it is likely that the limited information provided by a DNA profile and the limited purpose of identification will lead the Supreme Court to reach a conclusion that is different from that of the *Davis* court." *Id.* at 820. This case offers the Court an opportunity to answer which is correct: The Fourth Circuit's view in *Davis* or the SJC's view below.

It is true that the SJC also half-heartedly attempted to distinguish *Davis* based on the purpose of the DNA testing. *Id.* at 819. In Mr. Arzola's case, the goal of the challenged testing was to identify whose blood was on the suspect's shirt by matching the resulting profile with other known samples. *Id.* at 815. In *Davis*, the purpose of the testing was to obtain the defendant's DNA profile to find a match with samples from other crimes. *Id.* at 818-819. The SJC's attempt to distinguish *Davis* on this basis cannot avoid a circuit split because its reasoning conflicts with this Court's well-established Fourth Amendment caselaw. It is blackletter law that an officer's subjective intent has no bearing on whether a Fourth Amendment search occurred. *See Whren v. United States*, 517 U.S. 806, 813 (1996) ("Subjective intentions play no role in ordinary, probable-cause Fourth Amendment

analysis"). The focus on objective acts rather than subjective intent "recognizes that the Fourth Amendment regulates conduct rather than thoughts" and "promotes evenhanded, uniform enforcement of the law." *Ashcroft v. al-Kidd*, 131 S.Ct. 2074, 2080 (2011). Whether DNA testing of blood on a suspect's shirt is a Fourth Amendment "search" cannot depend on the purpose of the testing.[2]

The need to resolve the lower court disagreement is particularly strong because there is a federal/state split within the Fourth Circuit. In *Raynor v. State*, 440 Md. 71, 85-6 (2014), *cert. denied*, 135 S.Ct. 1509 (March 2, 2015), a deeply divided Maryland Court of Appeals (the state's highest court) held by a vote of 4-3 that analysis of the 13 identifying loci from the defendant's DNA extracted from a chair at the police station did not constitute a Fourth Amendment search because these 13 "junk" loci do not contain intimate genetic information. 440 Md. at 85-88. *Raynor* reasoned that DNA testing that involves only those loci is no different than fingerprinting for Fourth Amendment purposes. *Id*. at 87-8. Three judges dissented, noting the alarming implications of the majority's view:

> The result of the Majority opinion is that, short of searching a person via touch or entering her home, the State may collect any person's

[2] Although the SJC did not mention this in in its opinion, the result in *Davis* was also influenced by the fact that Davis was a victim of the crime that was being investigated that led to the seizure of his clothing. *See Davis*, 690 F.3d at 244. Because Davis was not under arrest for the crime being investigated, the Fourth Circuit reasoned, he retained more privacy rights in his property. *See id.* In this case, Arzola was not under arrest for the crime of stabbing Arevalo when his property was seized with the goal of testing the shirt for evidence of that offense. He was in custody for that offense by the time the DNA testing occurred.

> DNA, create a genetic profile, and add it to the CODIS database, all without implicating, let alone respecting, any constitutional protection.

Id. at 97 (Adkins, J., dissenting).

Raynor creates a clear and acknowledged federal/state split within the Fourth Circuit. *See id.* at 90 ("The *Davis* Court's conclusion that the DNA testing at issue in that case constituted a Fourth Amendment search rested on what may now be a faulty premise, given the discussion in *King* that DNA analysis limited to the 13 junk loci within a person's DNA discloses only such information as identifies with near certainty that person as unique."). In Maryland, whether DNA testing of seized property is a Fourth Amendment search hinges on whether the case is brought in federal or state court. If the case is brought in federal court, the DNA testing is deemed a search; if the case is brought in state court, it is not. Granting the writ of certiorari in this case will settle the federal/state split within the Fourth Circuit as well as the disagreement between the Fourth Circuit and the SJC.

II. THIS CASE PROVIDES AN APPROPIATE VEHICLE TO RESOLVE AN IMPORTANT QUESTION OF LAW

This case directly presents an issue of national importance. *See* Erin Murphy, *License, Registration, Cheek Swab: DNA Testing And The Divided Court*, 127 Harv. L. Rev. 161, 195 (2013) (noting the profound importance of how the Fourth Amendment applies to DNA collection). As the Court has recently recognized, "the utility of DNA identification in the criminal justice system is already undisputed." *King*, 133 S.Ct. at 1966. The use of DNA as

an identification system naturally raises very important questions about how the Fourth Amendment applies. The Court began addressing those questions in *King*, which involved forced buccal swabs to obtain DNA samples. In that case, it was not disputed that at least the swab was a Fourth Amendment search. *See id.* at 1968-69. The Court thus focused its attention on the reasonableness of the search. *See id.* at 1969-1980.

This case raises the next logical question: When the government obtains an item lawfully through means *other* than a buccal swab, is the subsequent extraction and testing of the DNA a "search"? The issue has major implications for the scope of government power in our technological age. DNA can be found nearly anywhere. In a world where the government has ready access to DNA, whether there are any constitutional limits at all on the government's ability to extract DNA, create profiles, and seek matches to prove identity is a question this Court should answer. *See generally Raynor v. State*, 440 Md. 71, 97 (2014) (Adkins, J., dissenting); Elizabeth Joh, *Reclaiming "Abandoned" DNA: The Fourth Amendment And Genetic Privacy*, 100 Nw. U. L. Rev. 857 (2006).

As a procedural matter, it is true that Mr. Arzola did not specifically challenge at trial whether the DNA extraction and analysis was a Fourth Amendment search. Under Massachusetts law, this failure could have resulted in a waiver of the issue on appeal. *See Commonwealth v. Silva*, 440 Mass 772, 781-2 (2004). This matter of state procedure should not interfere

with this Court's review, however, because the SJC opted to address this issue fully on the full merits. *See Arzola*, 470 Mass. at 814-15. The SJC exercised its discretion to review the claim to determine whether there was an error that created a substantial risk of a miscarriage of justice because the record was sufficient for review and the SJC wanted to address "this novel issue." *Id.* Because the SJC addressed this issue on the merits, without imposing a deferential standard of review, the Court may grant the petition and answer the Fourth Amendment question on the merits. If this Court reverses, the Court can then remand for additional proceedings, including whether the plain error standard was met as a matter of state procedural law.

Further, the Court's statement in *United States v. Edwards*, 415 U.S. 800 (1974), that "clothing [and] other belongings may be seized upon arrival of the accused at the place of detention and later subjected to laboratory analysis," is no barrier to review. As the Fourth Circuit recognized in *Davis*, this decades-old statement cannot be read so broadly as to answer whether DNA extraction and analysis of a seized sample is a Fourth Amendment search. *Davis*, 690 F.3d at 243. Indeed, the Court's recent decision in *Riley v. California*, 134 S.Ct. 2473 (2014), which prohibited the search of seized cell phones found on arrestees without a warrant, shows that this *dicta* in *Edwards* is no longer true based on current technological tools and analytical methods.

Relatedly, it must be noted that the issue raised by this petition is limited to the threshold question of what is a Fourth Amendment "search." That is the sole issue the SJC decided below. If the Court grants certiorari and reverses, the SJC can then consider on remand whether the government may then argue that the search that occurred was constitutionally reasonable. *See, e.g., Davis*, 690 F.3d at 247-250.

III. THE DECISION BELOW IS INCORRECT.

This Court also should grant certiorari because the decision below is incorrect. Extracting and subsequently testing DNA on a person's clothing is a Fourth Amendment search for two different reasons. First, a person's own clothing is part of his "effects" if not also part of his "person[]" that the text of the Fourth Amendment plainly protects. U.S. Const. Amend. IV. Physically invading a person's item of clothing, and scraping away what it contains with an intent to obtain a DNA profile, is a trespassory physical intrusion into the person's effects with the intent to obtain information that constitutes a Fourth Amendment search. *See United States v. Jones*, 132 S.Ct. 945, 949 (2012).

Second, extracting the DNA from blood and creating a DNA profile implicates the property owner's reasonable expectation of privacy under *Katz v. United States*, 389 U.S. 347 (1967). The Court has already recognized that conducting chemical tests on blood samples is a Fourth Amendment search. *See Skinner v. Railway Labor Executives' Ass'n*, 489 U.S. 602, 616–17 (1989)

("The ensuing chemical analysis of the [blood] sample to obtain physiological data is a further invasion of the tested employee's privacy interests"). The Court has similarly held that chemical testing of urine samples is a Fourth Amendment search in light of its potential to "reveal a host of private medical facts about an employee, including whether he or she is epileptic, pregnant, or diabetic." *Id*. at 617. The same analysis applies to chemical testing of a seized blood sample to create a DNA profile and identify the sex of the person whose blood was found on the sample.

CONCLUSION

For the foregoing reasons, this Court should grant the petition for a writ of certiorari.

Respectfully submitted,

Katherine C. Essington
190 Broad St., Suite 3W
Providence, RI 02903
(401) 351-2889 phone
(401) 351-2899 fax
katyessington@me.com
Counsel of Record

Orin S. Kerr
2000 H Street, NW
Washington, DC 20052

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Commonwealth
v.
Manuel Arzola
SJC-11679
Supreme Judicial Court of Massachusetts, Suffolk
March 4, 2015

Argued November 6, 2014

Indictments found and returned in the Superior Court Department on January 11, 2011.

Pretrial motions to suppress evidence and to compel the provision of a deoxyribonucleic acid sample by means of a buccal swab were heard by *Thomas A. Connors*, J., and the cases were tried before *Thomas E. Connolly*, J.

The Supreme Judicial Court on its own initiative transferred the case from the Appeals Court.

Katherine Essington for the defendant.

Donna Jalbert Patalano, Assistant District Attorney, for the Commonwealth.

Ian Stone, for Committee for Public Counsel Services, amicus curiae, submitted a brief.

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Kirsten V. Mayer, John J. Reynolds, III, Sara Perkins Jones, Matthew R. Segal, & Jessie J. Rossman, for American Civil Liberties Union Foundation of Massachusetts, amicus curiae, submitted a brief.

Present: Gants, C.J., Spina, Cordy, Botsford, Duffly, Lenk, & Hines, JJ.

OPINION

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Gants, C.J.

The defendant was convicted by a Superior Court jury of assault and battery by means of a dangerous weapon and assault and battery.[1] The defendant appealed, and we transferred the case here on our own motion. On appeal, the defendant contends that the motion judge erred in denying a motion to suppress the victim's out-of-court eyewitness identification of the defendant, where the victim had told the police that the assailant wore a gray shirt and the defendant was the only person shown wearing a gray shirt in the photographic array. The defendant also argues that deoxyribonucleic acid (DNA) evidence identifying the victim as the source of blood found on the defendant's shirt should have been suppressed, because the DNA analysis of the bloodstain constituted a search that could only be conducted lawfully with a warrant supported by probable cause, and no warrant had been obtained. We find no error and affirm the defendant's convictions. [2]

Background.

In the early morning of August 23, 2010, the victim, Mauricio Arevalo, was walking to his

home in Chelsea when a man seated on a bench asked him for money and cigarettes. The victim continued walking for another two or three blocks when someone came from behind him and held a knife to his back, demanding he give up his possessions. The victim surrendered his wallet and cellular telephone before the assailant shoved him to the ground and stabbed him in the neck and shoulder area. From the ground, the victim turned his head and observed the assailant, whom he recognized as the same person who had asked for money and cigarettes. The victim briefly followed the assailant but then stopped at a firehouse for assistance with his wounds.

Chelsea police Officer Robert Hammond met the victim at the firehouse before he was taken to the hospital. The victim de-

[470 Mass. 811] scribed the assailant as a heavy-set Hispanic male, approximately five feet, ten inches to six feet tall, wearing a gray shirt, dark-colored jeans, and possibly a hat. Shortly after an ambulance arrived, another officer alerted Officer Hammond that a man fitting the victim's description of the assailant had been stopped about two blocks away from the crime scene. Officer Hammond went to where the defendant had been stopped and observed that he matched the victim's general description.[3] After learning that the defendant had an outstanding warrant, Officer Hammond arrested him on the warrant and transported him to the Chelsea police station.

During booking, the defendant was asked to empty his pockets and, as he reached into them, Officer Hammond observed that the defendant had a stain on the left sleeve of his gray shirt. Believing the stain to be blood, Officer Hammond asked the defendant if he had any injuries that might have caused the stain. The defendant responded that he was not injured, and no wounds were found on him. Before placing the defendant in a cell, Officer Hammond seized the shirt as evidence of the alleged armed robbery and

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assault of the victim, although the defendant was not yet under arrest for those crimes. Because the defendant would have access to a sink and a toilet with running water in his cell, Officer Hammond was concerned that the defendant might wash away the stain if the shirt were not seized.

The following day, the victim met with Detective Michael Noone and described the assailant as a Hispanic male, about five feet, ten inches tall, with a heavy build and short hair, and wearing a gray sweatshirt. Detective Noone created an array of eight photographs, including the defendant's booking photograph. When choosing fillers for the array, he used a computer program that searched a database of photographs that matched the defendant's race and ethnicity, gender, height, weight, and age group. Detective Noone then selected people who looked similar to the defendant. Each of the filler photographs depicted a Hispanic male in the defendant's age group, with a heavy build and a similar complexion to the defendant's. The photographs themselves showed only each person's face and a small portion of the upper torso.

Detective Noone asked Officer Jose Torres, Jr., who was not involved in the investigation, to conduct the eyewitness identifi-

[470 Mass. 812] cation procedure. Before Officer Torres took the victim into a separate room, Detective Noone read the victim the Chelsea police department form used to prepare eyewitnesses for viewing a photographic array.[4] In the separate room, Officer Torres began

showing each photograph one-by-one for five to ten seconds. When he displayed the fourth photograph, which depicted the defendant, the victim stopped him and stated, " That's the man; I'm one hundred percent sure." The victim explained that he identified that person as his assailant based on the person's hair and complexion, and added that he could not forget the assailant's eyes.

After a grand jury indicted the defendant, the Commonwealth moved for an order requiring the defendant to produce a DNA sample by means of a buccal swab. The Commonwealth explained that the victim had submitted a DNA sample to compare with the DNA from the bloodstain on the defendant's shirt, and that it was necessary to obtain a DNA sample from the defendant in order to exclude the defendant as the source of the blood. The motion judge (who was not the trial judge) allowed the Commonwealth's motion, finding probable cause to believe that the defendant committed the crimes of armed robbery and assault and battery by means of a dangerous weapon, and that the sample would probably provide evidence relevant to the defendant's guilt. At trial, Kara Tremblay, the chemist who analyzed the defendant's shirt, testified to her opinion that the DNA profile obtained from the bloodstain on the shirt matched the victim and did not match the defendant.[5]

Discussion.

1. *Eyewitness identification procedure.*

The motion judge conducted

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an evidentiary hearing on the defendant's motion to suppress eyewitness identification evidence. In denying the motion, the judge found that the computerized process by which the filler photographs were selected was intended to ensure **[470 Mass. 813]** that no photograph stood out, and that, in fact, the seven other photographs showed men of a similar age, complexion, build, and hairline. Regarding the defendant's gray shirt, the judge found that (1) the gray shirt was only one of several descriptive features mentioned by the victim; (2) the photographs themselves showed a very small portion of the person's shirt; and (3) the victim explicitly stated that he made the identification based on the defendant's facial features, hair, complexion, and eyes.

" When reviewing the denial of a motion to suppress, we accept the judge's subsidiary findings of fact absent clear error, but we conduct an independent review of [the] ultimate findings and conclusions of law." *Commonwealth* v. *Perkins*, 450 Mass. 834, 841-842, 883 N.E.2d 230 (2008). To prevail on a motion to suppress an eyewitness identification, " the defendant must show by a preponderance of the evidence that, in light of the totality of the circumstances, the procedures employed were so unnecessarily suggestive and conducive to irreparable misidentification as to deny the defendant due process of law." *Commonwealth* v. *Cavitt*, 460 Mass. 617, 632, 953 N.E.2d 216 (2011), quoting *Commonwealth* v. *Miles*, 420 Mass. 67, 77, 648 N.E.2d 719 (1995). Here, as the motion judge found and as we confirmed from our own review of the photographic array, the men depicted were reasonably similar in their features and physical characteristics, including their hair length, skin complexion, age, and physical build. See *Commonwealth* v. *Silva-Santiago*, 453 Mass. 782, 795, 906 N.E.2d 299 (2009). Although the defendant was the only person shown wearing a gray shirt, the focal point of the photograph was

the defendant's face, and the gray shirt was not distinctive apart from its color. See *Commonwealth* v. *Montez*, 450 Mass. 736, 755-756, 881 N.E.2d 753 (2008) (although defendant was only person shown wearing hooded sweatshirt, which was mentioned in witness's description of assailant, defendant's hooded sweatshirt was " a generic type" and " defendant's photograph [did] not stand out as distinctive in any unnecessarily suggestive way").

" Although we disapprove of an array of photographs which distinguishes one suspect from all the others on the basis of some physical characteristic, we have sustained numerous such identifications when it is clear that the victim did not select the photograph on that basis." *Commonwealth* v. *Melvin*, 399 Mass. 201, 207 n.10, 503 N.E.2d 649 (1987). Here, the witness stated that he identified the defendant based on his hair, complexion, and eyes; the gray shirt was not mentioned as a factor that contributed to the identification. Compare *Commonwealth* v. *Mobley* , 369 Mass. 892, 896, 344 N.E.2d 181 (1976)

[470 Mass. 814] (defendant's distinctive feature of wearing hat was " neutralized by the witness's unequivocal testimony ... that [in substance] he was not looking for a hat when he examined the pictures"), with *Commonwealth* v. *Thornley*, 406 Mass. 96, 99-100, 546 N.E.2d 350 (1989) (identifications suppressed as impermissibly suggestive where defendant was only person in array who was wearing eyeglasses and eyewitnesses testified that eyeglasses were " significant factor" in making identifications). We conclude that the judge did not err in denying the motion to suppress eyewitness identification evidence.

2. *DNA profile.*

Before trial, the defendant moved to suppress the bloodstained

shirt and any evidence deriving from it as the fruit of an unlawful seizure. The motion judge denied the motion, concluding that Officer Hammond lawfully seized it in plain view, because (1) he had a legal right to be conducting the booking process when the stain was discovered; (2) the stain was found inadvertently, as the defendant was being booked on an unrelated warrant; and (3) the incriminating character of the object was immediately apparent where the police already had knowledge of the assault of the victim, and the defendant matched the assailant's description.[6]

On appeal, the defendant does not challenge the seizure of the shirt, the court-ordered buccal swab for a known sample of the defendant's DNA, or the subsequent analysis of the defendant's known sample. Rather, the defendant argues that the DNA analysis of the bloodstained shirt was itself a search that required a warrant, even where the shirt was lawfully seized in plain view. Because this claim was not raised in the motion to suppress, we ordinarily would consider it waived. See *Commonwealth* v. *Silva*, 440 Mass. 772, 781-782, 802 N.E.2d 535 (2004). However, we shall exercise our discretion to consider the claim, in order to determine whether there was an error that created a substantial risk of a miscarriage of justice. See *Commonwealth* v. *Vuthy Seng*, 436 Mass. 537, 550, 766 N.E.2d 492, cert. denied, 537 U.S. 942, 123 S.Ct. 342, 154 L.Ed.2d 249 (2002), *S.C.*, 456 Mass. 490, 924 N.E.2d 285 (2010); *Commonwealth* v. *Johnson*, 46 Mass.App.Ct. 398, 400, 706 N.E.2d 716 (1999). The record before us is sufficient to resolve the defendant's claim, the matter has been fully briefed (including by the amici), and we transferred this case from the Appeals Court to address this novel issue. See

Commonwealth v. *Daniel*, 464 Mass. 746, 755, 985 N.E.2d 843 (2013); *Commonwealth* v. *Bettencourt*,

[470 Mass. 815] 447 Mass. 631, 633-634, 856 N.E.2d 174 (2006). Given these considerations, we shall proceed to address the claim on the merits.

Before determining whether the DNA analysis of the defendant's shirt constituted a search that required a warrant, we first clarify the nature and scope of the DNA analysis at issue in this case. Here, the shirt was known to be worn by the defendant, but the source of the bloodstain was unknown, meaning the bloodstain was treated as an unknown DNA sample.[7] Tremblay testified that she examined sixteen loci on the unknown DNA sample, which were " chosen by the [Federal Bureau of Investigation (FBI)] ... [b]ecause they are highly variable between individuals" and the " most discriminating." [8] After

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the defendant's known sample was provided through the court-ordered buccal swab, and the victim voluntarily provided a known sample of his DNA, Tremblay compared the DNA profile from the unknown sample with the victim's and the defendant's known profiles. Based on the record before us, we conclude that this DNA analysis was conducted for the sole purpose of identifying the source of the unknown sample.

Whether the DNA analysis in this case was a " 'search' in the **[470 Mass. 816]** constitutional sense ... depends on whether the [Commonwealth's] conduct has intruded on a constitutionally protected reasonable expectation of privacy." *Commonwealth* v. *Lopez*, 458 Mass. 383, 389, 937 N.E.2d 949 (2010). We recognize that the DNA found in the bloodstain could potentially reveal more information than the identity of the source, including the source's ancestry and predisposition to medical or psychiatric conditions. See *Skinner* v. *Railway Labor Executives' Ass'n*, 489 U.S. 602, 617-618, 109 S.Ct. 1402, 103 L.Ed.2d 639 (1989) (chemical analysis of biological samples may reveal " a host of private medical facts"); *United States* v. *Mitchell*, 652 F.3d 387, 412-413 (3d Cir. 2011), cert. denied, 132 S.Ct. 1741, 182 L.Ed.2d 558 (2012) (" DNA *samples* may reveal private information regarding familial lineage" [citation omitted]). See also *Raynor* v. *State*, 440 Md. 71, 103, 99 A.3d 753 (2014) (Adkins, J., dissenting) (" With today's technology, scientists have the power to discern [from DNA] genetic traits, behavioral tendencies, propensity to suffer disease or defects, other private medical information, and possibly more"). But when limited to these sixteen loci, DNA analysis " does not show more far-reaching and complex characteristics like genetic traits." *Maryland* v. *King*, 133 S.Ct. 1958, 1966-1967, 186 L.Ed.2d 1 (2013). Apart from the source's sex, the DNA analysis of the unknown sample taken from the defendant's lawfully seized shirt revealed nothing more than the identity of the source, which is what an analysis of latent fingerprints would have revealed (albeit with less accuracy) had they been found on the clothing. Therefore, the DNA analysis was no more a search than an analysis of latent fingerprints would be. See *Boroian* v. *Mueller*, 616 F.3d 60, 66 (1st Cir. 2010) (DNA profile provides genetic fingerprint to uniquely identify individual but does not provide additional information about that person); *Raynor*, 440 Md. at 96 (" DNA testing of the [thirteen] identifying ... loci within genetic material, not obtained by means of a physical intrusion into the person's body, is no more a search for purposes of the Fourth Amendment [of the United States Constitution], than is the testing of

fingerprints"). See also *United States* v. *Dionisio*, 410 U.S. 1, 15, 93 S.Ct. 764, 35 L.Ed.2d 67 (1973), quoting *Davis* v. *Mississippi*, 394 U.S. 721, 727, 89 S.Ct. 1394, 22 L.Ed.2d 676 (1969) (fingerprinting does not involve " probing into an individual's private life and thoughts that marks an interrogation or search").

A defendant generally has a reasonable expectation of privacy in the shirt he or

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she is wearing, but where, as here, the shirt is lawfully seized, a defendant has no reasonable expectation of privacy that would prevent the analysis of that shirt to determine **[470 Mass. 817]** whether blood found on it belonged to the victim or to the defendant. See *Raynor*, 440 Md. at 92 (defendant " does not possess a reasonable expectation of privacy in the identifying characteristics of his DNA"). See also *State* v. *Athan*, 160 Wash.2d 354, 374, 158 P.3d 27 (2007) (" There is no subjective expectation of privacy in discarded genetic material just as there is no subjective expectation of privacy in fingerprints or footprints left in a public place"). Requiring police to obtain a warrant whenever they seek to analyze lawfully seized evidence for the sole purpose of identifying the unknown source of a genetic fingerprint would " impose[ ] substantial burdens on law enforcement without vindicating any significant values of privacy." [9] *Commonwealth* v. *Varney*, 391 Mass. 34, 39, 461 N.E.2d 177 (1984), quoting *Robbins* v. *California*, 453 U.S. 420, 429, 101 S.Ct. 2841, 69 L.Ed.2d 744 (1981) (Powell, J., concurring in the judgment). See *Commonwealth* v. *Robles*, 423 Mass. 62, 65 n.8, 666 N.E.2d 497 (1996) (if lawfully seized, police need not obtain warrant to conduct chemical analysis of bloodstained coat).

Although we recognize that the science of DNA analysis may evolve and enable DNA profiling to uncover from these loci information more personal than the identity and sex of its source, the loci tested in this case " are not at present revealing information beyond identification" and sex. *King*, 133 S.Ct. at 1979, quoting Katsanis & Wagner, Characterization of the Standard and Recommended CODIS Markers, 58 J. Forensic Sci. S169, S171 (2013). See *Boroian*, 616 F.3d at 68-69 (government use of DNA profile for more than identification " merely [a] hypothetical possibilit[y]"). If the Commonwealth were to obtain more than identification and sex information from these loci, use the DNA profile for any purpose other than identifying the unknown source of the sample, or analyze different loci that contained more **[470 Mass. 818]** personal genetic information, we would have to revisit the question whether such DNA analysis is a search in the constitutional sense. See *King, supra* (" If in the future police analyze samples to determine, for instance, an arrestee's predisposition for a particular disease or other hereditary factors not relevant to identity, that case would present additional privacy concerns not present here"); *Mitchell*, 652 F.3d at 408 (" Should technological advancements change the value of [loci analyzed in a DNA profile], reconsideration of our Fourth Amendment analysis may be appropriate"). Cf. *Riley* v. *California*, 134 S.Ct. 2473, 2490, 2493, 189 L.Ed.2d 430 (2014) (warrant is generally required for search of cellular telephone, even when lawfully seized incident to arrest, because " many

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of the more than [ninety per cent] of American adults who own a [cellular telephone] keep on their person a digital record of nearly every aspect of their lives -- from the mundane to the intimate").

The defendant's argument rests heavily on *United States* v. *Davis*, 690 F.3d 226, 250 (4th Cir. 2012), where the court concluded that the police conducted an unreasonable search in violation of the Fourth Amendment when they extracted the defendant's DNA profile from his lawfully seized clothing and tested it as part of a murder investigation.[10] In *Davis*, the defendant's clothing was seized as evidence while he was in the hospital as a gunshot victim, and his DNA profile was later obtained from the bloodstains on his pants in order to compare it with an unknown DNA profile from an unrelated homicide.[11] *Id.* at 230-231. After the defendant was excluded as the source of the evidentiary sample from that murder, the police retained his DNA profile and included it in their local DNA database, where it triggered a " cold hit" with another sample from a different homicide crime scene. *Id.* at 229, 231-232. The court concluded that the defendant's clothing was lawfully seized in plain view. *Id.* at 239. However, the court held that the defendant had an expectation of privacy in **[470 Mass. 819]** his DNA that was implicated once the police extracted the DNA from his clothing and obtained his DNA profile. *Id.* at 246.

In contrast with the instant case, the police in *Davis* treated the DNA sample on the defendant's clothing as the defendant's known sample, and created a DNA profile in order to compare it with other unknown samples obtained from various crime scenes. *Id.* at 231-233. The court's conclusion that the defendant " retained a reasonable expectation of privacy in his DNA profile" was premised on the finding that the sample from his clothing was known to contain the defendant's DNA. *Id.* at 248. Even if we were to accept the *Davis* court's reasoning with regard to a DNA sample *known* to belong to the defendant, a defendant does not have a reasonable expectation of privacy in a DNA profile from an *unknown* sample that was taken from lawfully seized evidence.[12]

Moreover, we doubt that the Fourth Amendment reasoning of the *Davis* court

will be adopted by the United States Supreme Court.[13] The *Davis* court never fully addressed the limited scope of the DNA analysis: to develop a DNA profile that would serve as a genetic fingerprint to be compared with unknown DNA profiles. See *id.* at 240 n.22 (declining further to discuss science of DNA profiling after noting that some courts analogize DNA to fingerprints while others recognize limitations of that analogy). The Supreme Court's subsequent opinion in *King*, 133 S.Ct. at 1979, noted that the loci that comprise a DNA profile " come from noncoding parts of the DNA that do not reveal ... genetic traits," and that the sole purpose of DNA profiling is to generate " a unique identifying number against which future samples may be **[470 Mass. 820]** matched." Although the Court was addressing the suspicionless *collection* of a DNA sample through a buccal swab of certain arrestees, rather than the *analysis* of such a sample, we think it is likely that the limited information provided by a DNA profile and the limited purpose of identification will lead the Supreme Court to reach a conclusion that is different from that of the *Davis* court. See *Raynor*, 440 Md. at 90, petition for cert. filed, U.S. Supreme Ct., No. 14-885 (Jan. 19, 2015) (" The *Davis* Court's conclusion that the DNA testing at issue in that case constituted a Fourth Amendment search rested on what may now be a faulty premise, given the discussion in *King* that DNA analysis limited to the [thirteen Core] loci within a person's DNA discloses only such information as identifies with near certainty that person as unique").

We conclude that where, as here, DNA analysis is limited to the creation of a DNA profile from lawfully seized evidence of a crime, and where the profile is used only to identify its unknown source, the DNA analysis is not a search in the constitutional sense. Therefore, no search warrant was required to conduct the DNA analysis of the bloodstain from the defendant's clothing that revealed that the victim was the source of the blood.

Conclusion.

Because we find no error, the defendant's convictions are affirmed.

So ordered.

Notes:

[1]The defendant was found not guilty of armed robbery. He was sentenced to from five to seven years in State prison on the conviction of assault and battery by means of a dangerous weapon, and to from three years of probation on the conviction of assault and battery, to commence on his release from State prison.

[2]We acknowledge the amicus briefs submitted by the Committee for Public Counsel Services and by the American Civil Liberties Union Foundation of Massachusetts.

[3]No showup identification procedure was conducted with the victim because he needed to be transported by ambulance to the hospital.

[4]Among other advisements, the form notifies eyewitnesses that the perpetrator may or may not be in the array; that it is as important to clear the innocent as to identify the guilty; that the Chelsea police would continue to investigate the crime regardless of whether a suspect were identified; and that if an identification is made, the witness should signify the level of certainty.

[5]Kara Tremblay also testified that the probability of a randomly selected unrelated individual having the deoxyribonucleic acid (DNA) profile matching the bloodstain profile was approximately 1 in 107.9 quadrillion in the Caucasian population, 1 in 262.6 quadrillion in the African-American population, 1 in 76.98 quadrillion in the Hispanic population, and 1 in 104.6 quadrillion in the Asian population.

[6]The motion judge also found that the police " may well have had" probable cause to arrest the defendant for the alleged robbery and assault, thus enabling them to seize the shirt as a search incident to a lawful arrest.

[7]Tremblay testified that she treated the sample from the defendant's shirt as an " unknown" or " question" sample, which she defined as evidence taken from a crime scene.

[8]The Federal Bureau of Investigation (FBI) generally requires that a minimum of thirteen " Core" loci be tested for inclusion in the Combined DNA Index System (CODIS). See FBI, Frequently Asked Questions (FAQs) on the CODIS Program and the National DNA Index System, available at http://www.fbi.gov/about-us/lab/biometric-analysis/codis/codis-and-ndis-fact-sheet [http://perma.cc/X76V-TXZL] (last visited Mar. 2, 2015). Tremblay tested the thirteen Core loci, Amelogenin (a gene used to determine sex), and two additional loci, both of which are commonly tested along with the thirteen Core loci. See J.M. Butler & C.R. Hill, Biology and Genetics of New Autosomal STR Loci Useful for Forensic DNA Analysis, in Forensic DNA Analysis: Current Practices and Emerging Technologies 183 (J.G. Shewale & R.H. Liu eds., 2014). These loci, other

than Amelogenin, are generally believed not to contain personal genetic information. See *United States* v. *Mitchell*, 652 F.3d 387, 400-401 (3d Cir. 2011), cert. denied, 132 S.Ct. 1741, 182 L.Ed.2d 558 (2012). See also *Maryland* v. *King*, 133 S.Ct. 1958, 1966-1967, 186 L.Ed.2d 1 (2013) (loci tested in DNA profiling " useful and even dispositive for purposes like identity"); *Boroian* v. *Mueller* , 616 F.3d 60, 65-66 (1st Cir. 2010) (Core loci " not associated with any known physical or medical characteristics" [citation omitted]). The resulting DNA profile was essentially a set of numbers corresponding to each locus. See *Boroian, supra* at 66 (DNA profile is " represented as a series of digits"). The analysis of Amelogenin only revealed " XY" to indicate a male.

[9]An amicus brief notes that DNA analysis of the shirt potentially could reveal the identities of persons who have touched the defendant's shirt, thereby intruding into his interest in keeping his associations private. We do not address whether our analysis would differ if the purpose of the DNA analysis were not to investigate the commission of a crime, but instead to determine the identity of persons intimately involved with the defendant. We note, however, that DNA analysis of blood found on a defendant's lawfully seized clothing, for the sole purpose of identifying the unknown source of blood, is unlikely to constitute an " undue intrusion" into a defendant's intimate relationships. *Roberts* v. *United States Jaycees*, 468 U.S. 609, 617-618, 104 S.Ct. 3244, 82 L.Ed.2d 462 (1984). The mere presence of another person's DNA on a defendant's clothing does not reveal a significant amount of information or detail about the nature of the relationship between the defendant and the source of the DNA.

[10]The Fourth Amendment violation, however, did not result in the suppression of the DNA evidence because the court concluded that the exclusionary rule should not apply in these circumstances under the " good faith" exception established in *United States* v. *Leon*, 468 U.S. 897, 919-920, 104 S.Ct. 3405, 82 L.Ed.2d 677 (1984). See *United States* v. *Davis*, 690 F.3d 226, 251, 257 (4th Cir. 2012).

[11]Because the parties' briefs and the record were " devoid of any factual basis" for concluding that the defendant was involved in the murder, *Davis*, 690 F.3d at 250, the court presumed that the police obtained the defendant's DNA profile based on suspicions that amounted to less than probable cause. *Id.* at 231 n.6, 250.

[12]We note that where we have concluded that a known DNA sample of a defendant was lawfully obtained without a court order, we have not required a search warrant to analyze the DNA from that sample to compare its profile with the profile from an unknown sample in the criminal investigation. See *Commonwealth* v. *Bly*, 448 Mass. 473, 489-491, 862 N.E.2d 341 (2007) (no warrantless search or seizure occurred where police retrieved cigarette butts and water bottle used by defendant during interview in order to obtain known DNA sample, because defendant failed " to manifest any expectation of privacy in the items whatsoever"); *Commonwealth* v. *Ewing* , 67 Mass.App.Ct. 531, 539-540, 854 N.E.2d 993 (2006) (defendant had no expectation of privacy in cigarette butts that he abandoned and that were used to obtain known DNA sample). We also note that the defendants in *Bly* and *Ewing* did not claim that, if the items were lawfully collected, a search warrant was required to conduct a DNA analysis of the known sample.

[13]The *Davis* court acknowledged that the " issue of a person's reasonable expectation of privacy in his DNA ... has not yet been addressed by the Supreme Court." *Davis*, 690 F.3d at 240.