

[8] *c. Constitutional challenges to § 105 (b)*. The defendant 1381 argues that if § 105 (b) criminalizes the act of photographing a fully clothed woman under her skirt while she is in a public place, it is both unconstitutionally vague and overbroad. Where “a particular construction of a statute is the premise of a constitutional claim, [the court] must resolve any issues of statutory interpretation . . . prior to reaching any constitutional issue.” *Commonwealth v. Suave*, 460 Mass. 582, 586–587, 953 N.E.2d 178 (2011), quoting *Santos, petitioner*, 78 Mass.App.Ct. 280, 284, 937 N.E.2d 461 (2010). Because we have concluded that § 105 (b) does not criminalize the defendant’s alleged conduct, we need not reach the constitutional questions he raises. See, e.g., *Suave, supra* at 589, 953 N.E.2d 178; *Commonwealth v. Raposo*, 453 Mass. 739, 743, 905 N.E.2d 545 (2009).

Order denying motion to dismiss reversed.



467 Mass. 336

COMMONWEALTH

v.

Rakim D. SCOTT.

Supreme Judicial Court of Massachusetts,
Suffolk.

Submitted Oct. 10, 2013.

Decided March 5, 2014.

Background: Defendant filed motion to vacate guilty plea to drug possession,

We note, without analysis of them, that in the past legislative session, proposed amendments to § 105 were before the Legislature

claiming he was involuntarily induced to enter plea by a forensic drug laboratory’s affirmative misrepresentation on the drug certificate used in his case. The Central Division of the Boston Municipal Court Department, Suffolk County, Michael J. Coyne, J., granted motion. Commonwealth’s application for direct appellate review was granted.

Holdings: The Supreme Judicial Court, Spina, J., held that:

- (1) drug laboratory’s misconduct was the sort of egregious government misconduct that could have rendered defendant’s guilty plea involuntary;
- (2) drug laboratory’s chemist acted as a government agent;
- (3) chemist’s signature on drug certificate was sufficient to establish the requisite nexus between the egregious government wrongdoing and defendant’s case; and
- (4) remand was necessary for trial court to determine whether defendant could establish a reasonable probability that he would not have pleaded guilty had he known of the government misconduct.

Order vacated; case remanded.

1. Criminal Law ⇌914

An admission to sufficient facts to warrant a finding of guilty is treated as a guilty plea for the purposes of a motion for a new trial. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

2. Criminal Law ⇌914

A motion for a new trial is the proper vehicle by which to seek to vacate a guilty plea. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

that appeared to attempt to address the upskirting conduct at issue here. See 2013 Senate Doc. No. 648; 2013 House Doc. No. 1231.

3. Criminal Law ⇨911

A motion for a new trial is committed to the sound discretion of the judge. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

4. Criminal Law ⇨959

A judge may make a ruling on a motion for new trial based solely on the affidavits and must hold an evidentiary hearing only if the affidavits or the motion itself raises a substantial issue that is supported by a substantial evidentiary showing. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

5. Criminal Law ⇨1158.1

The judge is the final arbiter on matters of credibility, and the judge's findings of fact are to be accepted if supported by the evidence.

6. Criminal Law ⇨1158.36

Particular deference is to be paid to the rulings of a postconviction motion judge who served as the trial judge in the same case.

7. Criminal Law ⇨1156(1)

An order granting a new trial motion is reviewed to determine if the judge committed a significant error of law or other abuse of discretion. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

8. Constitutional Law ⇨4587

Due process requires that a plea of guilty be accepted only where the contemporaneous record contains an affirmative showing that the defendant's plea was intelligently and voluntarily made. U.S.C.A. Const.Amend. 14.

9. Criminal Law ⇨273.1(1)

A guilty plea is intelligent if it is tendered with knowledge of the elements of the charges against the defendant and the procedural protections waived by entry of a guilty plea.

10. Criminal Law ⇨273.1(1)

A guilty plea is voluntary so long as it is tendered free from coercion, duress, or improper inducements.

11. Criminal Law ⇨1481

A defendant's guilty plea may be vacated as involuntary because of external circumstances or information that later comes to light. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

12. Criminal Law ⇨273.1(2)

Where a defendant's decision to tender a guilty plea was induced by government misconduct such as falsifying a key piece of evidence in the case against the defendant, it is most appropriate for the court to focus its analysis on the threshold question whether the decision to tender the plea was voluntary.

13. Criminal Law ⇨273.1(2)

Forensic drug laboratory chemist's affirmative misrepresentation on drug certificate used in defendant's case was the sort of egregious government misconduct that could have rendered defendant's guilty plea to drug possession involuntary, for purposes of applying the *Ferrara* analysis to defendant's motion to vacate his guilty plea; chemist made a number of affirmative misrepresentations by signing drug certificates and testifying to the identity of substances in cases in which she had not in fact properly tested the substances in question, and where defendant was charged solely with drug possession and no other crimes, the drug certificate was central to the Commonwealth's case, and an affirmative misrepresentation on the drug certificate may have undermined the very foundation of defendant's prosecution.

14. Criminal Law ⇨1481

In applying the *Ferrara* analysis to a defendant seeking to vacate a guilty plea on the ground that government misconduct

rendered the plea involuntary, the defendant first must show that egregious government misconduct preceded the entry of his guilty plea and that it is the sort of conduct that implicates the defendant's due process rights; rather than merely showing that he misjudged the prosecution's case or was unaware of a possible defense, the defendant must show that the guilty plea was preceded by particularly pernicious government misconduct that was the source of the defendant's misapprehension of some aspect of his case. U.S.C.A. Const.Amend. 14; Rules Crim. Proc., Rule 30(b), 47 M.G.L.A.

15. Criminal Law \S 1481

Forensic drug laboratory's affirmative misrepresentation on drug certificate used in defendant's case was undertaken by a government agent prior to defendant's entry of guilty plea to drug possession, for purposes of applying the *Ferrara* analysis to defendant's motion to vacate his guilty plea based on government misconduct; laboratory chemist responsible for the erroneous drug certificate was a person who had participated in the investigation or evaluation of the case and had reported to the prosecutor's office concerning the case, and the laboratory was responsible for safeguarding the entirety of evidence samples to which chemist was assigned throughout the testing process, and she was responsible for conducting chemical analyses of those samples and certifying on oath that the substances tested were what the certificate identified them to be. M.G.L.A. c. 111, \S 12.

16. Criminal Law \S 1481

In applying the *Ferrara* analysis to a defendant seeking to vacate a guilty plea on the ground that government misconduct rendered the plea involuntary, the defendant must show that the egregious misconduct was undertaken by government agents prior to the entry of the defen-

dant's guilty plea. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

17. Criminal Law \S 1481

Forensic drug laboratory chemist's signature on the misrepresented drug certificate used in defendant's case was sufficient to establish the requisite nexus between the egregious government wrongdoing and defendant's case, for purposes of applying the *Ferrara* analysis to defendant's motion to vacate his guilty plea to drug possession on the ground that government misconduct rendered the plea involuntary; chemist indicated that she may not have been able to identify those cases that involved proper testing and those that involved "dry labbing" or other breaches of protocol, and even if chemist herself were to testify in each of the thousands of cases in which she served as primary or secondary chemist, it was unlikely that her testimony, even if truthful, could resolve the question whether she engaged in misconduct in a particular case. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

18. Criminal Law \S 1481

In applying the *Ferrara* analysis to a defendant seeking to vacate a guilty plea on the ground that government misconduct rendered the plea involuntary, the defendant is required to show a nexus between the government misconduct and the defendant's own case. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

19. Criminal Law \S 36.6

In the wake of government misconduct that has cast a shadow over the entire criminal justice system, it is most appropriate that the benefit of the remedy inure to defendants.

20. Criminal Law \S 1181.5(3.1)

Remand was necessary for trial court to determine whether, in the totality of the

circumstances, defendant could demonstrate a reasonable probability that, had he known of forensic drug laboratory's affirmative misrepresentation on the drug certificate used in his case, he would not have admitted to sufficient facts and would have insisted on taking his chances at trial, for purposes of applying the *Ferrara* analysis to defendant's motion to vacate his guilty plea to drug possession on the ground that government misconduct rendered the plea involuntary. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

21. Criminal Law ⇌1481

In applying the *Ferrara* analysis to a defendant seeking to vacate a guilty plea on the ground that government misconduct rendered the plea involuntary, the defendant must demonstrate a reasonable probability that he would not have pleaded guilty had he known of the government misconduct. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

22. Criminal Law ⇌1481

For purposes of determining whether a defendant has established a reasonable probability that he would not have pleaded guilty had he known of government misconduct, courts consider the following: (1) whether evidence of the government misconduct could have detracted from the factual basis used to support the guilty plea; (2) whether the evidence could have been used to impeach a witness whose credibility may have been outcome-determinative; (3) whether the evidence was cumulative of other evidence already in the defendant's possession; (4) whether the evidence would have influenced counsel's recommendation as to whether to accept a particular plea offer; and (5) whether the value of the evidence was outweighed by the benefits of entering into the plea agreement. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

23. Criminal Law ⇌1481

To establish a reasonable probability that a defendant would not have pleaded guilty had he known of government misconduct, as part of the *Ferrara* analysis applicable to a defendant seeking to vacate a guilty plea on the ground that government misconduct rendered the plea involuntary, the defendant must convince the court that a decision to reject the plea bargain would have been rational under the circumstances. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

24. Criminal Law ⇌1481

To establish a reasonable probability that a defendant would not have pleaded guilty had he known of government misconduct, as part of the *Ferrara* analysis applicable to a defendant seeking to vacate a guilty plea on the ground that government misconduct rendered the plea involuntary, courts consider whether the defendant had a substantial ground of defense that would have been pursued at trial or whether any other special circumstances were present on which the defendant may have placed particular emphasis in deciding whether to accept the government's offer of a plea agreement. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

25. Criminal Law ⇌1481

For purposes of establishing a reasonable probability that a defendant would not have pleaded guilty had he known of government misconduct, as part of the *Ferrara* analysis applicable to a defendant seeking to vacate a guilty plea on the ground that government misconduct rendered the plea involuntary, a defendant's decision to tender a guilty plea is a unique, individualized decision, and the relevant factors considered in applying this "reasonable probability test" and their relative weight will differ from one case to the

next. Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

See publication Words and Phrases for other judicial constructions and definitions.

26. Criminal Law ⇌945(1)

When a defendant brings a motion for a new trial based on newly-discovered evidence, the defendant has the burden to show that the evidence casts real doubt on the justice of the conviction, requiring the defendant to convince the judge that there is a substantial risk that the jury would have reached a different conclusion had the evidence been admitted at trial.

27. Criminal Law ⇌945(1)

When ruling on a motion for new trial based on newly-discovered evidence, the motion judge need not be convinced that the jury's verdict would have been different but rather that the evidence would have been a real factor in the jury's deliberations.

28. Criminal Law ⇌919(1)

When a defendant brings a motion for a new trial based on the prosecutor's failure to disclose exculpatory evidence in violation of the defendant's due process rights, the defendant must show that there is a substantial risk that the jury would have reached a different conclusion if the evidence had been admitted at trial; this test is substantially the same as the *Safe-riean* ineffective assistance of counsel standard. U.S.C.A. Const.Amend. 6, 14; M.G.L.A. Const. Pt. 1, Art. 12.

29. Criminal Law ⇌919(1)

If a defendant brings a motion for a new trial based on the prosecutor's failure to disclose exculpatory evidence in violation solely of the defendant's due process

1. An admission to sufficient facts to warrant a finding of guilty is treated as a guilty plea for the purposes of a motion for a new trial. *Luk*

rights under the Federal Constitution, the defendant must show a reasonable probability that, had the evidence been disclosed to the defense, the result of the proceeding would have been different. U.S.C.A. Const.Amend. 14; Rules Crim.Proc., Rule 30(b), 47 M.G.L.A.

30. Criminal Law ⇌1920

In the context of a guilty plea, in order to satisfy the prejudice element of an ineffective assistance claim, the defendant has the burden of establishing that there is a reasonable probability that, but for counsel's errors, he would not have pleaded guilty and would have insisted on going to trial. U.S.C.A. Const.Amend. 6.

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Emma A. Andersson & Ezekiel R. Edwards, of New York; Emily A. Cardy & Eric Brandt, Committee for Public Counsel Services; & Matthew R. Segal & Elizabeth A. Lunt, for Committee for Public Counsel Services & others, amici curiae, submitted a brief.

Present: IRELAND, C.J., SPINA, CORDY, BOTSFORD, GANTS, DUFFLY, & LENK, JJ.

SPINA, J.

[1] ¶³⁷In this case, the defendant's motion to withdraw his admission to sufficient facts to warrant a finding of guilty under Mass. R.Crim. P. 30(b), as appearing in 435 Mass. 1501 (2001), was granted by a judge in the Boston Municipal Court.¹

v. Commonwealth, 421 Mass. 415, 418 n. 6, 658 N.E.2d 664 (1995). In this opinion we refer to a guilty plea and an admission to

The Commonwealth appealed, and we granted the Commonwealth's application for direct appellate review.² This case is one of four in this posture before us as a result of the ongoing investigation into the William A. Hinton State Laboratory Institute in the Jamaica Plain section of Boston and, specifically, the conduct of Annie Dookhan, an individual who was employed as a chemist in the forensic drug laboratory (Hinton drug lab or lab) from 2003 until 2012. See *Commonwealth v. Torres*, 467 Mass. 1007, 5 N.E.3d 560 (2014); *Commonwealth v. Bjork*, 467 Mass. 1006, 5 N.E.3d 559 (2014); *Commonwealth v. Davila*, 467 Mass. 1005, 5 N.E.3d 557 (2014). Among other things, that investigation led to the indictment of Dookhan on multiple counts of evidence tampering and obstruction of justice as well as on at least one count of perjury and one count of falsely claiming to hold a graduate degree, all relating to her handling and testing of samples at the Hinton drug lab.³

¹³³⁸In light of Dookhan's guilty pleas and the information gathered in the course of the investigation into her misconduct, we now hold that where Dookhan signed the certificate of drug analysis as either the primary or secondary chemist in the defendant's case, the defendant is entitled to a conclusive presumption that Dookhan's misconduct occurred in his case, that it was egregious, and that it is attributable to the Commonwealth. However, we vacate

sufficient facts to warrant a finding of guilty, collectively, as a "guilty plea."

2. We acknowledge the amicus brief filed by the Committee for Public Counsel Services, the American Civil Liberties Union, and the Massachusetts Association of Criminal Defense Lawyers. This brief was filed in support of Rakim D. Scott as well as four other defendants in cases also decided today by this court (Adam Davila, Corey Bjork, Geordano Rodriguez, and Rene Torres).
3. Since these cases were argued, Dookhan has pleaded guilty to twenty-seven charges

the order granting the defendant's motion to withdraw his guilty plea, and we remand this matter for further proceedings and findings on the question whether the defendant can demonstrate a reasonable probability that knowledge of Dookhan's misconduct would have materially influenced his decision to tender a guilty plea.

1. *Background on the Hinton drug lab investigation.* Until 2012, the Hinton drug lab was overseen by the Department of Public Health (department). By statute, the department, and by extension the lab, was required to perform chemical analyses of substances on request from law enforcement officials. G.L. c. 111, §§ 12–13, repealed by St. 2012, c. 139, § 107. Chemists employed by the lab were responsible for testing substances according to lab protocols and for safeguarding evidence samples throughout the testing process, and they were expected to testify as expert witnesses in criminal prosecutions.

In July, 2012, as part of the Commonwealth's budget bill, the Legislature transferred oversight of the lab from the department to the State police. See St. 2012, c. 139, § 56 (replacing G.L. c. 22C, § 39); St. 2012, c. 139, § 107 (repealing G.L. c. 111 §§ 12–13). At that time, State police assigned to the Hinton drug lab became aware of a 2011 incident that first raised questions regarding Dookhan's con-

arising out of the investigation, including one count of perjury, four counts of witness intimidation, and eight counts of evidence tampering. The record before us does not contain the details of which factual allegations served as the basis of those pleas. Nonetheless, in light of her guilty pleas, we treat the allegations set forth in the extensive investigative reports and grand jury testimony contained in the "Hinton Drug Laboratory Record Appendix" as the facts of her misconduct for the purposes of this appeal.

duct in the lab. In June, 2011, a lab supervisor discovered that approximately ninety samples had been removed from the lab's evidence locker in violation of internal protocol. Lab supervisors conducted an informal investigation and concluded that Dookhan had removed the samples without authorization and subsequently forged the initials of an evidence officer in the evidence log book in an attempt to hide her breach of protocols. As a result of this investigation, Dookhan was relieved of her duties in the lab³³⁹ effective June 21, 2011, and was assigned to perform administrative tasks outside the lab such as drafting policies and procedures. The informal investigation later triggered a formal inquiry by the Commissioner of Public Health limited to the incident involving the ninety samples. This inquiry ultimately led to Dookhan's resignation in lieu of termination proceedings in March, 2012.

In July, 2012, when the State police took control of the lab and became aware of the 2011 incident, the officers assigned to the lab asked the State police detective unit of the Attorney General's Office to launch a broader formal investigation into lab practices and Dookhan to ensure that her misconduct was limited to the incident involving the ninety samples. As it turned out, this incident was the proverbial tip of the iceberg.

The State police investigation into the Hinton drug lab revealed numerous improprieties surrounding Dookhan's conduct in the lab. Perhaps most concerning, Dookhan admitted to "dry labbing" for two to three years prior to her transfer out of the lab in 2011, meaning that she would group multiple samples together from various cases that looked alike, then test only a few samples, but report the results as if she had tested each sample individually. Dookhan also admitted to contaminating

samples intentionally, including turning negative samples into positive samples on at least a few occasions. Moreover, Dookhan has acknowledged to investigators that she may not be able to identify those cases in which she tested the samples properly and those in which she did not.

Additionally, Dookhan admitted to State police investigators that she deliberately committed a breach of lab protocols by removing samples from the evidence locker without following proper procedures and that she postdated entries in the evidence log book and forged an evidence officer's initials. The investigation also revealed that Dookhan falsified another chemist's initials on reports that were intended to verify the proper functioning of the machine used to analyze the chemical composition of certain samples (gas chromatography-mass spectrometer machine or "GC-MS"), and she falsified the substance of reports intended to verify that the GC-MS machine was functioning³⁴⁰ properly prior to her running samples through it. Dookhan also had an unusually high productivity level in the lab. She reported test results on samples at rates consistently much higher than any other chemist in the lab, starting as early as 2004, during her first year of employment. Indeed, she is estimated to have been involved in testing samples in over 40,000 cases. According to the Hinton drug lab internal inquiry report, dated November 13, 2012 (Hinton internal inquiry), "Dookhan's consistently high testing volumes should have been a clear indication that a more thorough analysis and review of her work was needed."

Based on the information gathered in the investigation, Dookhan's misconduct appears to have taken place during both phases of testing conducted at the Hinton drug lab. According to the Hinton internal inquiry, Hinton drug lab protocols re-

quired chemists to execute two levels of testing on each substance submitted for analysis. “Primary” tests are “simple bench top tests” that include “color tests, microcrystalline analyses, and ultraviolet visualization.” These tests have only “moderate discriminatory power, and are not associated with data that can be memorialized with a[n] instrument-generated paper or computer trail and reviewed.” These tests were carried out by the “primary chemist,” who also prepared a sample of the substance for use in the secondary tests. The primary chemist was also responsible for the full evidence sample during the entire testing process. Next, secondary, or “confirmatory,” tests were conducted, which “utilize sophisticated instrumentation such as Mass Spectrometry, Infrared Spectroscopy and Gas Chromatography, have high discriminatory power, and . . . produce instrument-generated documentation of test results.” These tests were carried out by another chemist, referred to as the “secondary” or “confirmatory” chemist. A chemist serving as a secondary or confirmatory chemist was responsible for carrying out the secondary tests and for verifying the proper functioning of the GC–MS machine prior to each “run” of samples through the machine. The secondary chemist then reported the results of the secondary tests to the primary chemist and the two chemists conferred to ensure aligned results. When testing of a sample was complete, the primary chemist returned the sample to the lab’s evidence officer who prepared §341a a document certifying the results of the tests and the chemical composition of the sub-

stances (drug certificate) for notarized signature by both chemists.⁴

Thus, Dookhan’s admitted wrongdoing in the form of “dry labbing” and converting “negatives to positives” likely took place while Dookhan was serving as the primary chemist responsible for those samples. Her failure to verify the proper functioning of the GC–MS machine, and her forgery of those reports to hide her wrongdoing, likely took place while Dookhan was serving as a secondary chemist. However, there is no suggestion in the investigative reports that Dookhan’s misconduct extended beyond cases in which she served as either the primary or the confirmatory chemist. For example, the record does not indicate that Dookhan engaged in any wrongdoing in cases where she merely served as a notary public and certified the signatures of other chemists on drug certificates. Indeed, it appears that the motive for her wrongdoing was in large part a desire to increase her apparent productivity. Additionally, Dookhan stated in her interview with the State police that no one, including other chemists in the lab, was aware of, or involved in, her deliberate misconduct. Although the record does suggest other improprieties surrounding Dookhan’s conduct in the lab, such as her accessing the evidence database to look up the status of cases at the request of certain prosecutors in breach of proper reporting protocols, there is no indication that she engaged in any wrongdoing through use of her access to the database or as a result of her apparently close relationship with some prosecutors. Therefore, it appears from the record of the investigation before us that Dookhan’s

4. A review of the certificate of drug analysis (drug certificate) issued by the forensic drug laboratory at the William A. Hinton State Laboratory Institute (Hinton drug lab) in Scott’s case, as well as other Hinton drug lab certificates in the record, indicates that two

chemists would sign the certificate on one line labeled “Assistant Analyst.” The face of the drug certificate does not clearly specify which chemist served as the primary and which served as the secondary in that particular case.

misconduct was limited to cases in which she served as either the primary or secondary chemist.

Ultimately, although the full extent of Dookhan's misconduct may never be known, the investigation into her wrongdoing has had an enormous impact on the criminal justice system in ¹³⁴²Massachusetts. See *Commonwealth v. Charles*, 466 Mass. 63, 65, 992 N.E.2d 999 (2013) ("In October, 2012, the Chief Justice of the Superior Court assigned specific judges in seven counties to preside over special 'drug lab sessions' From October 15 to November 28, the judges presiding over the drug lab sessions held 589 hearings, placing an enormous burden on the Superior Court"). See also D.E. Meier, *The Identification of Individuals Potentially Affected by the Alleged Conduct of Chemist Annie Dookhan at the Hinton Drug Laboratory: Final Report to Governor Deval Patrick 13* (Aug. 2013) (describing efforts to identify each individual in whose case Dookhan served as either primary or secondary chemist, which required "systematic review and analysis—initially by hand and then electronically—of some 3.5 million actual laboratory documents"). Two days after Dookhan's admissions to State police investigators, the Governor closed the entire William A. Hinton State Laboratory Institute. Indeed, as we stated in an earlier decision arising out of this same set of circumstances, "It is undisputed that the allegations of serious and far-reaching misconduct by Dookhan at the Hinton drug lab have raised significant concerns about the administration of justice in criminal cases where . . . the drugs at issue were analyzed at that facility." *Charles, supra* at 89, 992 N.E.2d 999.

2. *Facts.* The defendant in this case, Rakim D. Scott, was arrested in April, 2011, on an outstanding warrant. The defendant's arrest arose as a result of a

tip to police officers from a resident of an apartment building in Boston of two individuals conducting drug activity at the rear of the building. On approaching the two individuals and requesting their names, police discovered that the defendant had an outstanding default warrant and arrested him. At booking, police discovered the defendant attempting to conceal five plastic bags containing what appeared to be "crack" cocaine. The defendant was thus charged with possession of a class B controlled substance pursuant to G.L. c. 94C, §§ 31 and 34. The substance was tested at the Hinton drug lab on June 10, 2011. The Hinton drug lab subsequently issued a drug certificate identifying the substance as one containing cocaine as defined in G.L. c. 94C, § 31. The first signature on the drug certificate on the line labeled "Assistant Analyst" is that of Annie Dookhan.

¹³⁴³In September, 2011, before Dookhan's wrongdoing had been made public, the defendant admitted to sufficient facts to warrant a finding of guilty. Pursuant to a disparate plea agreement such as is permitted by Mass. R.Crim. P. 12(b)(1)(C), as appearing in 442 Mass. 1511 (2004), the prosecution recommended a sentence of one year's probation with an order to stay away from the apartment building where he was arrested. The defense requested a continuance without a finding for twelve months and administrative probation to run concurrently with and subject to the same terms of probation the defendant was then serving on an unrelated charge. The judge accepted the defendant's recommended disposition and continued the case without a finding for twelve months pending completion of the defendant's then-current term of probation.

During his probation term, the defendant was arrested for an offense arising out of an assault and battery, and he was

charged with a probation violation. Thereafter, the defendant filed a motion to vacate his underlying guilty plea pursuant to Mass. R.Crim. P. 30(b) on the basis that Dookhan's signature on the drug certificate in the defendant's case indicated her involvement in testing the substance found in the defendant's possession and that her misconduct in testing samples at the Hinton drug lab rendered the defendant's guilty plea involuntary and unintelligent in violation of the Fifth and Fourteenth Amendments to the United States Constitution and art. 12 of the Massachusetts Declaration of Rights. The motion further asserted that the investigation revealing Dookhan's misconduct constituted newly discovered exculpatory evidence and that the prosecution violated the defendant's due process rights and its own duty to provide true and accurate discovery by failing to disclose information regarding Dookhan's wrongdoing to the defendant prior to the entry of his guilty plea. The defendant's motion was supported by an affidavit of counsel averring to general information concerning the investigation into Dookhan's misconduct. However, the defendant did not provide his own affidavit addressing whether or how knowledge of the investigation into Dookhan would have influenced his decision to plead guilty, nor did the defendant submit an affidavit from plea counsel regarding how such information may have affected ³⁴⁴counsel's advice to the defendant on whether to tender a guilty plea.

The motion judge, who was also the plea judge, conducted two nonevidentiary hearings on the defendant's motion and subsequently granted the defendant's motion to vacate his guilty plea without findings or rulings. The Commonwealth appealed the judge's order and then filed an application for direct appellate review. We granted the Commonwealth's application, and we now conclude that the defendant's motion

must be remanded to the motion judge for findings and rulings consistent with the analysis set forth in this opinion.

[2-7] 3. *Standard of review.* A motion for a new trial pursuant to Mass. R.Crim. P. 30(b) is the proper vehicle by which to seek to vacate a guilty plea. *Commonwealth v. Fernandes*, 390 Mass. 714, 715, 459 N.E.2d 787 (1984). Under Mass. R.Crim. P. 30(b), a judge may grant a motion for a new trial any time it appears that justice may not have been done. A motion for a new trial is thus committed to the sound discretion of the judge. *Commonwealth v. Moore*, 408 Mass. 117, 125, 556 N.E.2d 392 (1990). A judge may make the ruling based solely on the affidavits and must hold an evidentiary hearing only if the affidavits or the motion itself raises a "substantial issue" that is supported by a "substantial evidentiary showing." *Commonwealth v. Stewart*, 383 Mass. 253, 260, 418 N.E.2d 1219 (1981). Rule 30(b) encourages judges to make "such findings of fact as are necessary to resolve the defendant's allegations of error of law." The judge is the "final arbiter on matters of credibility," and the judge's findings of fact are to be accepted if supported by the evidence. *Commonwealth v. Schand*, 420 Mass. 783, 787, 653 N.E.2d 566 (1995). Particular deference is to be paid to the rulings of a motion judge who served as the trial judge in the same case. *Commonwealth v. Leavitt*, 21 Mass.App.Ct. 84, 85, 484 N.E.2d 1032 (1985). We review an order granting a new trial motion to determine if the judge committed "a significant error of law or other abuse of discretion." *Commonwealth v. Sherman*, 451 Mass. 332, 334, 885 N.E.2d 122 (2008), quoting *Commonwealth v. Martin*, 427 Mass. 816, 817, 696 N.E.2d 904 (1998).

4. *Discussion.* The defendant's motion to withdraw his guilty plea was based in

part on a claim that the plea was not knowing and intelligent and therefore violated the defendant's due process³⁴⁵ rights. On appeal, the Commonwealth argues that evidence of Dookhan's misconduct does not cast doubt on whether the defendant freely and voluntarily tendered his guilty plea. It casts doubt only on the evidence that would have been used to establish the defendant's guilt at trial—a matter conclusively established, the Commonwealth contends, by the defendant's admission to sufficient facts at the plea colloquy. The Commonwealth further argues that even if Dookhan's misconduct were of the sort that would render the defendant's guilty plea involuntary, the defendant failed to establish that Dookhan engaged in wrongdoing in her testing of the substances at issue in his case. Finally, the Commonwealth contends that even if the defendant could establish that Dookhan's wrongdoing was particular to his case, the judge erred in granting the defendant's motion because the defendant failed to show, or even aver, that the wrongdoing influenced his decision to enter a guilty plea.

[8–11] Due process requires that a plea of guilty be accepted only where “the contemporaneous record contains an affirmative showing that the defendant's plea was intelligently and voluntarily made.” *Commonwealth v. Furr*, 454 Mass. 101, 106, 907 N.E.2d 664 (2009), citing *Boykin v. Alabama*, 395 U.S. 238, 89 S.Ct. 1709, 23 L.Ed.2d 274 (1969), and *Commonwealth v. Foster*, 368 Mass. 100, 102, 330 N.E.2d 155 (1975). A guilty plea is intelligent if it is tendered with knowledge of the elements of the charges against the defendant and the procedural protections waived by entry of a guilty plea. *Commonwealth v. Duest*, 30 Mass.App.Ct. 623, 630–631, 572 N.E.2d 572 (1991). A guilty plea is voluntary so long as it is tendered free from coercion, duress, or improper inducements. *Id.* at

631, 572 N.E.2d 572. Most cases in which a defendant seeks to vacate a guilty plea start with these principles and allege a facial defect in the plea procedure itself. See, e.g., *Furr*, *supra* at 107, 110, 907 N.E.2d 664. However, a defendant's guilty plea also may be vacated as involuntary because of external circumstances or information that later comes to light. See, e.g., *Commonwealth v. Conaghan*, 433 Mass. 105, 110, 740 N.E.2d 956 (2000) (new evidence raising question as to defendant's mental competence at time of guilty plea was relevant to voluntariness of plea).

[12] In this case, the defendant argues not that his guilty plea was facially defective, but that it was involuntarily induced by government³⁴⁶ misconduct that since has been discovered. This case is similar to *Ferrara v. United States*, 456 F.3d 278, 290 (1st Cir.2006). There, the United States Court of Appeals for the First Circuit considered the government's appeal from the District Court's grant of a defendant's petition for postconviction relief, which was based on the discovery, more than ten years after the defendant's entry of a guilty plea, of government misconduct leading up to the plea agreement. *Id.* at 280–281, 284, 292–293. Specifically, the lead prosecutor in *Ferrara* was determined to have manipulated deliberately a key witness, convincing the witness to testify against the defendant despite the recantation by that witness of his statements incriminating the defendant. *Id.* at 291. Although the defendant entered into a plea agreement prior to trial and before the witness testified against him, a portion of the factual basis for the plea recited by the prosecution relied on the by-then recanted statements of the witness. *Id.* at 284, 285. Additionally, the prosecutor was determined to have misrepresented the nature of the key witness's planned testimony to the defendant and to the court throughout

pretrial proceedings and plea negotiations. See *id.* at 291, 292–293. The court in *Ferrara* characterized the prosecutor’s actions as “paint[ing] a grim picture of blatant misconduct” and more than a mere “garden-variety bevue.” *Id.* at 293. Therefore, limiting its analysis solely to the question whether this sort of government misconduct could render a guilty plea involuntary, the court in *Ferrara* concluded that when a defendant seeks to vacate a guilty plea as a result of underlying government misconduct, rather than a defect in the plea procedures, the defendant must show both that “egregiously impermissible conduct . . . by government agents . . . antedated the entry of his plea” and that “the misconduct influenced his decision to plead guilty or, put another way, that it was material to that choice.” *Id.* at 290. We apply the *Ferrara* analysis in this case.⁵

1347a. *Prong one: Egregious misconduct by the government in the defendant’s case.*

5. The defendant also argues that relief may be available to him under *Brady v. Maryland*, 373 U.S. 83, 87, 83 S.Ct. 1194, 10 L.Ed.2d 215 (1963), as a result of the prosecution’s failure to disclose the potentially exculpatory evidence of Dookhan’s misconduct to the defendant prior to his guilty plea. We conclude, however, that the *Ferrara* analysis, which is limited to the question whether the defendant’s guilty plea was knowing and voluntary, is the appropriate framework to apply to Scott’s case. See *Ferrara v. United States*, 456 F.3d 278, 290 (1st Cir.2006). The law currently is unsettled among the Federal circuits, and we have yet to determine, whether a defendant may assert a violation of his right to prosecutorial disclosure of exculpatory evidence as a ground to withdraw a guilty plea, or whether that is one of many constitutional rights deemed waived upon entry of a voluntary and intelligent guilty plea. Compare *Matthew v. Johnson*, 201 F.3d 353, 361–362 (5th Cir.2000), with *Miller v. Angliker*, 848 F.2d 1312, 1320 (2d Cir.1988). See *Commonwealth v. Berrios*, 447 Mass. 701, 715, 856 N.E.2d 857 (2006). Therefore, we conclude

[13, 14] i. *Egregious misconduct.* Under the *Ferrara* analysis, the defendant first must show that egregious government misconduct preceded the entry of his guilty plea and that it is the sort of conduct that implicates the defendant’s due process rights. *Ferrara*, 456 F.3d at 290, 291. It is not enough for a defendant to show that he misjudged the prosecution’s case or was unaware of a possible defense. See *Brady v. United States*, 397 U.S. 742, 757, 90 S.Ct. 1463, 25 L.Ed.2d 747 (1970). See also *United States v. Broce*, 488 U.S. 563, 572, 573–574, 109 S.Ct. 757, 102 L.Ed.2d 927 (1989) (guilty pleas upheld as voluntary despite defendants’ lack of knowledge of possibility of suppressing confession or challenging constitutionality of grand jury selection process). Rather, the defendant must show that the guilty plea was preceded by “particularly pernicious” government misconduct that was the source of the defendant’s misapprehension of some aspect of his case.⁶ *Ferrara*, 456 F.3d at 291.

that where a defendant’s decision to tender a guilty plea was induced by government misconduct such as falsifying a key piece of evidence in the case against the defendant, it is most appropriate to focus our analysis on the threshold question whether the decision to tender the plea was voluntary.

6. Although the particular form of misconduct in *Ferrara* was the prosecutor’s withholding of exculpatory evidence, the court in *Ferrara* did not limit its framework to cases of egregious prosecutorial nondisclosure. *Ferrara*, 456 F.3d at 290. Rather, it set forth a general framework for determining whether government misconduct of any sort could have been sufficiently egregious to render the defendant’s guilty plea involuntary. *Id.* Indeed even if the prosecutor in Scott’s case had a duty to disclose evidence of Dookhan’s wrongdoing as a result of the Commonwealth’s constructive knowledge of her actions, the failure to disclose this information is in no way as egregious as the prosecutor’s conduct in *Ferrara*, nor is it as egregious as

³⁴⁸For example, in *United States v. Fisher*, 711 F.3d 460, 462, 463, 465 (4th Cir.2013), the United States Court of Appeals for the Fourth Circuit applied the *Ferrara* analysis to a case in which the defendant sought to vacate his guilty plea after discovering that a law enforcement officer had lied in the affidavit supporting the application for a search warrant that lead to the defendant's arrest. The court in *Fisher* held that the officer's conduct was the sort of egregious misconduct that could render the defendant's guilty plea involuntary because the defendant's assessment of the strength of the government's case "stem[med] from an affirmative government misrepresentation" that "strikes at the integrity of the prosecution as a whole." *Id.* at 466.

Like the law enforcement officer in *Fisher*, Dookhan made a number of affirmative misrepresentations by signing drug certificates and testifying to the identity of substances in cases in which she had not in fact properly tested the substances in question. See *id.* Moreover, where Scott was charged solely with drug possession and no other crimes, the drug certificate was central to the Commonwealth's case, and an affirmative misrepresentation on the drug certificate may have undermined the very foundation of Scott's prosecution. Thus, we conclude that Dookhan's misconduct constitutes the sort of egregious misconduct that satisfies the first element of the first prong of the *Ferrara* analysis.

[15, 16] ii. *By the government.* The defendant next must show that the egregious misconduct was undertaken "by government agents" prior to the entry of the

the misconduct of Dookhan herself. See *United States v. Wilkins*, 943 F.Supp.2d 248, 257, certificate of appealability granted, 948 F.Supp.2d 87 (D.Mass.2013) ("It takes no leap of imagination to recognize that the government's 'suppression' of impeachment evidence concerning Dookhan[, the scope of

defendant's guilty plea. See *Ferrara*, 456 F.3d at 290. Although the government agent in *Ferrara* was the prosecutor in the defendant's case, the *Ferrara* analysis encompasses a broader range of government agents whose actions may constitute misconduct "by the government" that could render a defendant's guilty plea involuntary. See *id.* at 284, 290. For example, in *Fisher*, the court applied the *Ferrara* analysis and held that an individual law enforcement officer's conduct in lying in a search warrant affidavit in the defendant's case, regardless of the prosecutor's lack of actual knowledge of ³⁴⁹the officer's wrongdoing, constituted impermissible conduct by the government that could render the defendant's guilty plea involuntary. See *Fisher*, 711 F.3d at 467.

Similarly, in the related context of a prosecutor's duty to disclose exculpatory evidence to the defense, we have considered whether the prosecutor's duty may extend to information known to other government officials. As a general rule, we have held that the prosecutor's duty does not extend beyond information held by "agents of the prosecution team." *Commonwealth v. Thomas*, 451 Mass. 451, 454, 886 N.E.2d 684 (2008), quoting *Commonwealth v. Beal*, 429 Mass. 530, 532, 709 N.E.2d 413 (1999). However, we also have held that individuals other than prosecutors and police may be considered agents of the prosecution team. For example, in *Martin*, 427 Mass. at 823, 696 N.E.2d 904, we addressed the question whether the duty of prosecutorial disclosure extended to the results of tests conducted by the

which it could not have been aware of at the time of the pleas,] falls miles short of . . . sufficiently egregious misconduct . . . that figured in *Ferrara*". Therefore, we apply the *Ferrara* analysis here in light of Dookhan's own misconduct, not the conduct of any other government agent.

State police crime laboratory where the “evidence was not in the prosecution’s possession (or known to it), but rather was held by the State police crime laboratory and perhaps known only to one of its chemists.” There, we held that a prosecutor’s duty to disclose exculpatory evidence extends to information in the possession of a person who “has participated in the investigation or evaluation of the case and has reported to the prosecutor’s office concerning the case.” *Id.* at 824, 696 N.E.2d 904. Additionally, in *Commonwealth v. Woodward*, 427 Mass. 659, 679, 694 N.E.2d 1277 (1998), we held that the medical examiner was a “Commonwealth agent” in part because the “Legislature contemplated coordination of efforts between the medical examiner and the district attorney”

Like the chemist in *Martin*, Dookhan, in her role as a chemist at the Hinton drug lab, was a person who “ha[d] participated in the investigation or evaluation of the case and ha[d] reported to the prosecutor’s office concerning the case”—both in Scott’s case and in others in which Dookhan served as either the primary or secondary chemist. *Martin*, 427 Mass. at 824, 696 N.E.2d 904. Additionally, at the Hinton drug lab Dookhan was responsible for safeguarding the entirety of evidence samples to which she was assigned throughout the testing process, and she was responsible for conducting chemical analyses of those samples and certifying on oath that the substances tested were what the certificate ¹³⁵⁰identified them to be. See G.L. c. 111, §§ 12–13. Dookhan and other chemists also were expected to

testify as expert witnesses regarding the testing of samples in various criminal prosecutions. Additionally, like the medical examiner’s office in *Woodward*, the Legislature appears to have contemplated a coordination of efforts between law enforcement and the Hinton drug lab because the lab was required by statute to perform chemical analyses of substances on request from law enforcement officials. See G.L. c. 111, §§ 12–13; *Woodward*, 427 Mass. at 679, 694 N.E.2d 1277.

Moreover, although we held in *Commonwealth v. Waters*, 410 Mass. 224, 226, 229, 230, 571 N.E.2d 399 (1991), that the misconduct of police officers engaged in their own individual unlawful scheme to extort the defendant was not related to “the Commonwealth’s interest in law enforcement” and therefore was not attributable to the government, we also acknowledged that misconduct arising from “overzealousness or sloppy police work” is so attributable. Here, the record does not indicate that Dookhan’s misconduct stemmed from some sort of larger criminal scheme. Rather, it appears that her misconduct was the result of a misguided effort to test as many samples as possible (whether properly or not) and to further what she perceived to be the mission of the Commonwealth: to “get [criminals] off the streets,” in her words. Thus, Dookhan’s misconduct was not an “individual unlawful scheme,” *Waters, supra* at 230, 571 N.E.2d 399, and is attributable to the government for the limited purposes of the *Ferrara* analysis.⁷ *Martin*, 427 Mass. at 824, 696 N.E.2d 904. *Woodward*, 427 Mass. at 679, 694 N.E.2d 1277.

7. We emphasize that our conclusion here today that Dookhan’s misconduct may be attributed to the Commonwealth is limited solely to the application of the *Ferrara* analysis to the defendant’s motion under Mass. R.Crim. P. 30(b), as appearing in 435 Mass. 1501 (2001). There is no indication in the record that the

Commonwealth had actual knowledge of Dookhan’s misconduct at any point during Scott’s prosecution, nor have we been asked to decide whether her misconduct should be attributed to the Commonwealth for the purposes of determining any sort of criminal or civil liability.

[17, 18] iii. *In the defendant's case.* Finally, under the first prong of the analysis, the defendant must demonstrate that the misconduct occurred in his case. This requirement was not stated explicitly in *Ferrara*, but there the nexus between the prosecutor's wrongdoing and the defendant's case was not in dispute. See ¹³⁵¹*Ferrara*, 456 F.3d at 284. In *Ferrara*, the lead prosecutor in the defendant's case was discovered to have made affirmative misrepresentations regarding the planned testimony of a key government witness in the defendant's case and to have withheld exculpatory evidence from the defendant prior to the entry of his guilty plea. See *id.* at 280, 284, 292–293. Similarly, in *Fisher* there was no dispute that the law enforcement officer's wrongdoing occurred in the defendant's case; the offending officer admitted that he had lied in the affidavit supporting the search warrant application that led to the defendant's arrest. See *Fisher*, 711 F.3d at 463. Thus, although neither *Ferrara* nor *Fisher* explicitly stated that the defendant must show that the misconduct occurred in his case, a logical extension of the reasoning in these cases requires the defendant to establish such a nexus. See *Fisher*, *supra* at 463; *Ferrara*, *supra* at 292–293.

We have required the existence of such a nexus in similar cases. See, e.g., *Commonwealth v. Ellis*, 432 Mass. 746, 764–765, 739 N.E.2d 1107 (2000), overruled on other grounds by *Commonwealth v. Britt*, 465 Mass. 87, 987 N.E.2d 558 (2013) (judge did not err in denying defendant's new trial motion where record was devoid of any evidence suggesting that police officers who had pleaded guilty to criminal wrongdoing in other cases had engaged in any such wrongdoing in investigation of defendant). See also *Commonwealth v. Campiti*, 41 Mass.App.Ct. 43, 65, 66, 668 N.E.2d 1308 (1996) (judge did not err in denying defendant's new trial motion be-

cause actions of State police officer convicted of embezzling money seized in drug investigations, including defendant's, did not taint “in any way” evidence against defendant). Therefore, we conclude that in applying the *Ferrara* analysis to a defendant seeking to vacate a guilty plea under Mass. R.Crim. P. 30(b), on the ground that government misconduct rendered the plea involuntary, the defendant is required to show a nexus between the government misconduct and the defendant's own case.

In cases arising out of Dookhan's misconduct, however, such a nexus may be impossible for the defendant to show. Unlike the government misconduct in *Fisher* or *Ellis*, Dookhan, who was the only witness to her misconduct in most instances, has indicated that she may not be able to identify those cases that involved proper testing and those that involved “dry labbing” ¹³⁵²or other breaches of protocol. See *Ellis*, 432 Mass. at 764, 739 N.E.2d 1107; *Fisher*, 711 F.3d at 463. Additionally, Dookhan appears to have been motivated primarily by a desire to appear highly productive, not by a desire to target particular defendants she can now identify. Thus, even if Dookhan herself were to testify in each of the thousands of cases in which she served as primary or secondary chemist, it is unlikely that her testimony, even if truthful, could resolve the question whether she engaged in misconduct in a particular case. What is reasonably certain, however, is that her misconduct touched a great number of cases.

[19] This particularly insidious form of misconduct, which belies reconstruction, is a lapse of systemic magnitude in the criminal justice system. Thus, it is incumbent upon us to exercise our superintendence power to fashion a workable approach to motions to withdraw a guilty plea brought

by defendants affected by this misconduct. We must account for the due process rights of defendants, the integrity of the criminal justice system, the efficient administration of justice in responding to such potentially broad-ranging misconduct, and the myriad public interests at stake. Moreover, in the wake of government misconduct that has cast a shadow over the entire criminal justice system, it is most appropriate that the benefit of our remedy inure to defendants. See *Lavallee v. Justices in the Hampden Superior Court*, 442 Mass. 228, 246, 812 N.E.2d 895 (2004).

Therefore, we hold that in cases in which a defendant seeks to vacate a guilty plea under Mass. R.Crim. P. 30(b) as a result of the revelation of Dookhan's misconduct, and where the defendant proffers a drug certificate from the defendant's case signed by Dookhan on the line labeled "Assistant Analyst," the defendant is entitled to a conclusive presumption that egregious government misconduct occurred in the defendant's case.⁸ See *Commonwealth v. DiGiambattista*, 442 Mass. 423, 444–445, 813 N.E.2d 516 (2004) ("We retain as part of our superintendence power the authority to regulate the presentation of evidence in court proceedings").³⁵³ Indeed it appears from the record before us that the

only reliable and available basis from which a defendant could even begin to assess whether Dookhan's wrongful conduct touched the defendant's case is whether Dookhan signed the drug certificate in her role as an analyst in that defendant's case. Therefore, Dookhan's signature as an assistant analyst on the drug certificate is sufficient to establish the requisite nexus between egregious government wrongdoing and the defendant's case.⁹

Moreover, furnishing a drug certificate signed by Annie Dookhan as an assistant analyst in the defendant's case satisfies the defendant's evidentiary burden to establish each element of the first prong of the *Ferrara* analysis. Therefore, in addition to enabling the defendant to establish the nexus between Dookhan's misconduct and the defendant's own case, the solution we fashion today relieves defendants of the costly administrative burden of proving the nature and extent of the investigation into Dookhan and the Hinton drug lab in order to establish that Dookhan's misconduct was egregious and that she may be considered a government agent. Our solution also will relieve the trial courts of the administrative burden of making duplicative and time-consuming findings in po-

8. This rule does not extend, however, to cases in which Dookhan signed the drug certificate in her role as a notary public. The record does not contain any allegations of wrongdoing by Dookhan in certifying the signatures of other chemists in the lab or in any case in which she did not serve as the primary or confirmatory chemist. See *Commonwealth v. Gardner*, 467 Mass. 363, 369, 5 N.E.3d 552 (2014).

9. We emphasize that this result attaches whether Dookhan served as the primary or confirmatory chemist testing the samples in the defendant's case. Dookhan's misconduct likely occurred both while conducting primary tests and while conducting confirmatory tests using the gas chromatography-mass

spectrometer machine. Additionally, the drug certificates issued by the Hinton drug lab in the defendant's case, along with others provided in the record, do not indicate which signing chemist served as either the primary or secondary chemist in that case. Although it is assumed that on the line labeled "Assistant Analyst" the signature further to the left is that of the primary chemist and the signature further to the right is that of the secondary chemist, nothing on the face of the certificate confirms that assumption. Therefore, if Dookhan signed the drug certificate in a defendant's case as one of two chemists vouching for the accuracy of the testing that identified the substances in issue, her misconduct is deemed to have touched the defendant's case.

tentially thousands of new trial motions regarding the nature and extent of Dookhan's wrongdoing.¹⁰

We emphasize that this special evidentiary rule is *sui generis*. It is a remedy dictated by the particular circumstances surrounding³⁵⁴ Dookhan's misconduct as a chemist at the Hinton drug lab and is intended to apply only to this narrow class of cases in which a defendant seeks to withdraw his or her guilty plea after having learned of Dookhan's misconduct. Should the *Ferrara* analysis be applied in the case of a motion for a new trial under Mass. R.Crim. P. 30(b) that does not arise from the investigation of Dookhan, the defendant will have the burden to establish each element of the first prong of *Ferrara*, and the adequacy of the defendant's showing will be committed to the sound discretion of the motion judge. Additionally, this presumption shall *not* apply in a trial in which the defendant seeks to impeach the testing process utilized at the Hinton drug lab, including those new trials conducted following the grant of a defendant's motion to withdraw a guilty plea pursuant to our holding in this case.

In sum, we conclude that Dookhan's misconduct is the sort of egregious misconduct that could render a defendant's guilty plea involuntary, and we further conclude that Dookhan's actions may be attributed

to the government for the purposes of the *Ferrara* analysis. Finally, we conclude that furnishing a drug certificate signed by Dookhan as a primary or secondary chemist in the defendant's case is sufficient to establish the requisite nexus between the defendant's case and Dookhan's misconduct. Thus, defendants seeking to vacate a guilty plea who produce a drug certificate related to the charges underlying their plea that is signed by Dookhan on the line labeled "Assistant Analyst" are entitled to a conclusive presumption that all three elements of the showing required under the first prong of the *Ferrara* analysis have been satisfied.

[20, 21] b. *Prong two: Material influence on the defendant's decision to plead guilty.* Although our holding under the first *Ferrara* prong enables the defendant to establish that egregious government misconduct occurred in his case using only the drug certificate signed by Dookhan, we do not relieve the defendant of his burden under the second *Ferrara* prong to particularize Dookhan's misconduct to his decision to tender a guilty plea.¹¹ Under the second prong of the *Ferrara* analysis, the defendant 355 must demonstrate a reasonable probability that he would not have pleaded guilty had he known of Dookhan's misconduct.¹² See

10. The record appendix documenting the investigation into the Hinton drug lab in this appeal contains more than 400 printed pages along with a compact disc containing several hundred additional pages of exhibits.

11. It certainly is true that we cannot expect defendants to bear the burden of a systemic lapse, but we also cannot allow the misconduct of one person to dictate an abrupt retreat from the fundamentals of our criminal justice system. See *Commonwealth v. Chatman*, 466 Mass. 327, 333, 995 N.E.2d 32 (2013) ("The defendant has the burden of proving facts upon which he relies in support of his motion for a new trial"). See also

Commonwealth v. Lewin, 405 Mass. 566, 585, 586, 542 N.E.2d 275 (1989) (charges against defendant need not be dismissed where police misconduct was egregious but not prejudicial to fair trial). Unlike evidence of the particular scope of Dookhan's misconduct, evidence of the circumstances surrounding the defendant's decision to tender a guilty plea should be well within the defendant's reach.

12. The court in *Ferrara* cites *Hill v. Lockhart*, 474 U.S. 52, 106 S.Ct. 366, 88 L.Ed.2d 203 (1985), as the source for this reasonable probability standard. *Ferrara*, 456 F.3d at 294. See *Hill*, *supra* at 58–59, 106 S.Ct. 366 (reasonable probability standard is test for preju-

Fisher, 711 F.3d at 469; *Ferrara*, 456 F.3d at 290, 294.

[22] The court in *Ferrara* describes the reasonable probability test as a totality of the circumstances test and identifies several factors that may be relevant to the defendant's showing under this prong. See *Ferrara*, 456 F.3d at 294, citing *Brady v. United States*, 397 U.S. at 749, 90 S.Ct. 1463. These factors include (1) whether evidence of the government misconduct could have detracted from the factual basis used to support the guilty plea, (2) whether the evidence could have been used to impeach a witness whose credibility may have been outcome-determinative, (3) whether the evidence was cumulative of other evidence already in the defendant's possession, (4) whether the evidence would have influenced counsel's recommendation as to whether to accept a particular plea offer, and (5) whether the value of the evidence was outweighed by the benefits of entering into the plea agreement. See *Ferrara*, *supra*.

[23] Notably, the reasonable probability standard mirrors our formulation of the test for prejudice in cases in which a defendant claims that counsel's ineffective assistance induced the defendant to plead guilty. See *Commonwealth v. Clarke*, 460

dice for claims of ineffective assistance of counsel). The court in *Ferrara* also acknowledges that the reasonable probability standard mirrors the standard for assessing materiality, or prejudice, in cases in which the defendant alleges a violation of the duty of prosecutorial disclosure under *Brady v. Maryland*, 373 U.S. 83, 83 S.Ct. 1194, 10 L.Ed.2d 215 (1963). *Ferrara*, *supra* at 294 n. 12. We have departed from the Federal "reasonable probability" standard for testing prejudice in cases of prosecutorial nondisclosure by instead requiring the defendant to demonstrate prejudice by showing a "substantial risk that the jury would have reached a different conclusion if the evidence had been admitted at trial." *Commonwealth v. Tucceri*, 412 Mass. 401, 403-404, 412-413, 589 N.E.2d 1216 (1992).

Mass. 30, 46-47, 949 N.E.2d 892 (2011). In such cases we have held that the defendant must demonstrate a reasonable probability that but for counsel's errors he would not have pleaded guilty and would have insisted on going to trial. See *id.* at 47, 949 N.E.2d 892. At a minimum, the defendant must aver to this fact. See *id.* Additionally, the defendant must "convince the court that a decision to reject the plea bargain would have been rational under the circumstances." *Id.*, quoting *Padilla v. Kentucky*, 559 U.S. 356, 372, 130 S.Ct. 1473, 176 L.Ed.2d 284 (2010).

[24] Due to the similarity of our formulation of the prejudice test in *Clarke* to the formulation of the test in *Ferrara*, we draw on our ineffective assistance of counsel cases to identify additional factors that may be relevant to show a reasonable probability that had the defendant known of the government misconduct at the time of his plea, he would not have tendered a guilty plea. For example, these factors may include whether the defendant had a substantial ground of defense that would have been pursued at trial or whether any other special circumstances were present on which the defendant may have placed particular emphasis in deciding whether to

We made this departure in part because the Federal standard did not, in our opinion, focus the judge's assessment of the harm of nondisclosure on the likely effect of the withheld evidence on the jury and thereby did not adequately safeguard the defendant's right to a trial by jury. See *id.* at 411, 589 N.E.2d 1216. See also *Commonwealth v. Gallarelli*, 399 Mass. 17, 21 n. 5, 502 N.E.2d 516 (1987). This rationale is not directly applicable in motions to withdraw guilty pleas, however. Indeed, here we are seeking to assess the effect of government misconduct on the defendant's decision to plead guilty, not the jury's decision to convict. Thus, we are not compelled to depart from the *Ferrara* standard for materiality in our application of the *Ferrara* decision to Scott's case.

accept the government's offer of a plea agreement.¹³ See *Clarke*, 460 Mass. at 47–48, 949 N.E.2d 892.

[25] Ultimately, a defendant's decision to tender a guilty plea is a unique, individualized decision, and the relevant factors and their relative weight will differ from one case to the next. See *Ferrara*, 456 F.3d at 294. See also *Commonwealth v. Tirrell*, 382 Mass. 502, 510, 416 N.E.2d 1357 (1981) (in plea bargaining context “defendant's fond hopes for acquittal must be tempered by his understanding of the strength of the case against him, his prior record,³⁵⁷ and the completely unknowable reaction of the trier of fact”). Moreover, a particular case may give rise to consideration of additional relevant factors not identified by either *Clarke* or *Ferrara*, such as whether the defendant was indicted on additional charges and whether the drug-related charges were a minor component of an over-all plea agreement.

Therefore, in Scott's case, the motion judge may consider such relevant facts as the circumstances of the defendant's arrest and whether the Commonwealth possessed other circumstantial evidence tending to support the charge of drug possession, along with the generous terms of the sentence reduction he received and other facts that may come to light on reconsideration of the defendant's motion, including any anticipated collateral consequences stemming from accepting a plea offer rather than pursuing a trial by jury.¹⁴ Thus, we emphasize that the full context of the de-

fendant's decision to enter a plea agreement will dictate the assessment of his claim that knowledge of Dookhan's misconduct would have influenced the defendant's decision to plead guilty. See *Ferrara*, 456 F.3d at 294 (“Because a multiplicity of factors may influence a defendant's decision to enter a guilty plea, a court attempting to answer this question must use a wide-angled lens”). However, in assessing the likelihood of whether the defendant would have tendered a guilty plea, a judge may not consider any assertion by the Commonwealth that it would have offered to retest the substances at issue in the defendant's case if the defendant had known of Dookhan's misconduct. The reasonable probability analysis must be based on the actual facts and circumstances surrounding the defendant's decision at the time of the guilty plea in light of the one hypothetical question of what the defendant reasonably may have done if he had known of Dookhan's misconduct. To permit further hypothetical arguments to factor into the analysis, such as the results of any retesting the Commonwealth might have offered to undertake, would require a court to heap inference upon inference and will bring the inquiry under this prong too far afield of the facts and circumstances actually known to the defendant at the time of his guilty plea.

We therefore remand the defendant's case for the judge to determine whether, in the totality of the circumstances, the defendant can demonstrate a reasonable

13. Such special circumstances could include, for example, the collateral immigration consequences of the defendant's conviction of a particular crime. See *Commonwealth v. Clarke*, 460 Mass. 30, 47–48, 949 N.E.2d 892 (2011).

14. The defendant asserts that because the judge specifically asked the Commonwealth during oral argument on the defendant's motion whether the strength of the Common-

wealth's case against Scott may have influenced his decision to plead guilty, and the Commonwealth stated, “I think it probably did, Your Honor . . .,” a basis existed in the record to support the judge's order granting the motion for a new trial. We reject any argument that this exchange alone is adequate to satisfy the defendant's burden under this prong of the *Ferrara* analysis.

probability that had he known of Dookhan's misconduct, he would not have admitted to sufficient facts and would have insisted on taking his chances at trial. See *Clarke*, 460 Mass. at 47, 949 N.E.2d 892; *Ferrara*, 456 F.3d at 294. In so doing, we remind judges of the importance of their findings and rulings for purposes of appellate review, especially in the case of a fact-intensive analysis taking account of the range of circumstances surrounding the defendant's decision to enter a plea agreement. See Mass. R.Crim. P. 30(b) ("the trial judge shall make such findings of fact as are necessary to resolve the defendant's allegations of error of law"). See also Reporters' Notes to Rule 30, Mass. Ann. Laws Court Rules, Rules of Criminal Procedure, at 1660 (LexisNexis 2013) ("The absence of a finding of fact hampers appellate review of the judge's decision on a new trial motion").

5. *Other grounds.* In response to the Commonwealth's appeal, the defendant raises two alternative grounds on which the judge could have based the decision to grant the defendant's motion to vacate his guilty plea. The defendant argues that the judge could have found that the investigation into Dookhan's conduct and the Hinton drug lab constituted newly discovered exculpatory evidence that casts real doubt on the justice of the defendant's conviction. See *Commonwealth v. Tucceri*, 412 Mass. 401, 408–409, 589 N.E.2d 1216 (1992); *Commonwealth v. Grace*, 397 Mass. 303, 305, 491 N.E.2d 246 (1986). The defendant also argues that the judge could have granted the defendant's motion on the ground that Dookhan's misconduct and the investigation surrounding the Hinton drug lab constitute material exculpatory evidence that the prosecution constitutionally was obligated to disclose to the defendant prior to his guilty plea. See

Brady v. Maryland, 373 U.S. 83, 87, 83 S.Ct. 1194, 10 L.Ed.2d 215 (1963). See also *Tucceri*, *supra* at 404–405, 589 N.E.2d 1216.

The Commonwealth argues, however, that each of these claims was waived by the entry of the defendant's voluntary and intelligent guilty plea. See *Commonwealth v. Fanelli*, 412 Mass. 497, 500, 590 N.E.2d 186 (1992) ("A defendant's guilty plea, made knowingly, voluntarily and with the benefit of competent counsel, waives all nonjurisdictional defects in the proceedings prior to the entry of the guilty plea"). The Commonwealth asserts that in the case of a conviction by guilty plea, newly discovered evidence may only cast doubt on the justice of a conviction if it calls into question the voluntariness of the plea itself. See *id.* Otherwise, newly discovered evidence, even if it could be used to impeach a key witness, is not sufficient to cast doubt on the justice of a conviction because the factual basis of a defendant's guilt is established conclusively by the defendant's guilty plea. See *id.* Similarly, the Commonwealth contends that a constitutional violation premised on prosecutorial nondisclosure, a so-called "*Brady v. Maryland* violation," could not have served as a basis for granting the defendant's motion to vacate his guilty plea because a voluntary and intelligent guilty plea constitutes a waiver of all pre-plea constitutional claims. See *Tollett v. Henderson*, 411 U.S. 258, 267, 93 S.Ct. 1602, 36 L.Ed.2d 235 (1973). Thus, according to the Commonwealth's argument, if on remand the defendant fails to establish that his guilty plea was involuntary under the *Ferrara* analysis, postconviction relief based either on the common-law basis of newly discovered evidence or on the constitutional basis of a *Brady v. Maryland* violation is foreclosed, and the defendant's motion must be de-

nied.¹⁵

It is not necessary here to reach the question whether a voluntary and intelligent guilty plea constitutes a waiver of the defendant's right to seek to vacate a plea based either on the common-law claim of newly discovered evidence or on the constitutional claim of prosecutorial nondisclosure. If, on remand,¹³⁶⁰ the defendant fails to establish that the guilty plea was involuntary under the *Ferrara* analysis because under the second prong he is unable to demonstrate that knowledge of Dookhan's misconduct would have materially influenced his decision to plead guilty, the *Ferrara* analysis will likely be dispositive of the other grounds asserted by the defendant as well.

[26–29] Both a common-law claim of newly discovered evidence and a constitutional claim of prosecutorial nondisclosure require the defendant to make some showing of prejudice or materiality. See *Tucceri*, 412 Mass. at 412–413, 589 N.E.2d 1216; *Grace*, 397 Mass. at 305–306, 491 N.E.2d 246. When a defendant brings a motion for a new trial based on newly discovered evidence, the defendant has the burden to show that the evidence “casts real doubt on the justice of the conviction.”

15. The Commonwealth also argues that even if the defendant's *Brady v. Maryland* claim is not waived by entry of a valid guilty plea, the defendant should not prevail on this ground because the Commonwealth had no duty to disclose evidence of Dookhan's misconduct either because the Commonwealth did not “possess” the evidence in the requisite sense or because the evidence was mere “impeachment evidence” that, under *United States v. Ruiz*, 536 U.S. 622, 629, 122 S.Ct. 2450, 153 L.Ed.2d 586 (2002), the prosecution is not required to disclose prior to a defendant's guilty plea. We need not rule on either of these subsidiary arguments at this time, however, because, as we discuss, *infra*, the whole of the prosecutorial nondisclosure ground is likely resolved by the prejudice analysis under the second prong of *Ferrara*.

Grace, 397 Mass. at 305, 491 N.E.2d 246. The defendant must convince the judge that there is a “substantial risk that the jury would have reached a different conclusion had the evidence been admitted at trial.” *Id.* at 306, 491 N.E.2d 246. The judge need not be convinced that the jury's verdict would have been different but rather that the evidence would have been a “real factor” in the jury's deliberations. *Id.* Similarly, when a defendant brings a motion for a new trial based on the prosecutor's failure to disclose exculpatory evidence in violation of the defendant's due process rights under art. 12 of the Massachusetts Declaration of Rights, the defendant must show that “there is a substantial risk that the jury would have reached a different conclusion if the evidence had been admitted at trial.”¹⁶ *Tucceri*, 412 Mass. at 406, 413, 589 N.E.2d 1216. As we stated in *Tucceri*, this test is “substantially the same as the *Saferian* ineffective assistance of counsel standard.” *Id.* at 413, 589 N.E.2d 1216. See *Commonwealth v. Saferian*, 366 Mass. 89, 96, 315 N.E.2d 878 (1974).

[30] Our decisions in *Grace*, *Tucceri*, and *Saferian* all arose, however, in the context of a defendant's motion for a new

16. If a defendant brings a motion for a new trial based on the prosecutor's failure to disclose exculpatory evidence in violation solely of the defendant's due process rights under the Federal Constitution, the defendant must show “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, 87 L.Ed.2d 481 (1985). This standard parallels the prejudice standard set forth in *Ferrara*. See *Ferrara*, 456 F.3d at 294 & n. 12.

trial ¹³⁶¹ following conviction after a trial, not a guilty plea. See *Tucceri*, 412 Mass. at 402, 589 N.E.2d 1216; *Grace*, 397 Mass. at 304, 491 N.E.2d 246; *Saferian*, 366 Mass. at 90, 315 N.E.2d 878. Our case law on new trial motions based on newly discovered evidence or prosecutorial nondisclosure has not yet set forth a particular formulation of the standard for prejudice in cases in which a defendant is seeking to withdraw a guilty plea rather than to vacate a conviction by a judge or jury. However, our ineffective assistance of counsel line of cases has given rise to such a formulation. See *Clarke*, 460 Mass. at 47, 949 N.E.2d 892. In *Clarke*, we considered a defendant's motion for a new trial in order to vacate his guilty plea based on ineffective assistance of counsel, and we held that, "[i]n the context of a guilty plea, in order to satisfy the 'prejudice' requirement, the defendant has the burden of establishing that 'there is a reasonable probability that, but for counsel's errors, he would not have pleaded guilty and would have insisted on going to trial.'" *Id.* at 31, 47, 949 N.E.2d 892, quoting *Hill*, 474 U.S. at 59, 106 S.Ct. 366. This standard is identical to, and draws from the same source as, the standard in *Ferrara*. See *Ferrara*, 456 F.3d at 294, citing *Hill*, 474 U.S. at 59, 106 S.Ct. 366. Moreover, unlike the formulation of the standard set forth in *Grace*, *Tucceri*, and *Saferian*, which focuses the relevant inquiry on the prejudicial effect on the jury's deliberations, the standard set forth in *Clarke* focuses the inquiry on the prejudicial effect on the defendant's decision whether to enter a plea agreement. See *Clarke*, *supra* at 47, 949 N.E.2d 892. Therefore, were we to determine the specific formulation of the standard for prejudice to be applied to defendants seeking to withdraw a guilty plea based on either newly discovered evidence or prosecutorial nondisclosure, we may well conclude that the most

appropriate formulation would be the reasonable probability standard that we adopted in *Clarke*, *supra*, which also reflects the standard in *Ferrara*, *supra*. Consequently, passing on the question whether a voluntary guilty plea constitutes a waiver of the right to seek a new trial on the grounds of either newly discovered evidence or prosecutorial nondisclosure, if a defendant is unable to establish prejudice under the second prong of the *Ferrara* analysis, it is likely that he or she would be unable to make the showing of prejudice required by the other two grounds as well. Therefore, reconsideration of the defendant's motion based on the voluntariness ¹³⁶² analysis we have set forth in this opinion should be sufficient to dispose of all the grounds on which the defendant raised his motion to withdraw his guilty plea.

6. *Conclusion.* For the foregoing reasons, we conclude that because Dookhan signed the drug certificate as an assistant analyst in Scott's case, and because Scott offered the signed drug certificate in support of his motion to withdraw his guilty plea, Scott is entitled to a conclusive presumption that Dookhan's misconduct was egregious, is attributable to the government, and occurred in his case. However, we vacate the order allowing the defendant's motion to withdraw his guilty plea, and we remand this case for findings on the question whether there is a reasonable probability that the defendant would not have pleaded guilty had he known of Dookhan's misconduct at the Hinton drug lab.

So ordered.

