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SAMMY MARSHALL

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

THE PEOPLE OF THE STATE OF CALIFORNIA, Plaintiff, v. SAMMY MARSHALL Defendant.	No. BA 069796 DEFENDANT'S RESPONSE TO PEOPLE'S ANSWER TO MOTION FOR APPOINTMENT OF EXPERT AND DEFENSE ACCESS TO LABORATORY FOR RETESTING Hearing Date March 31, 1995 Department 115

I. Introduction

The key evidence against defendant Sammy Marshall in this case is derived from a DNA test. The test was performed and interpreted by Mr. Michael DeGuglielmo, a

technician[1] employed by Genetic Design Corporation, an unaccredited[2] private forensic laboratory in Greensboro, North Carolina. According to Mr. DeGuglielmo, his test (which employed RFLP analysis) shows a DNA banding pattern in the "vaginal aspirate" of the rape victim that is consistent with Mr. Marshall's DNA banding pattern; this pattern is estimated to occur with a frequency of only one in 641 million. On its face, this DNA evidence appears to provide powerful proof of Marshall's guilt.

With DNA evidence, however, appearances can be deceiving. At the request of defense counsel, two Ph.D.-level experts have reviewed DeGuglielmo's work by examining copies of the test results disclosed by the prosecution, including copies of x-ray plates, known as autorads, that show the "DNA banding pattern" of each sample. The two experts, Professor William Shields of the State University of New York, Syracuse, and Professor Aimee Bakken of the University of Washington, independently reached the same conclusion: the DNA test does **not** incriminate Mr. Marshall. The professors could not see a "DNA banding pattern" in the vaginal aspirate that corresponds to Marshall's pattern. When Professor Bakken "scored" these autorad copies, using a BioImage machine (the same type of computer-assisted imaging device used by Mr. DeGuglielmo), the machine found a different "DNA banding pattern" in the vaginal aspirate than had been reported by DeGuglielmo. Based on these findings, the experts concluded that, with respect to Mr. Marshall, the results of the DNA test are either inconclusive or exculpatory.

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[1] Mr. DeGuglielmo does not have a Ph.D. Should he be called to testify, the defense will challenge his expertise in areas of science relevant to forensic DNA testing (i.e., molecular biology, population genetics, statistics).

[2] The only recognized system of accreditation for forensic DNA laboratories is administered by the American Society of Crime Laboratory Directors (ASCLD). A number of state and county crime laboratories, and at least one private laboratory (Cellmark Diagnostics), have received ASCLD accreditation. Genetic Design has not.

(See declarations of Professors Shields and Bakken, attached to defendant's Points and Authorities in support of this motion).

What accounts for the contradiction between the conclusions of defendant's Ph.D.-level experts and those of Genetic Design's technician, Mr. DeGuglielmo? Defendant contends that DeGuglielmo reached the wrong conclusion because he failed to follow correct scientific procedures for analyzing DNA evidence.[3] Specifically, DeGuglielmo failed to use objective procedures for "scoring" the autorads. Although he used a computer-assisted imaging device to "score" the autorads, defense counsel believe that he overrode the device's findings and substituted his own subjective interpretation of the autorads and did so in a manner that caused him (perhaps unwittingly) to be biased in favor of an incriminating result. Additionally, defendant contends that the BioImage machine is unreliable for scoring bands as faint as those that allegedly incriminate Mr. Marshall.

It is the extreme faintness of the "incriminating bands" that makes this case unusual. In most cases, the critical bands are so dark and clear that there can be no dispute about their presence. In this case, however, the critical bands are so faint that they are difficult to see (if they are present at all). Consequently, this case raises different issues than most DNA cases. In this case, unlike most cases, the reliability of the laboratory's method for "scoring" faint bands, and the accuracy with which specific bands were scored, will be key

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[3] "Admissibility of expert testimony based upon the application of a new scientific technique traditionally involves a two-step process: (1) the reliability of the method must be established, usually by expert testimony, and (2) the witness furnishing such testimony must be properly qualified as an expert to give an opinion on the subject. Additionally, the proponent of the evidence must demonstrate that correct scientific procedures were used in the particular case." People v. Kelly (1976) 17 Cal.3d 24, 30, 130 Cal.Rptr. 144 (emphasis added).

issues. If these issues have arisen rarely in the past, it is because few analysts are as venturesome in their interpretation of DNA evidence as technician DeGuglielmo was in drawing incriminating conclusions from the ambiguous evidence in this case.

The prosecution has, thus far, been unwilling to concede that DeGuglielmo overrode the BioImage device and relied on subjective scoring of the autorads. The prosecutor has suggested that the copies of the autorads that were provided to defense may be "lighter" than the originals, such that they fail to show the extremely faint "bands" incriminating Mr. Marshall that were detected by the BioImage device at Genetic Design. But one of defendant's experts had an opportunity briefly to examine the original autorads (while visiting the laboratory in connection with another case) and has reported that the copies appear accurate. The prosecutor has been unwilling to provide to the defense copies of the autorads that he considers accurate.

Under these circumstances, the duty of defense counsel is clear. In order to effectively represent Mr. Marshall, defense counsel must seek an independent scientific opinion on whether the original autorads in this case can be scored reliably through the use of correct scientific procedures (i.e., through objective scoring by a computer-assisted imaging device without the use of operator overrides) and, if so, whether this objective scoring incriminates Mr. Marshall. This information is obviously relevant to defendant's pretrial challenge to the admissibility of the DNA evidence under Kelly and may be crucial to defendant's ability to mount an effective defense before the jury, should the DNA evidence be admitted. Defendant's motion is designed to allow defendant to gather this information.

The prosecution does not contest defendant's claim that he is entitled, under the discovery statute and under the U.S. Constitution, to have an expert examine the original autorads. In the prosecution's response to defendant's motion, no objection is raised to Dr. Shields' going to Genetic Design and looking at the original autorads. Nor is there any objection, in principle, to Dr. Shields' using a machine to "rescore" the autorads, provided that it is not Genetic Design's machine.[4] The only real point of contention is whether Dr. Shields should be allowed to use Genetic Design's equipment.

Two arguments are offered against defendant's request that Dr. Shields be allowed to use Genetic Design's equipment to rescore the original autorads: (1) Dr. Shields might harm the equipment or gain access to proprietary data that are stored in the computer; and (2) defendant has alternative means to examine this evidence. We shall respond to these objections in reverse order.

II. Defendant's Expert Cannot Effectively Examine the Original Autorads Without Using Genetic Design's Equipment

In order to determine whether the original autorads can be scored reliably by a computer-assisted imaging device, defendant's expert must simultaneously have access to two things: (1) the original autorads, and (2) a computer-assisted imaging device. The prosecution has refused to allow the defendant to examine the original autorads outside Genetic Design's laboratory, and it would not be feasible to bring a BioImage machine

[4] If the defense were able to bring its own equipment to Genetic Design for the purpose of non-destructive rescoring of the original autorads, the prosecution presumably would not object. Certainly the prosecution has stated no grounds for such an objection. Unfortunately, the cost of obtaining such equipment and transporting it to North Carolina is prohibitive.

into the laboratory from outside, so defendant's only option is to use Genetic Design's equipment.

The first alternative suggested by the prosecution is for defendant to "send a known sample to Genetic Design and personally observe them performing RFLP analysis." (People's Response, p. 5). This suggestion misses the point. What defendant seeks to examine (using proper scientific equipment) is the results of the RFLP analysis that was performed in this case (i.e., the original autorads that purport to incriminate him), not the results of testing on some other sample.

The second alternative proposed by the prosecutor has the same problem. The prosecutor suggests that defendant's expert "could watch Genetic Design personnel using the BioImage machine on its daily, regular basis and derive information relevant to scoring from this observation." (People's Response, p. 5). Again, the issue is not the manner in which Genetic Design's personnel score autorads in other cases (where the bands may be dark and clear), it is how the autorads were scored in this case (where the bands are extremely faint, if not non-existent). What defendant needs to know is not the general procedure of scoring, but whether that procedure is reliable as applied to the evidence that purports to incriminate him and whether the procedure, when properly performed, produces incriminating results.

The third "alternative" proposed by the prosecutor is for defendant "to conduct his own DNA analysis at another laboratory using a similar scoring process." This alternative would not satisfy the prosecutor's legal obligation under the discovery statute and under the U.S. Constitution to allow defendant to examine the evidence against him. What defendant seeks to examine is "the results of...scientific tests, experiments, or comparisons

which the prosecutor intends to offer in evidence at trial." Penal Code Section 1054.1(f). To say "you cannot examine the results of the prosecution's test, which will be used against you at trial, but you can conduct your own test and examine that" complies with neither the letter nor the spirit of the discovery statute, and effectively shifts the burden of proof from the prosecution to the defense.

Finally, the prosecutor suggests that it is unnecessary for defendant's expert to examine the evidence because "nothing precludes the defendant from his right to fully confront and cross-examine...Genetic Design employees ..." (Prosecution Response, p. 5-6). This alternative also fails to satisfy the prosecutor's legal obligations under the discovery statute and the U.S. Constitution. To say "you cannot examine the results of the prosecution's test, which will be used against you at trial, but you can ask the prosecution's experts questions about the those results" is obviously inadequate. If this response were sufficient, prosecutors would never need to disclose tangible evidence and defendants would never have the opportunity to examine and retest scientific evidence offered against them. The law requires more. In order to cross-examine the prosecution's experts <u>effectively</u>, defendant must have the opportunity to examine and rescore the original autorads.

The key issues concerning DNA evidence in this case are ones that, by their very nature, are difficult to deal with through cross-examination alone. Defense counsel need to know, for example, whether the technician followed correct procedures nearly two years ago, when scoring the autorads in this case. Defense counsel are particularly interested in the method used to "score" a few critical bands out of dozens of bands in that case. But the technician scores thousands of bands on hundreds of autorads every month

and keeps no contemporaneous notes about how he does it. Indeed, the laboratory has taken active steps to prevent the creation of a record from which defense counsel might infer whether correct procedures were followed.[5] Even if one believed that the technician would try to tell the truth about how he scored the autorads (while his interpretation was under attack), it would be foolish to trust his memory about his scoring of specific bands nearly two years ago, when this action is likely to be indistinguishable in his mind from hundreds or thousands of similar actions that he performs daily. The situation would be analogous to questioning a witness about whether he signaled before making a lane change on the freeway two years ago when the witness drives the freeways daily, changes lanes frequently, and heretofore had no reason to think the lane change in question was particularly noteworthy.

Defense counsel also need to know whether the BioImage device is reliable in its scoring of the critical bands in this case. An important issue, for example, is whether the device will give the same results each time if the critical faint bands in this case are "scored" several different times. This question cannot be answered through cross-examination of a technician who has scored the critical bands only once. The answer can only be obtained by having an independent expert conduct an appropriate testing regimen with a BioImage device on the original autorads in this case. To deny the defendant's request to conduct such tests would be to deny him the opportunity to uncover evidence that could very well be exculpatory.

[5] The BioImage program, which Genetic Design uses, normally makes a print out showing whether particular bands were scored by the machine itself, or by "operator override." Genetic Design has disabled the program in a manner that suppresses this portion of the print out.

The futility of challenging scientific evidence through cross-examination alone, without the opportunity for an independent examination of the test results, is an important reason that the right to retest is seen as fundamental to due process. "The right to retest is so basic that some courts have declared it constitutionally based and a violation of fundamental fairness when denied." P. Giannelli, Criminal Discovery, Scientific Evidence and DNA, 44 Vanderbilt.L.Rev. 791, 817 (1991); cf. Barnard v. Henderson, 514 F.2d 744, 746 (5th Cir. 1975)("fundamental fairness is violated when a criminal defendant...is denied the opportunity to have an expert of his choosing...examine a piece of critical evidence whose nature is subject to varying expert opinion.").

III. Rescoring of the Original Autorads Can Be Accomplished in a Manner That Protects Genetic Design's Interest in Preventing Damage to Its Computer and Protecting Confidential Data.

The prosecution's concerns about damage to Genetic Design's computer and theft of confidential data are overblown. Defendant's expert, Professor William Shields, is an internationally recognized scholar of unimpeachable integrity who has no motive to harm Genetic Design's equipment nor to steal its data. Dr. Shields is familiar with the BioImage machine and has stated, in his declaration, that in his judgment rescoring will pose "no risk whatsoever" to the BioImage machine. The prosecutor offers only his own unsupported assertions to support his claims that the computer might be damaged and that confidential data within the computer cannot be protected.[6]

[6] Most computers, including the one on which this document is being typed, have password systems that that allow unauthorized users to be locked out of applications containing sensitive data. Is the prosecutor

Defense counsel remain confident that an order can be crafted that will accommodate Genetic Design's security concerns in a manner consistent with defendant's rights. Defendant is willing to accept any reasonable arrangement and is more than willing to negotiate the details. The suggestion of a "room monitor," which the prosecutor dismisses as "farcical," was offered in good faith. Rather than dismiss this initial suggestion out of hand, why not explore it further? If the only way to protect Genetic Design's security interests is to have the "room monitor" observe the computer screen while Dr. Shields works, then defendant will accept this arrangement, provided that measures can be taken to protect defendant's Sixth Amendment rights and work-product privileges. Defendant would ask, for example, that the prosecutor stipulate that the room monitor not be called as a witness and stipulate that any information arising from the room monitor's observations is inadmissible in this case. Defendant would also ask that the court order the room monitor to hold in confidence all observations of Dr. Shield's actions (unless, of course, the monitor observed some attempt to access confidential materials or damage the computer).

IV. Conclusion

This motion requires the court to balance the defendant's right to due process and a fair trial against the security concerns of a private commercial laboratory employed by the prosecution to do DNA testing. Defendant has made a powerful showing of the need

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asserting that there is no such system on Genetic Design's computer? Has he even made the effort to find

to have an independent expert rescore the original autorads. The affidavits of Professors Shields and Bakken make it perfectly clear that rescoring of the original autorads: (1) is necessary to allow defense counsel to understand the value of the DNA evidence, (2) is necessary to allow effective cross-examination of the prosecution's experts, and (3) might very well produce exculpatory evidence. The prosecution's half-hearted suggestion that defendant has "alternative means" of discovery misses the point of defendant's motion and is completely unpersuasive.

The only real objection the prosecution has raised is that rescoring might compromise the security of confidential data at the forensic laboratory. The prosecutor has made no showing (beyond his own assertions) that the operator of the BioImage machine could, in fact, access confidential records. Nor has the prosecutor made a persuasive case that the laboratory lacks the means easily to prevent such access (e.g., through use of the sort of password system that is available on most computers). Most importantly, the prosecution has suggested no reason why defendant's expert, a distinguished university professor, would even want to access the laboratory's confidential data. These "security concerns" are, at bottom, simply a pretext to prevent the defendant from proving that Mr. DeGuglielmo botched the analysis of DNA evidence in this case.

Nevertheless, defendant is willing to bend over backwards to accommodate these concerns. Defendant has suggested a method of monitoring that would prevent any damage to the computer and any unauthorized access to data. This method will allow the original autorads to be rescored by defendant's expert while fully protecting the

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laboratory's interests. Defendant's accommodating stance on this point satisfies any legitimate security concerns.

Under these circumstances, it would plainly be unfair to deny defendant's motion. To allow the prosecution to offer what appears to be damning evidence of defendant's guilt, without giving defendant the right to examine that evidence in a manner that could well show it to be worthless, or even exculpatory, would be a gross violation of defendant's right to due process and a fair trial.

Respectfully submitted,

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William C. Thompson
Attorney for Sammy Marshall

Dated: March 17, 1995