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July 24, 2006

RECEIVED
JUL 24 2006
CLERK SUPREME COURT

Hon. Frederick K. Ohlrich
Clerk, California Supreme Court
Supreme Court of California
350 McAllister Street
San Francisco, CA 94102

Re: *People v. Michael Johnson*, No. S144821 (Fifth Appellate District, NO. F046939)

LETTER BRIEF OF CALIFORNIA ATTORNEYS FOR CRIMINAL JUSTICE IN SUPPORT OF PETITION FOR REVIEW (RULE 28(g), CALIFORNIA RULES OF COURT), FILED BY PETITIONER MICHAEL JOHNSON IN THE ABOVE-ENTITLED CASE

Dear Mr. Ohlrich:

This letter, permitted by Rule 28(g) of the California Rules of Court, is submitted by California Attorneys for Criminal Justice (hereafter "CACJ") to support the Petition for Review filed in this Court by Petitioner Michael Johnson in the above-entitled case.

Thanks to the assistance of Edward J. Ungvarsky, Special Counsel to the Director of the Public Defender Service for the District of Columbia, whose Declaration dated July 21, 2006, is submitted as Exhibit A to this letter brief, CACJ has the privilege of providing this Court a letter containing important information about the case, signed by 25 scientists, many of whom are scholars at universities and colleges in the United States and overseas, notably in the United Kingdom. Other authors of the July 20 scientists' letter administer, are on the staff of, or are affiliated with, laboratories and research institutions involved in DNA work. All of these scientists are familiar with the scientific issues presented in this case.

As it has in a number of letter briefs tendered to this Court over the years, CACJ makes known its identity and interest in the matter presented. However, CACJ's brief on the merits of the Petition for Review is largely embodied in the appended scientists' letter of July 20, 2006. While submitted to this Court by an organization of advocates, the letter has been authored by scientists concerned that scientific principles and the state of the sciences at issue receive scientifically valid and reliable discussion.

Therefore, CACJ urges this Court to review the appended July 20 scientists' letter as an important basis for granting review.

A. **Identification of CACJ**[1]

CACJ is a nonprofit California corporation. According to Article IV of its bylaws, CACJ was formed to achieve certain objectives including "to defend the rights of persons as guaranteed by the United States Constitution, the Constitution of the State of California and other applicable law."

CACJ is administered by a Board of Governors consisting of criminal defense lawyers practicing within the State of California. The organization has approximately 2,000 members, primarily criminal defense lawyers practicing before federal and state courts. These lawyers are employed throughout the State both in the public and private sectors.

CACJ has often appeared before this Court, the United States Supreme Court, and the Courts of Appeal in California on issues of importance to its membership. CACJ's appearance as an *amicus curiae* before this Court has been recognized in several of the Court's published decisions.

B. **Statement of Interest of Amicus**

CACJ's membership is regularly involved in the presentation of scientific evidence in California courts. When this Court was considering whether California should change its rules of evidence concerning the admission of opinion testimony based on a new scientific technique, CACJ filed an *amicus* brief and its appearance was noted in *People v. Leahy* (1994) 8 Cal.4th 587, 590.

The California Public Defenders Association and CACJ are the predominant presenters of continuing education programs for the criminal defense bar. A number of these programs have dealt with DNA testing, the interpretation of DNA test results, and the presentation of statistical evidence pertinent to the significance (or lack thereof) of any result generated by available DNA testing hardware and techniques.

CACJ has an interest in ensuring that any decision by a California reviewing court that involves scientific evidence set forth scientifically valid and reliable discussions and holdings. CACJ's concern is that the Court of Appeal misunderstood some of the critical scientific evidence pertinent to the issues in the above-entitled case.

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[1] The undersigned, as Chair of the amicus committee of CACJ, certifies that no party involved in this litigation has tendered any form of compensation, monetary or otherwise, for legal services related to the writing or production of this brief, and additionally certifies that no party to this litigation has contributed any monies, services, or other form of donation to assist in the production of this brief.

C. CACJ'S BRIEF ON THE MERITS

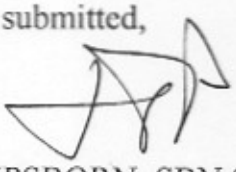
As noted above, CACJ incorporates by reference the July 20, 2006 scientists' letter that is appended to this CACJ letter brief as Exhibit B. Also incorporated here is Edward Ungvarsky's Declaration (Exhibit A) evidencing the fact that the Public Defender Service for the District of Columbia consulted with all 25 scientists who approved the text of the July 20 letter.

CACJ respectfully notes that the Public Defender Service for the District of Columbia (PDS) is uniquely suited to have assisted in the transmission to the Court of information relevant to the issues presented in this case. PDS has become known nationwide for having developed a specialized "unit", staffed by experienced lawyers, charged with litigating scientific evidence issues. Lawyers from PDS include some members of the California Bar, and a number of 'alumni' of that office practice or teach law in California. PDS lawyers and alumni have been involved in the training of capital defenders in the State of California through the annual CACJ/CPDA Death Penalty Seminar held in Monterey, California, as well as through the California Death Penalty College held annually at the University of Santa Clara's School of Law.

It is in part because of the nationwide influence that California's courts have had in the field of criminal law and procedure, that CACJ has worked with PDS to ensure that the scientists' letter appended as Exhibit B is made available to this Court.

CACJ respectfully urges this Court to grant review so that the issues addressed in the scientists' letter (Exhibit B) can be fully and fairly dealt with.

Respectfully submitted,



JOHN PHILIPSBORN, SBN 83944
Chair, CACJ Amicus Curiae Committee

Proof of Service attached

EXHIBIT A

Declaration of Edward J. Ungvarsky,
Special Counsel to the Director of the PDS

DECLARATION

Case Name: People v. Johnson, No. F046939

I, the undersigned, declare as follows:

My name is Edward J. Ungvarsky. I am Special Counsel to the Director of the Public Defender Service for the District of Columbia. I am an attorney and a member of the bars of the District of Columbia, New York, and New Jersey.

I am over the age of 18 years and am not a party to this case. My business address is: 633 Indiana Avenue, N.W., Washington, D.C. 20004. My business telephone number is (202) 628-1200.

I assisted Mr. John Philipsborn of the California Attorneys for Criminal Justice in communicating with scientists who wished to submit a letter to this Court, asking this Court to grant review in People v. Michael Johnson No. S144821 [F046939]. In communicating with the scientists, from 24 of the 25 signers of the letter, I received email confirmations that he had read the letter, that he agreed with its contents, and that he wished to be included as a signer of the letter submitted to the Court. As to the 25th signer, Marc Taylor, the President and Laboratory Director of Technical Associates, Inc., Mr. Taylor advised a colleague at the Public Defender Service, Jason Tulley, Esq., by telephone communication, that Mr. Taylor had read the letter, agreed with its contents, and wished to be included as a signer of the letter submitted to the Court.

I declare under penalty of perjury that the foregoing is true and correct.

Signed on July 21, 2006, at Washington, D.C.

EDWARD J. UNGVARSKY

EXHIBIT B

Letter to the Honorable Frederick K. Ohlrich
signed by 25 scientists

July 20, 2006

Frederick K. Ohlrich, Clerk
California Supreme Court
350 McAllister Street
San Francisco, CA. 94102

Re: People v. Michael Johnson No. S144821 [F046939]

Dear Mr. Ohlrich:

We are twenty-five scientists and scholars very familiar with the issues that arise with the use of DNA evidence in the courtroom. Our attention was drawn to this appeal because of the lower court's apparent misunderstanding of the role that science can and should play in illuminating scientific questions extant in legal cases. Cases such as this one where DNA match evidence is presented subsequent to the defendant's being first identified as a suspect through a DNA database search process raise profound and important scientific questions. We encourage the California Supreme Court to grant review in this case to address the lower court's imperfect appreciation of the interplay between law and science and its apparent misunderstanding of the scientific discipline of statistics and the role of the statistician.

As scientists, we are concerned by the increasing dissonance between the legal and scientific communities over the nature and scope of statistics as the field applies to forensic DNA evidence. Recent court decisions[1] have suggested that it is not a scientific matter to determine which statistical methodology most accurately answers the central and oft-presented question in a DNA database match case: "What is the likelihood that a

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[1] *See, e.g., People v. Johnson*, 139 Cal. App.4th 1135, 1154-55 (5th Dist. Cal. 2006); *United States v. Jenkins*, 887 A.2d 1013, 1022, 1023-24 (D.C. 2005).

match found between a known DNA profile and a profile found by a search of a DNA database is merely coincidental." By contrast, we as scientists report to this Court that the scientific community believes *any* answer to the question presented requires statistical expertise and thus falls squarely within the province of scientific knowledge. To ignore the discipline of statistics in determining that likelihood is non-scientific and can allow erroneous and potentially dangerous inferences to be drawn about the statistical meaning of such match evidence.

By way of background, we make clear that we are scholars and scientists, not attorneys. Our professional interest is in the proper understanding of the role that science in general, and statistics in particular, can and should play in legal cases involving forensic DNA evidence. Assuming that criminal trials are a search for the truth, evidence presented before juries should be accurate. Forensic DNA evidence is grounded in statistical expressions that measure the likelihood of coincidence. Statisticians and other professional scientists with an interest in, and knowledge about, statistics and genetics are uniquely empowered to advise how to derive those statistical expressions. Science matters, and court decisions that treat statistical questions such as how to express match evidence in DNA database match cases as purely legal ones are, respectfully, worrying.

We amici are scholars and scientists who, through our professional capacities, have considered and studied how to calculate the chance that a match found between an evidentiary DNA profile and a profile discovered by a search of a DNA database is merely coincidental. We represent a variety of scholarly disciplines concerned about the scientific question presented in this case – *e.g.,* statistics and mathematics, population genetics, molecular biology, and forensic science. Collectively, we have authored

articles in leading scientific journals and law reviews, scientific and legal treatises, and scholarly monographs; additionally, we have made numerous conference presentations on topics related to this letter. Among our group representing the general scientific community, we include academicians and practicing scientists. We have worked with both the prosecution and the defense in criminal cases; indeed, some of us have not participated previously in a criminal case at all. We are objective scientists, writing to express the opinion of the general scientific community. Our interest in this case is not outcome-determinative; rather, our interest is in ensuring that science is properly understood and followed when a criminal case involves the application of science.

The dissonance between the views expressed in recent court decisions and those held by the general scientific community seems to have arisen from two basic misunderstandings. One concerns the fundamental nature of the question as to how to express the significance of a forensic match to a DNA profile first identified through the search of a database. The lower court suggests that the initial search process is irrelevant to how the ultimate match between the evidence sample and the suspect sample is reported and thereby endorses reporting out a random match probability estimate in DNA database search cases. As scientists, we know that the search process *does* influence the likelihood of a coincidental match, and thus find respectful, if frustrating, disagreement with the court on this point. We believe that our critical difference of opinion with the lower court may have arisen because that court, and others that have considered this issue, may have misperceived the scientific discipline of statistics and its relationship to genetics. As members of the scientific community, we would like to explain briefly our views on these two points.

We start with some background about genetics. This Court undoubtedly knows that an individual's forensic DNA profile consists of only a few genetic markers and not the person's entire genome. It is therefore possible for two people to coincidentally have the same forensic DNA profiles even though their complete genomes are distinctly different. Two related persons (*e.g.*, siblings) are more likely to have like DNA profiles than unrelated persons.

With this background in mind, we recognize that in a DNA database search case, as in any other case, different questions could arise in the legal context regarding the significance of a DNA match, depending upon the totality of the evidence in the case; for instance, an additional statistical calculation may be desirable if the defendant has a brother who may or may not be an alternative suspect. As a group of scientists, we do not presume what, in a particular case, is most helpful to jurors in deciding how much to weigh the evidence. We simply assert that the expression of the significance of the match cannot ignore the great wealth of scholarship that addresses the effect of what some call "ascertainment bias" – the effect of the search process itself on measuring the likelihood that a match between an evidentiary DNA profile and a profile found initially by a search of a DNA database is merely coincidental.

The fact that a suspect is first identified by searching a database unquestionably changes the likelihood of the match being coincidental. Scientists differ as to the effect of ascertainment bias – *i.e.*, whether it increases or decreases the likelihood of coincidence and the degree to which it affects the modification of the likelihood of coincidence. But we all agree that the fact that the suspect was first identified in a DNA

database search must be taken into account in reporting out the likelihood that the match simply occurred by chance.

Nor, as in cases like *Johnson* where an individual becomes a suspect solely because of a database search, can retesting of the defendant eliminate or correct for the impact of the database search on the statistical significance of the match between the suspect's and the evidence's profiles. Retesting the same genetic markers simply confirms that there were not laboratory errors or clerical errors in inputting the suspect's profile into the database in the first place. Retesting does not address the fundamental underlying mathematical and statistical issues at play when an individual is first identified as a criminal suspect as the result of a database search process.

Because statisticians have clearly and unequivocally shown that the database search process must be taken into account in expressing the likelihood of coincidence between a suspect and crime scene evidence DNA, such database match cases stand in stark contrast with those cases where the defendant is identified by other means (*e.g.*, eyewitness identification or fingerprint comparison) and the forensic DNA comparison conducted between the crime scene evidence and the suspect is confirmatory in nature. In contrast to the methodology generally used for the typical confirmation case, in a DNA database case, good science requires an alternative methodology – one that factors in the fact that a database search occurred and led to the identification of the suspect – to explain the significance of the DNA match evidence.

We understand from the lower court's decision that this Court is aware that there are different schools of thought about which statistical methods most accurately answer the question of how to measure the likelihood that an individual matches crime scene

DNA evidence when the individual was first identified through a DNA database search. Because those conversations are discussed elsewhere, we will not delve into them here. To be clear, in this letter we are neither endorsing nor disapproving of any particular methodology or statistic to answer the question presented. Although some of us have individually taken positions elsewhere as to the rightness of the NRC I, NRC II, DAB, Bayesian, and other possible methods of answering the question presented, as a consensus group representing the general scientific community we take no position in this letter as to these various approaches. Regardless of which methodology is used to answer the question of measuring coincidence in such case, we seek to make clear that the answer is a *scientific* matter fully and completely within the realm of statisticians, geneticists, and other scientists engaged in the field.

This brings us to the second apparent misunderstanding. Statistics is not the mere inputting of the numbers into established formulae to generate mathematical results. To the contrary, to paraphrase one textbook, statistics is the study of making numerical inferences about puzzling questions. In answering such a specialized question as the chance of a coincidental DNA match through a search of a particular forensic database, scientists draw upon the tools of our fields of learning and scholarship to determine which formulae and methods should be used to give the most accurate estimate. Statistical applications like this are not the rote mathematics of plugging numbers into a calculator and coming up with figures. Choosing the most accurate methodology of analysis requires training and familiarity with genetic statistics that, with respect, courts and laypersons lack. We and our colleagues spend our professional lives considering such questions, and it is troubling at best to observe courts such as the lower court here

discount and reject our knowledge and experience. The courts should embrace scientific knowledge, not sidestep it.

By this letter, we only seek to clarify the consensus view of the scientific community that, whatever the answer to the question presented may be, it requires scientific expertise to determine which mathematical methodology most accurately responds to the question "what is the likelihood that a match found between a known DNA profile and a profile found by a search of a DNA database is merely coincidental." This Court has the unique opportunity to define properly the scope and nature of statistics as it applies to forensic DNA database searches in the State of California and, by this Court's influence on other courts in the country, to affect the treatment of these questions nationwide. However this Court may ultimately rule about which statistic and statistical methodology is best for use in the present case given all the legal considerations, we ask this Court to be clear that the determination of the appropriate match statistic is an essentially scientific question as to which statistical methodology *most accurately* determines the likelihood of a coincidental match between a known DNA profile and a profile found by a search of a DNA database.

We thank the Court for considering our letter. Below please find a list of our names and, for identification purposes, affiliations.

Respectfully Submitted,

/s/

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PROOF OF SERVICE

I, Steven Gray, declare:

That I am over the age of 18, employed in the County of San Francisco, California, and not a party to the within action; my business address is 507 Polk Street, Suite 250, San Francisco, California 94102. On today's date, I served the within document entitled:

LETTER BRIEF OF CALIFORNIA ATTORNEYS FOR CRIMINAL JUSTICE IN SUPPORT OF PETITION FOR REVIEW (RULE 28(g), CALIFORNIA RULES OF COURT), FILED BY PETITIONER MICHAEL JOHNSON IN THE ABOVE-ENTITLED CASE (exhibits attached)

(X) By placing a true copy thereof enclosed in a sealed envelope with postage thereon fully prepaid, in the United States Mail at San Francisco, California, addressed as set forth below;

( ) By electronically transmitting a true copy thereof;

( ) By having a messenger personally deliver a true copy thereof to the person and/or office of the person at the address set forth below.

( ) By delivering a true copy thereof to "Federal Express" to be delivered to the person at the address set forth below.

( ) By serving a true copy by facsimile to the person and/or office of the person at the address set forth below

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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 24th day of July, 2006, at San Francisco, CA.

Signed: _____
Steven Gray