

# FAMILIAL DNA DATABASE SEARCHING

BY FITZHUGH CANTRELL

Recent advances in DNA technology are evolving so rapidly that some have surpassed current state and national criminal laboratory policies. None of these advances in DNA technology is more controversial than familial DNA database searching. The traditional DNA database search involves identifying an exact match between a crime scene DNA profile and a criminal database suspect profile. Familial DNA database searches occur following a failed exact match search and involve changing the parameters of the search to include partial or close DNA matches between the crime scene profile and the criminal databases. Once a close match is identified, a criminal investigation focuses on the relatives of the near DNA match, attempting to determine if they are responsible for the crime. This investigative practice has been embraced by police services in Great Britain and enthusiastically supported by a handful of prosecutors in the U.S. However, the practice has been criticized by many in the legal and academic communities due to privacy rights issues. To further complicate this practice, there still remains an issue as to what exactly constitutes familial DNA database searching.

There is an important distinction between familial DNA database searching and partial DNA matches. A partial DNA match is an *unintended* match during a normal initial criminal database search. A familial DNA database search involves a *deliberate* follow-up search for similar matches usually following an initial search that failed to



identify an exact match from the criminal database. This distinction between the two searches is particularly important when the suspect profile is deteriorated and contains less than the full identifying DNA markers. Assessing a partial match practice can be particularly difficult when the case involves a deteriorated DNA sample, one with less than the normal 26 alleles, something that is not uncommon in crime scene DNA, particularly cold cases.<sup>1</sup> In comparing familial searching and partial match practices, one finds that legal professionals are equally divided on the practice, both stating that if you allow one practice, it is hard to disallow the other. From a legal standpoint, it is hard to separate the two practices.

An important aspect of the problem involving familial DNA searches is the lack of a national standard involving its practice in the U.S. State policies vary on allowing its practice within their state criminal database systems. At the nation-

al level, the FBI's Combined DNA Index System prohibits these types of searches. The FBI CODIS has recently made some concessions in their policy to allow states to share this type of information if they choose. The FBI's policy leaves it up to the individual states to decide whether to allow familial DNA database searching, and has critics on both sides of the issue. Many consider this policy a failure to take a position on the practice, which has resulted in various state policies on the practice.<sup>2</sup>

## FAMILIAL SEARCHING POLICY INCOHERENCE

Initially, familial searching was limited to individual state practices as well as the CODIS inter-state regulations. This rule prohibited the release of any identifying information about an offender in one state's database to officials in another state unless the offender's DNA was an exact match. In 2006, however, Denver

1) Harmon, Rockne. Forensic/Cold Case Consultant. Former district attorney. Personal interview. March 12, 2010.

2) Ram, Natalie. Greenwall Fellow in Bioethics and Health Policy at John Hopkins and Georgetown Universities. Personal interview. January 20, 2010.

District Attorney Mitch Morrissey identified a local case where a close match was found between evidence taken from the scene of a rape in Denver and with convicted felons in California, Oregon, and Arizona. This match indicated that the actual perpetrator was potentially a relative of one of the unidentified convicted felons. DA Morrissey approached the FBI and convinced them to modify their stance regarding familial DNA searching. Follow-up testing by the states revealed that none of the profiles in the state databases were related to the Colorado rapist. Regardless of the lack of success, the new FBI interim policy left it up to each state to decide whether it would report to intra-state investigators any partial matches that might turn up in the course of ordinary database searches.<sup>3</sup>

Since the FBI released its interim policy, states have taken a number of approaches to the issue. California was the first to set up a comprehensive familial searching policy. Maryland is the only state with state legislation on familial searching, and it bans the practice. This variance is further complicated when you examine different state DNA database collection and use standards. Kentucky collects DNA samples from persons found guilty of misdemeanors while at the same time restricting DNA appeal testing for inmates serving life sentences. Other states collect DNA samples from only convicted felons. Despite the broad spectrum of state policies on DNA, many states have not taken an “official stance” on familial DNA database searching. Nonetheless, there are trends of state familial DNA database searching policy and statute expansion. Of the 32 states with some policy or practice already in place, at least 16 permit the reporting of a partial DNA match to criminal investigators for the purpose of familial

investigation.<sup>4</sup> The practice is still very premature in states like California which has had the policy since 2008. Initial reports were that California has attempted familial searching six times and have yet to identify a partial match until a recent break came in July 2010.<sup>5</sup> In the break, the LAPD arrested the “Grim Sleeper” serial killer, Lonnie David Franklin, who the police have charged with 10 counts of murder. This arrest was California’s first successful attempt in familial DNA searching.<sup>6</sup>

### POLICY ALTERNATIVES

The three main policy alternatives for the FBI CODIS laboratory regarding familial DNA searching are: (1) the FBI should discourage familial searching within states by denying national funding to those states that allow its practice; (2) the FBI should encourage familial searching both within states and nationally by requiring states to perform familial searches or risk being denied federal funds; or (3) the FBI should maintain the interim policy which allows states to set their own policy regarding familial searching and does not conduct national

familial searches using CODIS. The criteria used to properly evaluate these alternatives are: the legal and privacy rights issues surrounding familial DNA searching, the effectiveness of familial searching, and the impact familial searching will have on public safety.

### PRIVACY RIGHTS AND FAMILIAL SEARCHING

Privacy advocates argue that “developing technology, rather than constitutional analysis and informed public decision making, is driving the expansion of DNA databanks.”<sup>7</sup> The Supreme Court has repeatedly held that authorities may not conduct searches for general law enforcement purposes without probable cause. Maryland is one of the few states that has outlawed familial DNA searching. Critics are also disturbed by the demographics of DNA databases. Some consider the existing criminal databases as already racially skewed and further developing familial DNA leads from these databases would exacerbate the problem.<sup>8</sup>

Despite the vocal concern by privacy and defense advocates, legal scholars recognize that making a Fourth Amendment claim about familial DNA searching is difficult. DA Morrissey argues that since individuals in the database have already been arrested or convicted of a crime, they have a reduced expectation of privacy. Additionally, DA Morrissey argues that the alleged suspect who



4) Ram, Natalie. “DNA Confidential.” *Science Progress*. November 2, 2009.

5) *Supra* note 1.

6) Simon, Mallory. “Arrest made in Los Angeles Grim Sleeper serial killer case.” *CNN.com*; <http://www.cnn.com/2010/CRIME/07/07/grim-sleeper.arrest/index.html?iref=51>. July 7, 2010.

7) Simoncelli, Tania, and Sheldon Krinsky. “A New Era of DNA Collection: At What Cost to Civil Liberties?” *American Constitution Society for Law and Policy*. 2007.

8) Nakashima, Ellen. “From DNA of Family, a Tool to Make Arrests.” *Washington Post*. April 21, 2008.

3) Rosen, Jeffrey. “Genetic Surveillance for All.” *Slate Magazine*. March 17, 2009.

<b>Alternatives</b>	<b>Costs*</b>	<b>Legal Feasibility</b>	<b>Safety Impact</b>	<b>Political Feasibility</b>	<b>Total</b>
<b>Encourage State Familial Searches</b>	3	2	2.5	2	9.5
<b>States Decide Independently</b>	2.5	4	1.5	3	11
<b>Discourage State Familial Searches</b>	4	1.5	0	1.5	7

Chart: Scale 0-4 (0 - none, 1 - little, 2 - moderate, 3 - significant, 4 - high)

\*Costs meaning affordability.

left his DNA at the crime scene gave up his expectation to privacy when he left his DNA sample there. The last legal argument favoring familial searching simply states a suspect identified from a familial search cannot claim legal standing to challenge the DNA profile search of his sibling, parent, or offspring. This standing issue is a fundamental issue to overcome, even before a challenge can be seriously pursued. The conventional legal wisdom is that familial DNA searching is a close call that legally depends on the specifics involved, but may be a harder challenge for the defense because of the legal standing issue.<sup>9</sup>

### THE EFFECTIVENESS OF FAMILIAL DNA SEARCHING

On page 1315 of Frederick Bieber, et al, Science magazine article "Finding Criminals Through DNA of Their Relatives," writes about the effectiveness of familial DNA searching. Bieber states, "consider a hypothetical state in which the "cold-hit" chance of finding a match between a crime scene and someone in the offender database is 10 percent. For example, if among criminals who are not in the database themselves, five percent of them have a close relative (parent/child or sibling) who is. Based on these

projections, the estimates indicate that up to 80 percent of those five percent could be indirectly identified. It follows that kinship analyses could increase a 10 percent cold-hit rate to 14 percent which is an overall increase of 40 percent." Last year there were approximately 20,000 cold hits and it is estimated that familial searching has the potential for thousands more once the practice becomes a standard investigative step.<sup>10</sup> They argue this based on the ineffectiveness of DNA database operations in a study conducted by the University of Nebraska at Omaha by Samuel Walker and Michael Harrington, where only one of eighteen database searches led to the violator responsible. Some law enforcement officials have expressed concern that funding for these DNA database searches and analysis would reduce existing funding from more established law enforcement measures such as following up on traditional investigative leads or placing uniform officers on patrol.<sup>11</sup>

### THE PUBLIC SAFETY IMPACT OF FAMILIAL DNA SEARCHING

It is difficult to state the public safety impact of familial DNA searching since the practice has just started in the United States. Despite the potential impact to public safety, the fundamental question remains: is familial DNA searching

worth the risk to privacy at the national level? Many believe that it isn't, citing studies that state the overwhelming majority (87 percent) of traditional-offender hits occur within the state in which the crime occurred. The costs involved in encouraging all states to perform familial DNA searching are moderately low. Initial start-up costs in implementing a modified version of the existing computer software for the state databases could be significantly reduced if they used or modified the current software that either California or Colorado utilizes.<sup>12</sup> Other costs involve additional comprehensive DNA testing on the seized sample. The real issues underlying familial DNA searching concern the legal and political feasibility of the practice. Legal scholars on both sides of the issue agree that both fortuitous partial DNA matches and familial searching are difficult to distinguish legally, and both practices should be found either unconstitutional or constitutional.<sup>13</sup> The Policy Alternative Chart attempts to rate the likelihood of potential outcomes with a higher number given to that which is most reasonable.

### POLICY ALTERNATIVE CHART AND ANALYSIS OF THE ALTERNATIVES

The Policy Alternative Chart analysis favors keeping the current policy of the FBI CODIS, which allows states to decide whether to conduct familial DNA searches. The fundamental belief is that familial DNA searching is likely premature for making final decisions on the practice at the national level. Also, many believe that states can have different practices on aspects of public safety and privacy rights like familial searching. The practice could be just another potential capability of a state database, something

9) Supra note 1.

10) Supra note 7.

11) Bieber, Frederick, Charles Brenner, and David Lazer. "Finding Criminals Through DNA of their Relatives." Science Magazine, Vol. 312. June 2, 2006.

12) Supra note 1.

13) Supra note 2.

that doesn't necessarily need a national standard given the difficulty involved. Overall, it would be difficult for the FBI CODIS to advocate the practice at the national level citing an expected significant improvement to public safety without additional successes like the "Grim Sleeper" case as well current U.S. state statistics on the practice.

The potential political landmines involving familial DNA searching come from all sides: privacy right groups, groups critical of "big brother" government expansion, African-American political leaders concerned with law enforcement racial profiling, and law and order groups critical of perceived "pro-criminal" legislation if the practice is prohibited. Political ideology of the state appears to be a factor in the practice, but this is not always the case. Despite a greater percentage of traditional "red states" having policy in favor of the familial searching, there are several significant exceptions. California, a traditional blue state, was the first state to formally approve familial searching. Connecticut, New York, Washington, and Oregon also permit partial match searches to be reported. However familial searching is not allowed in historically political "swing states" like Ohio and Michigan.<sup>14</sup>

## THE FUTURE OF FAMILIAL SEARCHING

California Attorney General Jerry Brown decided to resolve the issue of familial searching in California by establishing a state policy on the practice instead of pushing the legislation, which is something many believe is the future of familial searching. California's familial searching policy placed significant safeguards in place, establishing strict criteria which must be presented to the Familial Searching Committee. The FSC is made up of a panel of state certified

subject matter experts in both the legal and scientific fields. Some of the criteria require that cases being presented to the FSC must have all logical investigative leads completed and a full DNA profile identified from a single source profile in a crime scene. A single source profile in a crime scene is usually common in sexual crimes or violent crimes involving only one attacker. The CA familial searching policy states that it can only be used in major violent crimes where there is a serious risk to public safety. Furthermore, the CA policy requires additional comprehensive DNA testing on all suspect samples before the search is conducted. When a familial search identifies a match, the FSC (not the investigator) initiates a background investigation on the candidate to determine whether that candidate can be eliminated by historical facts and relationships or circumstances surrounding being a potential relative of the true perpetrator.<sup>15</sup>

The CA familial searching policy is one of the most advanced pro-familial searching policies and the FBI CODIS should gather a working group of subject matter experts surrounding various legal, scientific, and human rights fields to closely monitor their results. Familial DNA database searching is no doubt an important scientific advancement, but its use by law enforcement should be taken with caution. An incremental state-by-state approach to the practice, despite its many drawbacks, could be an effective test case for determining its national impact on public security as well as privacy rights. ❧

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<sup>14</sup>) Supra note 2.

<sup>15</sup>) Supra note 1.