

Illinois v. Ollins et al.

Review Report
Dated January 9, 2001
FSA File No. 00-675

and

Trial Testimony of Pamela Fish
in

Illinois v. Omar Sanders
Illinois v. Calvin Ollins
and
Larry Ollins

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See How the FBI
Crime Scene Pofilers Claimed to
Have Solved the [REDACTED]
Rape/Murder and Help Frame
Sanders & the Ollins Cousins



Dear Jodie: Don't they make a darling couple? Nancy is downright sexy. One day you and I will occupy the White House and the peasants will drool with envy. Until then, please do your best to remain a virgin. You are a virgin, aren't you?
[signed] John Hinckley

He hadn't sent the postcard, but he had written it. Another item seized was a letter to Foster that said he was going out to shoot Reagan and knew he might not return, but that he wanted her to know he had done this deed for her. (This letter, among other items, was evidence of a premeditated attack against Reagan and of the fact that he knew what he was doing was legally wrong.) There were diaries and comments in the margins of papers; one read, "Everything whirls / and still the young girls / laugh and mock my name." There was an annotated copy of the script of *Taxi Driver*, the film about an assassin in which Jodie Foster had starred. All of this material fit quite well with my snap evaluation of John Hinckley as a loner who was unsuccessful with women and who lived in a fantasy world.

One thing we in law enforcement are never able to forget is that murder is a horrific crime that scars the family, friends, and associates of the victim. This bedrock belief was all the more reason for me to feel the necessity of doing what I could to help when a call came from Dr. James Cavanaugh in Chicago. Years earlier, I had enlisted Dr. Cavanaugh as an adviser to my Criminal Personality Research Project. He was medical director of the Isaac Ray Center of Rush-Presbyterian St. Luke's Medical Center in Chicago, which deals in forensic psychiatric issues. One of Cavanaugh's medical students, a young woman named Lori Roscetti, had been found murdered at the side of some railroad tracks not far from the medical center. Roscetti had been a bright, gentle, straight-A student who had just finished a campaign to reinstate a campus escort service for women, which had been dropped as a result of a budget crunch. Her efforts had failed. Lori was liked by every-

one at the center, and the staff and Cavanaugh were quite upset by her death.

The formal request for my presence was initiated by Tom Cronin, a Chicago police officer who had been a police fellow at the FBI Academy and a student of mine. Tom sent me a batch of materials. He facetiously noted that a reward for information leading to the arrest of the murderer had already reached \$45,000, of which half would be mine if we did a good profile. (In the middle of serious business, law-enforcement people often try to maintain a level head by making jokes; we are, of course, precluded from seeking or accepting monetary rewards.)

From the materials, I learned that the young student had been studying in a room with several others until about 1:30 A.M. on a Saturday in October. She and a male student had gone down to the garage to get her car, carrying books and bags, and she had then driven the male student up to another level of the garage, where he got out of the car and slammed the door. She must have assumed the door was locked, since that male student and others had told the police that Lori was always quite conscientious about such matters; the medical center was in a bad neighborhood at the edge of the University of Illinois Circle campus, and she was always cautious about traveling to and from the area.

At five-thirty that same morning, her body and her car were found next to a railroad trestle adjoining an impoverished black community and not more than half a mile from the hospital. The medical examiner's report showed that she had been badly beaten about the face, that there were considerable trauma injuries to her midsection, and that she had been repeatedly sexually assaulted. It seemed that her car had actually been driven over her body. The doors and trunk of the car were open, and her empty wallet was found on the scene.

The police had no suspects but were interested in a young man who had been a platonic friend of the victim's. He had sought a closer relationship with her and had been spurned, but he had been unexpectedly in town on Friday night and on the morning of the murder. They were also looking into her

relationships at the medical center—focusing, for instance, on a janitor who had access to the garage—as well as canvassing in the area where she lived. They were attempting to trace people who drove trucks near the railroad tracks and a nearby viaduct—in short, going out in all directions.

In terms of profiling, the case was easy, and after viewing aerial photos of the crime-scene area, the medical examiner's report, and all the other documents, I gave an oral profile to Tom Cronin at his home.

My guess was based on what I thought was likely to have happened after Roscetti had left the garage. She had probably stopped at a light in this run-down district, and some people had come up to her, blocked the car, and one had pulled a door, which happened to be open, even though she had thought it was locked. These people then forced her to drive to the somewhat isolated location, where they had raped, killed, and robbed her.

To my mind, this had been an opportunistic crime; the attempt to rob had been the primary motivator, and the sexual assault was secondary. The murder had probably been committed to prevent the victim from identifying her attackers, and it reflected the psychopathic nature of the group of attackers. The presence of a good deal of seminal fluid made it likely that there had been more than one killer. It had all the hallmarks of a gang event. I told the police to look for a group of black youths, somewhere between three and six males, ranging in age from fifteen to twenty, who would previously have been in jail, and who lived close by the scene of the abduction and the railroad trestle where Roscetti had been killed. In white middle-class neighborhoods, kids tend to hang out in single-age groups—all fifteen-year-olds, for example, or all eighteen-year-olds—but in black neighborhoods, there is often a mixture of ages, with young ones accompanying older ones. This murder took place well before the rape of the jogger in Central Park by a bunch of kids who had gone "wilding"; if I had known the term *wilding* then, I would have used it to describe what I thought had happened in the murder of Lori Roscetti. The anal assault convinced me that at least some of the gang

members had already been incarcerated, because such assaults are common in prisons.

Was this an obvious profile? Yes and no. As I indicated earlier, the police were intensely investigating people linked personally to Roscetti, and continuing on that path would have taken them further and further astray. The profile allowed the police to refocus the investigation, and thereby sped up the case. Armed with the profile—and the lure of reward money for information—police put the word out on the streets of the black neighborhoods adjoining the crime sites that they were looking for young black men who had bragged of taking money from a woman medical student, or of doing anything else associated with Roscetti's murder. The community rather readily came up with a number of nicknames—Shim-Sham was one—that were tracked down, and youngsters were hauled in for questioning. The youngest of the four suspects was fourteen; interrogated, he admitted to the crime, as did two other perpetrators, aged seventeen and sixteen. Between them, these latter two already had more than two dozen arrests and convictions for previous offenses, and both had served time in youth reformatories. A fourth youth was still being sought when the whole story emerged. After a night out, the foursome had run out of money and were looking for a car to rob. They waited about fifteen minutes until they saw a car with a lone white female stopped at a light. Two had stood in front of the car, betting that the driver wouldn't run them over, while another tried the doors. Finding a door open, he climbed into it and opened the other doors for his companions. After that, the foursome had driven Roscetti to the trestle site, where they stabbed her with a sharpened stick she had kept in the car for protection, and had put her over the hood of the car and raped her before beating her into unconsciousness. When she stirred again, they smashed in her head with a piece of concrete wrapped in a plastic bag, and ran her car over her body. Then the attackers had walked to the Abba projects where three of them lived and where the fourth used to reside.

The fourth suspect, eighteen, eventually surrendered in the custody of a local television newsman who was known for such

assistance. Later, several of the suspects tried to recant their early confessions and claimed these had been coerced by the police. The jury evidently didn't believe the recantations, and all four were convicted. Three were sent to prison, and the youngest to a youth facility. The escort system Lori had fought for was reinstated. Neither the convictions nor the beefed-up security brought Lori Roscetti back, of course, but the law's vengeance and the future protection of other potential victims were the only solace available to the community, to Lori's family and friends, and to Dr. Cavanaugh and the staff of the medical center.

Many of the cases that the FBI profiles have to do with offenders who have already been caught but whose crimes are so unusual that the local authorities seek guidance on how to proceed. One morning during Thanksgiving week of November 1985, a teenage girl, nude, handcuffs on hands and feet, and quite weak from loss of blood, crawled along a road near Malabar, Florida, seeking help. Several trucks passed her by, but then a motorist stopped.

"You're not going to take me back to that house, are you?" the terrified girl asked.

The motorist responded that he would help her, and got her into the car. She asked him to "remember that house," which she pointed out to him, a few doors away, a place with a well-kept lawn, many trees, a swimming pool and patio. The motorist took her home and called the police and an ambulance. At the hospital, it was determined that she had lost between 40 and 45 percent of her blood and that there were ligature marks on her neck as well as on her hands and ankles.

As she recovered, the nineteen-year-old told the police that one day earlier she had been hitchhiking in Brevard County on her way to a friend's home and had been picked up by a man wearing a sport coat and a tie. He offered to take her most of the way but said he had to stop at his home and pick something up. At the house, he asked the hitchhiker to come inside. When she said no, he went around to the back of the car, got in behind her, and threw a nylon rope around her and choked her into unconsciousness.

The hitchhiker awoke to find that she was tied to a kitchen countertop, arms and legs immobilized. A video camera had been set up, along with lights. The man raped her and videotaped the action. Then he inserted needles into her arm and wrist and carefully extracted blood and began to drink it, telling her that he was a vampire. After that, he handcuffed her and put her in the bathtub, returning later for another round of sexual assault and blood extraction. The next morning, after a third round, the man handcuffed the hitchhiker and left her in the bathroom, saying that he would be back later for further assaults, and that if she tried to escape in the interim, his brother would come and kill her. It was after the attacker had left the house that she was able to push out the bathroom window and crawl to the road. Had she not escaped then, doctors believed, she might well have died from a further round of blood extraction.

The house that she described to the police belonged to John Brennan Crutchley, thirty-nine, a computer engineer for the Harris Corporation, a NASA contractor. He was married and had one child; both his wife and child were in Maryland, visiting her family for the holidays. A search warrant was obtained and served on Crutchley's home at two-thirty the next morning. During this serving, Crutchley was arrested, some obvious items of interest were seized, and photographs were taken of the residence. The hitchhiker initially did not want to file charges against Crutchley, but she was convinced to do so by a rape counselor, on the grounds that convicting Crutchley would prevent him from assaulting other women. The victim took and passed a lie-detector test about the rapes, and Crutchley was charged with sexual battery, kidnapping, and aggravated battery of the hitchhiker, as well as possession of marijuana and of drug paraphernalia.

The well-meaning police search had seized some of the obvious items, such as the video camera, the hook in the ceiling where the hitchhiker had been tied, the marijuana, and some of the other paraphernalia of the assaults, but they had not been in time to prevent the erasure of the sections of videotape. According to the victim, this video would have contained the record of the assault on the hitchhiker. After the search, it was

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Re: Wardell and Reynolds v. Pamela Fish and the City of Chicago
Court No. 98 C 8002 and 99 C 1856
Our File No. 00-675

Review of the Testimony of Pamela Fish

Dear Ms. Zellner:

We have completed a review of court transcripts and supporting documents in several cases in which there was significant analytical work and expert testimony by Pamela Fish during her tenure as a criminalist in the Chicago, Illinois Police Department Crime Laboratory. In many of these cases, Ms. Fish misrepresents the scientific significance of her findings either directly or by omission. The nature of these errors are such that a reasonable investigator, attorney, or fact finder would be misled concerning the ability of her work to either include or exclude relevant individuals as potential sources of biological evidence. A synopsis of each reviewed case is described below.

Illinois v. Willis

In *Illinois v. Willis*, Fish conducted an ABO typing analysis on an essentially neat semen stain from a toilet paper wrapper. In her laboratory

report concerning this analysis, Fish characterized the analysis of the semen evidence as "inconclusive". In fact, her findings revealed that the semen source was most likely an A secretor based on the analysis of two semen stained areas from the toilet wrapper. Willis was determined to be a B secretor. Fish did not conduct an ABO typing analysis on the victim's [Karen Eady] blood or saliva. At trial Fish claimed that her ABO analysis of the semen stains from the toilet paper wrapper were inconclusive because of erroneous results from unstained portions of the toilet paper wrapper. Her notes of this analysis do not support this contention; nor is there any indication that she attempted to repeat her analysis in light of the fact that she had discovered an ABO blood type [A] that could not have been contributed by Willis.

Willis was ultimately exonerated by a DNA analysis that simultaneously inculpated convicted rapist Dennis McGruder.

Illinois v. Larry Ollins, Calvin Ollins, and Omar Saunders

In the case of *Ollins et al.*, Larry Ollins, Calvin Ollins, and Omar Saunders were separately tried and convicted of the rape and murder of [REDACTED]. [REDACTED] was killed during an alleged takeover of her vehicle. Marcellius Bradford, an alleged co-conspirator in this crime, testified that he, Larry Ollins, Calvin Ollins, and Saunders were present when Larry and Calvin raped [REDACTED].

As is revealed in her laboratory reports dated October 30, 1986 and October 20, 1987, Fish determined that [REDACTED] was an ABO type O non secretor with PGM type 2-1+ [2 minus and 1+]. Fish found semen to be present on the [REDACTED] vaginal swab. Her examination of the vaginal swab revealed the ABO H blood group substance which must originate from an O secretor [assuming a correct ABO testing process]. She also found a PGM typing mixture containing PGM alleles 2-, 1+, and 1-. Since the victim, [REDACTED] is a non secretor, the H ABO blood group substance must originate from an ABO type O secretor semen source. The only PGM trait which could not originate from [REDACTED] is the PGM allele 1-. From this analysis Fish's

findings are compatible with a single semen source who is an ABO type O secretor with PGM type 1-1- or 1+1- or 2-1-.

Fish determined that Larry Ollins was a non secretor with PGM type 1+1-. She determined that Calvin Ollins was a non secretor with PGM type 1+1+. She determined that Omar Saunders was a non secretor with PGM type 2+2+. She also determined that Marcellius Bradford was a non secretor with PGM type 2-1+. None of these individuals could account for the finding of the H antigen from the semen bearing [REDACTED] vaginal swab. Furthermore, the only individual who possesses a PGM allele that must be from the semen source is Larry Ollins whose PGM type is 1+1-; however Larry Ollins could not be the source of the semen because as a non secretor he could not produce the H ABO blood group substance. Therefore, in order to account for Fish's findings another unknown male must be responsible for at least some of the semen found on the [REDACTED] vaginal swab. In her laboratory reports and in her trial testimony Fish failed to state that her findings eliminated Larry and Calvin Ollins, Sanders, and Bradford unless there was another semen source who was an ABO type O secretor.

Fish Testimony in the Trial of Larry Ollins

On direct examination in the trial of Larry Ollins, Fish testified she generally cannot, and in this case was unable to, determine whether or not there was more than one semen donor. [TT639, ln 11-21] However, when she was asked what she determined about the vaginal swab results compared to Larry Ollins and Calvin Ollins she responded merely that "the PGM results were consistent with the types, PGM type I got on the vaginal swab" [TT640, ln 2-7]. This response completely ignored the ABO test findings from the vaginal swab that are not compatible with Larry and Calvin Ollins. This testimony also failed to consider the normally expected PGM contribution from [REDACTED] herself.

On cross examination, Fish revealed the presence of H blood group substance on the vaginal swab from a secretor semen donor, and she admitted that Larry Ollins could not be the source of this genetic trait. Then defense counsel asked the following:

Q. It is entirely consistent with all your testing that someone other than Larry Ollins, without Larry Ollins, deposited semen in Lori Roscetti is it not?

A. No sir it is not. [TT 654-655]

The only possible response was "Yes." An O secretor individual must be the source of the H blood group substance and a single semen source, or any number of persons other than Larry Ollins in combination with an O secretor could account for the results Fish generated from her testing. The response by Fish asserts a definitive association of Larry Ollins to the [REDACTED] vaginal swab, which is not possible.

On redirect there was the following exchange:

Q. Counsel one time referred to the fact that the semen had to be deposited by someone other than Larry Ollins, but in fact the semen had to be deposited by Larry Ollins plus at least one other person, is that correct?" [emphasis added]

A. That's correct. [TT 665 - 666]

When it was clear that Larry Ollins was eliminated as a potential semen source under the prosecution's theory of this case, Fish's representation of her data in this fashion can be viewed only as scientific fraud. Even if Fish's findings were different from her actual findings such that they reflected semen from a non secretor with Larry Ollins's PGM type of 1+1-, it is scientifically insupportable to claim that Larry Ollins is the only person who could produce semen with these genetic characteristics.

Fish Testimony in the Trial of Calvin Ollins

In the Calvin Ollins trial Fish testified on direct examination that "the PGM type of Calvin Ollins was consistent with the PGM type that I received on that vaginal swab" [TT 1429]. When asked by the prosecutor "And what conclusion did you come to with regard to the semen that you found on the

vaginal swab and Calvin Ollins?" Fish responded, "I came to the conclusion that the semen present on that vaginal swab could have come from Calvin Ollins" [TT 1429].

Calvin Ollins is neither a secretor nor does he possess the requisite PGM 1- allele to account for Fish's findings. Neither he nor Larry nor Omar Saunders in any combination of these individuals can account for Fish's findings from the vaginal swab. As in Larry Ollins's trial, the fact that at least some of the semen must originate from a secretor was completely avoided on direct examination. It was also ignored that the PGM allele 1+ that Fish attributed to Calvin Ollins in her testimony could have simply originated from the female victim herself.

As for the presence of semen from more than one source, the prosecutor asked Fish if it was possible to determine whether one was dealing with one or more semen sources in a stain, to which Fish replied "No, sir, you cannot" [T1426]. This is false testimony. It was and is, in fact, possible to make such a determination. Whether or not more than one semen source can be determined depends on the test results. A PGM test result that reveals three PGM alleles which could not originate from a female victim demonstrates the presence of at least two semen sources.

On cross examination, Fish testified that she could not reach a conclusion as to whether the semen donor on the vaginal swab was a secretor or not [TT 1434 - 1435]. In light of her testimony in Larry Ollins' trial, this testimony is false. Later, Fish again denied that she was even capable of determining whether or not seminal fluid originates from a secretor or non secretor [TT 1437]. This too was false testimony. When Fish was forced to admit there was semen from a secretor on the [REDACTED] vaginal swab, that she knew could not have been deposited by any of the four defendants, she cast doubt on this finding by undermining the forensic utility and reliability of this genetic trait [secretor status]. The fact that she relied on the secretor system as a reliable genetic trait will be revealed in *Wright, Adams, and Wardell* below.

Fish Testimony in the Trial of Omar Saunders

Like her direct testimony in the trials of the Ollins brothers, in her direct testimony in the Saunders trial there was no mention of the ABO testing that revealed semen from an O secretor on the vaginal swab. There was no testimony that the PGM 2- and 1+ traits could all have originated from the victim, nor did Fish reveal that all four male suspects were determined by her to be ABO non secretors who could not produce the H antigen she detected from victim's vaginal swab.

The prosecutor again invoked the potential for a mixture of semen from two males by the phrasing of his questions to Fish. Fish responded "the markers I obtained on the swab were consistent with the PGM markers from Calvin Ollins and Larry Ollins" and that she "can conclude that it is possible that Calvin Ollins' and Larry Ollins' semen may be present on that vaginal swab" [TT 117 -118]. These statements misrepresented what Fish already knew about the H blood group substance from the vaginal swab because neither Larry nor Calvin Ollins could have contributed the ABO H antigen. This testimony also misrepresented what the vaginal swab PGM results were capable of proving -- that only the PGM 1- trait was foreign to the female and, therefore, attributable to the semen source or sources.

Fish "excluded positively" Omar Saunders as possibly contributing semen to the [REDACTED] vaginal swab, then included Bradford "as an individual who could have contributed his genetic markers" and Larry Ollins was "also included in the group of people who contributed to the genetic markers on that vaginal swab" and Calvin Ollins was included "in a group of people that could have been the donor of that semen" [TT 127]. Here Fish lumped three of the four defendants together as possible contributors to the [REDACTED] vaginal swab knowing full well there was no way any of them alone or in any combination could account for her findings. Even though Fish correctly eliminated Saunders as a possible source of the genetic traits attributable to the semen on the [REDACTED] vaginal swab, given that the State's theory required the presence of semen from at least two males, even Saunders cannot be eliminated as a potential contributor to the vaginal swab specimen.

Finally, Fish was asked if she did "any further testing of the vaginal swab and the blood workup of the four individuals" to which she responded "There was no further testing for me to do on that vaginal swab so therefore I ended my testing" [TT 130]. This was false testimony in two different ways. First, in the Saunders trial Fish never mentioned during her testimony on either direct or cross examination that she had conducted ABO typing on the victim's vaginal swab and found the H antigen which could not have originated from any of the "four individuals." Nor did she mention that the four individual suspects had been determined to be non secretors.

Secondly, it was a common practice for Fish to conduct peptidase A typing on sexual assault evidence at the Chicago Police Department Laboratory. This enzyme genetic marker is useful for distinguishing between members of the Black population and is present in semen at high levels. Fish did not conduct such an analysis on the evidence from [REDACTED]

**Illinois v. Wardell; Illinois v. Reynolds
Illinois v. Wright; Illinois v. Adams
Illinois v. Torry**

In *Wardell*, *Reynolds*, *Wright*, *Adams*, and *Torry* Fish attempted to develop genetic information from semen alleged to be present on vaginal swabs collected from the complaining victims in each case. Just as in *Ollins et al*, only the detected genetic traits that are foreign to the female victim provide information about potential semen sources¹. In each of these cases, Fish misrepresented or erred in drawing conclusions relevant to potential semen sources. Some of these cases yielded identical data, yet Fish offered different opinions -- and always she offered the opinion most damaging to the defendant. In each of these cases, Fish relied heavily on the secretor trait that she attempted to undermine or ignored in the *Ollins et al* case.

¹ The only exception to this restriction in interpreting results from commingled body fluids such as vaginal fluid and semen occurs when there is a quantitative showing of the presence of semen at a concentration (ca 1:100 or greater) from which one would expect to be able to detect genetic traits from a secretor semen source. Absent such a showing, no genetic information in regard to the semen source can be inferred from data that is entirely compatible with the female.

In *Wardell and Reynolds, Wright, and Adams* all of the genetic data developed as a result of Fish's testing was compatible with the female victim. Thus, no information concerning potential semen sources was obtained by her analysis. Therefore no male in the population could be eliminated as a possible semen source. Yet in each of these cases, Fish inappropriately narrowed the population of potential semen sources to a subset of the population that always included a defendant.

The Reynolds & Wardell Case

In *Reynolds & Wardell*, Fish detected A and H blood group substances from the vaginal swab preparation. The source of the swab, Jeannie Coscia, was determined to be an A secretor, which means her vaginal fluid can account for all of Fish's findings from the vaginal swab preparation. Thus, no information concerning potential semen sources was obtained and none of the population could be eliminated as a possible semen source.

Fish testified that the vaginal swab contained a contribution from an A individual and an O individual [TT 872] and used this data to erroneously eliminate Billy Wardell, a B secretor, as a possible semen source and to include Donald Reynolds, an O secretor, "in 'the group' that could have deposited semen on that swab" [TT 875].

Even if Fish could have narrowed the population somehow, she failed to give this narrowing any meaning by not defining the subset of potential semen sources or their frequency of occurrence in the population. For example, Fish eliminated Wardell as a potential semen source apparently because she failed to detect the ABO B blood group substance and she had determined that Wardell was an ABO type B secretor. This conclusion is only correct if she also demonstrated that the semen concentration in her typing extract was sufficiently high that she would always detect the ABO antigens from a secretor. This quantitative assessment, however, was not a practice employed by Fish. Even assuming that the semen concentrations were sufficiently great, the semen source could be from an ABO non secretor [20%],

ABO type A secretor [32%], or ABO type O secretor [36%]². Thus, 88% of the population are potential semen sources based on the Fish analysis. Fish failed to provide this information in her testimony.

On cross examination defense counsel elicited from Fish a frequency for type O in the general population, this "group" was never clearly statistically defined, which was essential to understanding the significance of Fish's findings [TT 876]. Fish could not be referring to the general population as 'the group' because of the elimination of a group of people that included Wardell.

Both Wardell and Reynolds were subsequently eliminated as potential semen sources in this case through post-conviction DNA analysis.

The Adams Case

In *Adams*, Fish was confronted with the exact same set of data as in the Wardell case. In *Adams*, Fish detected A and H blood group substances from the [REDACTED] vaginal swab. She also determined that the female victim was an ABO type A secretor. Since nothing foreign to the victim was detected in the [REDACTED] vaginal swabs, the semen source could be a non secretor or a secretor of any ABO type. Thus, no one could be eliminated as a potential semen source based on the Fish analysis.

Fish determined that Eddie Adams was an ABO non secretor. Fish then inappropriately eliminated all of the population as potential semen sources except for non secretors, and she testified that only 20% of the population (rather than 100%) are potential semen sources. In Wardell, Fish included secretors (Reynolds was an O secretor) using the exact same test results as in *Adams*. These two cases clearly illustrate a pattern of misrepresentation in Fish's casework.

² This ABO frequency data is for the Caucasian population. The frequency data for the Black population is ABO non secretors [20%], ABO A secretors [19%], ABO O secretors [40%]. The total for the Black population is 79%.

Even the Court understood that Fish had found nothing attributable to the semen on the Finner vaginal swab, as is revealed by the following exchange between the judge and Fish [TT 273 lines 2-20]:

Q: So, the reason that you are saying that the semen that was found is consistent with that of the Defendant is because what you found was you did not find anything really, right?

A. Well, what I found was the semen could not have come from a B secretor because then on the vaginal swab, I would have picked up A (sic) and H. It could not have come from an AB secretor. I would have picked up that B.

Q. How about from an A non secretor or B non secretor, or O non secretor or AB non secretor?

A. That's correct, all of them.

Q. What would be the percentage of any of that whole group of non secretors?

A. Twenty percent of the population are non secretors.

Q. So, what we are talking about it is consistent with twenty percent of the population?

A. Correct.

Rather than telling the Court in direct response to the Court's question that, in fact, she had found nothing in her analysis that could be attributed to the semen source, Fish went on to claim that because she did not detect the "B" antigen, she could eliminate B secretors and AB secretors. This claim could only be supported if Fish had conducted quantitative estimates of the semen levels in the extracts employed for the ABO typing analyses. There is no indication that such quantitative estimates were made by Fish in this case or in any other case in her laboratory. Thus, Fish could not eliminate A secretors, B secretors, O secretors, or AB secretors.

Even if Fish had conducted quantitative analyses of the semen concentrations in the extracts employed in the ABO analysis and even if those estimates proved that the semen concentration was sufficiently concentrated

such that the ABO antigens from a secretor would always be detected, her findings would only eliminate B and AB secretors as potential semen sources. B and AB secretors constitute only 12% of the Black population; that is, 88% of the Black population, like the defendant, would not be excluded as potential semen sources based on this evidence.

In further response to the court's inquiry, Fish stated that all non secretors are potential semen sources and that non secretors constitute 20% of the population. While this answer is correct with regard to the frequency of non secretors, it misrepresents the full constellation of the population who, like the defendant, would not be eliminated as a semen source based on her analysis. That is, all secretors and all nonsecretors or 100% of the population are potential semen sources based on the Fish analysis.

Fish provided completely different interpretations for the same data set in *Wardell* and *Adams*, and in each case the interpretation was erroneous, misleading, and the most damaging interpretation for the particular defendant.

The Wright Case

In the Wright case, like the cases described above, all of the genetic traits Fish detected in the victim's vaginal swab were genetically compatible with the victim herself. Fish never described her PGM findings from the vaginal swab or from the victim, [REDACTED]. The ABO typing analysis from the [REDACTED] vaginal swab revealed the ABO H antigen; and [REDACTED] was determined to be an ABO type O secretor. Since the H antigen and the PGM typing traits from the [REDACTED] vaginal swab are all genetically compatible with [REDACTED] herself, no genetic information concerning the semen source was developed by the Fish analysis.

Preliminary Hearing Testimony
in Wright

At the preliminary hearing, Fish testified that both [REDACTED] and Paul Wright were determined to be ABO type O secretors [HT 331, ln 15; HT 331 ln 19]. Fish testified that ABO inhibition testing of the Feemster vaginal swab revealed the presence of only H blood group substance [HT 312, ln 21; HT 313 ln 18]. She then testified that 40% of the population could have placed body fluids on the [REDACTED] vaginal swab [HT 314, ln 22 through 315, ln 12, overruled objection omitted, emphasis added]. This testimony misrepresented the significance of Fish's findings because all of the H antigen activity could simply have originated from the victim, herself:

Q. Miss Fish, did you conclude what percentage of the male population could have placed their semen on the swab that you examined from [REDACTED]?

A. I could determine the percentage of the population that could have--the percentage of the Black population, that could have placed body fluids on that swab; I could not determine the percentage of the male population, no.

Q. What percentage of the Black population?

A. Approximately forty percent.

Under cross-examination, Fish admitted that she could not determine whether the H activity she detected was attributable to vaginal fluid or semen on the swab [HT 321, ln 19-24]. Fish also conceded that all non secretors would be included as potential semen donors [HT 322-324]. On re-direct, Fish re-affirmed her findings [HT 329, ln 20-23, emphasis added]:

Q. And, the test of Paul Wright's blood, was that also consistent with the blood typing of the semen on the swab?

A. That is correct.

On re-cross, Fish re-affirmed her testimony that O-secretors, and all non secretors are included as potential semen donors [HT 330, ln 12-19]:

Q. He's not excluded from a large group of the population, isn't that correct?

A. As I testified, approximately forty percent of the population.

Q. That forty percent that you testified to, is that including the A and B non secretors that we talked about?

A. That is correct.

As in *Wardell* and *Adams*, none of the population of potential semen donors can be excluded as a result of Fish's findings in this case. As she admitted, all of the H blood group substance she detected from the vaginal swab extract could be attributable to [REDACTED]. Absent an objective quantitative assessment of the semen concentration on the vaginal swab, only blood group substances foreign to [REDACTED] can provide information about the semen source. This is a fundamental principle in the forensic examination of body fluid evidence. Although Fish opined there was a high level of H blood group substance on the swab [HT 329, ln 14], she had no way of knowing whether that H substance originated from semen or vaginal fluid. Therefore, attribution of some or any of the H substance to the semen was pure speculation.

As we have previously discussed above, an objective quantitative assessment of the semen concentration in the vaginal swab extract would have entailed either a quantitative acid phosphatase assay or P30 titer determination. From this quantitative data an estimate of the semen concentration in the swab extract could have been estimated. This data would then provide a scientific basis for determining whether or not the semen concentrations were sufficiently high that one would be assured of detecting antigens from the semen if the semen originated from a secretor. Absent this information the Fish analysis was simply uninformative concerning the ABO type and secretor status of the semen source; that is, the semen could originate from any male.

Even if one assumes that the semen concentration from the [REDACTED] vaginal swab was adequate, the Fish analysis could only demonstrate that the

semen originates from an O secretor or non secretor. O secretors occur in 40% of the Black population and non secretors occur in 20% of all populations. The total population of non excluded males would then be 60%; not the 40% alleged by Fish.

Fish made similar misrepresentation regarding her data from the electrophoretic analysis results from the [REDACTED] vaginal swab. Fish testified that the enzymes types determined from [REDACTED] and the vaginal swab were all the same type for each of four genetic systems [HT 314, ln 2-8].³ Thus, as with the ABO blood group test results, there was nothing foreign to the female detected in her vaginal swab by the electrophoretic testing. [REDACTED] vaginal fluid could be the source of all of the electrophoretic results. No male can be excluded as a possible semen source based on this analysis. However, in contrast to the ABO test results, Fish refused to admit that [REDACTED] could be the source of all of the electrophoresis results [HT 322, ln 14-20]:

Q. So, if a non-secretor with type A blood was responsible for the semen that you found on the vaginal swab taken from [REDACTED] you would come up with the same results that you came up with when you tested the swab, isn't that correct?

A. For the absorption inhibition, but not necessarily for the enzyme typing.

This was reiterated later [HT 324, ln 24 though HT 325, ln 3]:

Q. So, it is even possible that a type A or type B secretor could have deposited this semen, and still come up with the results that you came up with?

A. For the absorption inhibition test, but not for the enzyme.

When giving her final assessment as to what groups of the population are included as potential semen donors in this case, Fish again included the

³ It is unclear from the Fish testimony exactly what electrophoretic systems she employed and what types she obtained for both [REDACTED] and the [REDACTED] vaginal swab. There are only two electrophoretic systems that are relevant to the analysis of semen evidence. They are PGM and Pep A.

electrophoretic test results as being capable of providing discrimination [HT 329, ln 4-6]:

Q. But, it is A non secretors, B non secretors, and A and B non secretors, and O secretors?

A. Correct, plus the enzymes.

Not only did Fish fail to acknowledge that her electrophoresis typing data could all be attributable to Feemster's vaginal fluid, her response of "not necessarily for the enzyme typing" implied that the electrophoresis data is attributable to semen. Even though Fish's testimony implied that the "electrophoretic data" originated from the semen source, she never defined the "electrophoretic types" she obtained, nor did she provide the genotype frequency data that would normally be employed to limit the population of semen sources if, in fact, the "electrophoretic data" could be attributable to the semen.

Trial Testimony in Wright

The Fish trial testimony in Wright was as misleading as her testimony at the preliminary hearing. She testified on direct as she did at the hearing that [REDACTED] and Wright were determined to be blood type O and secretors, that she detected H blood group substance consistent with type O blood on the vaginal swab, and that the electrophoresis results for the vaginal swab were the same as [REDACTED] and Wright. Again the electrophoretic systems subjected to test were never defined; nor were the types obtained from each test described. However, when assigning statistical significance to her findings, Fish again failed to reveal that she has no information regarding potential semen sources and, therefore, 100% of the male population was included as possible semen donors. At trial both Fish and the prosecutor were careful not to assign population frequency statistics directly to the analytical findings. Instead, the prosecutor asked [TT 848, ln 24 through T849, ln 5]

Q. So, what percentage would be -- of the population would be O secretors?

A. For the black population?

Q. For the black population.

A. Excuse me. Type O secretors would be, approximately, 40 percent, type O secretors.

This misleading testimony left the impression that Fish could determine that the semen source was an O secretor even though she had previously testified that the semen could also originate from non secretors.

On cross-examination in the trial, in direct contrast to her pre-trial testimony, Fish refused to admit that all of the H blood group substance on the [REDACTED] vaginal swab could have originated from the victim [TT 854, ln 7-11]:

Q. So, it is possible that the H activity that you observed on the swab was attributable to the vaginal secretions of Jacqueline Feemster, isn't that correct?

A. Part of it could have been, yes.

Fish did admit that she could not determine whether the H activity was attributable to semen or to vaginal fluid [T855, ln 5-11].

Contrary to her pre-trial testimony, defense counsel was able to get Fish to admit that her 40% figure misrepresented the facts as presented [TT 858, ln 18 through TT 859, ln 1]:

Q. And 60 percent of the male black population, according to the tests that you conducted, the absorption inhibition test, 60 percent of the male black population could -- could be responsible for the semen that you found on that swab, isn't that correct?

A. Sixty percent of the black population, yes.

Fish again falsely included Wright in the group of O secretors and non secretors that comprises 60% of the black population as potential semen

donors when she had no information about the semen source from which to narrow the population of potential donors from 100%.

Even after the judge had stricken Fish's testimony on direct about electrophoresis testing in this case, Fish refused to abandon it [TT 857, ln 7-12]:

Q. If that -- if a type B non-secretor was responsible for the semen on that swab, you would come up with the same results that you testified to today in the absorption inhibition test?

A. For the absorption inhibition test only, yes.

and again [TT 858, ln 12-17]:

Q. Okay. And -- so -- Paul Wright would just be one person in a group of 60 per cent of the male black population based upon your tests, isn't that correct?

A. In the black population, based only on the absorption inhibition tests only.

The same pattern of overstating the strength of her test results is repeated by Fish in *Wardell & Reynolds, Adams, and Wright*.

Other Examples

In *Illinois v. McKinley*, Fish declined to conduct conventional serology testing of rape evidence. Her explanation for not conducting testing in this case was that there was potential for more than one semen source because the victim had been subjected to a gang rape. In *McKinley*, Fish provided the following testimony:

Q. Miss Fisch [sic], does the fact that a gang rape situation occurred with more than one person affect your ability to perform any such tests?

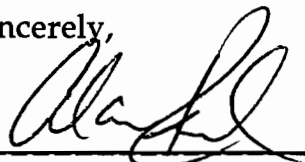
A. Yes, it does.

This testimony [TT 227] appears to contradict her testimony in the *Ollins* cases. Additional information should be obtained concerning laboratory practices where there is the potential for multiple semen donors.

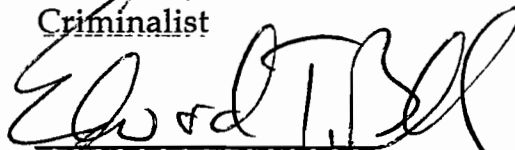
It is noteworthy that the same misrepresentation of conventional serology findings exhibited by Fish in this review was also present in one of the most famous false conviction cases in the history of Illinois, the case of *Illinois v. Gary Dotson*. ABO typing information in Dotson, all of which was attributable to the female, was attributed to Dotson at his trial by an Illinois State Police analyst. Not only did the alleged victim recant her testimony that she was raped; ultimately, Dotson was exonerated by a DNA analysis conducted in our laboratory. One can only conclude from this observation that some things never change.

If you have questions concerning this review, please contact us.

Sincerely,



Alan Keel,
Criminalist



Edward T. Blake, D.Crim.

