

EXHIBIT 438
05 CF 381
DATE: 03-05-07 JB
Initials

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DECLARATION OF MARC LEBEAU

I, Marc LeBeau, declare as follows:

1. I am the Chief of the Chemistry Unit of the FBI Laboratory in Quantico, Virginia. I am an analytical chemist and a forensic toxicologist. A copy of my curriculum vitae is attached hereto as Attachment A.

2. At the request of the California Attorney General's Office, I reviewed the testimony of Dr. Kevin Ballard from the science tutorial in the United States District Court for the Southern District of California in the case of *Cooper v. Goughnour*. I also reviewed the photographs of the blood stained T-shirt presented by the scientist from the DOJ Berkeley Laboratory in the science tutorial.

3. The size of the blood stain identified through STR Profiler Plus DNA testing as belonging to Kevin Cooper is very small. Dr. Ballard estimates the amount of blood in the smear of blood as one microliter. One microliter is an extremely small amount of blood. One microliter is 1/1000th of a milliliter. There are approximately 20 drops of blood to one milliliter, so a microliter would be 1/50th of a drop of blood. One drop of blood on a garment might expand to the size of a penny. If 1/50th of a drop a blood were placed on a garment it may not spread to even 1/50th of the size of the penny because of the lesser weight.

4. It would be peculiar for someone to purposely contaminate something with such a small volume in the 1980's given the state of scientific technology concerning blood evidence.

5. In order to compare specific numbers of EDTA levels in a blood stain with the level of EDTA used to preserve blood in a test tube, it is important that the amount of blood in the stain be proven scientifically. The weighing method is not a scientifically reliable method for determining the amount of blood in a stain such as is present in the *Cooper* case. It is not scientifically valid to eyeball the stain in an attempt to guess the amount of blood in the stain. The amount of blood should be determined through experimentation on the same fabric. If the drop of blood is smeared or disturbed, the quantity

1 of blood cannot be accurately determined, and therefore it may not yield meaningful
2 numbers to compare with the amount of EDTA used to preserve blood in a test tube.

3 6. Dr. Ballard states in his testimony that a one microliter stain of "purple-
4 topped tube" blood would contain between 1,000 to 1,300 nanograms of EDTA. He states
5 the "normal" level of EDTA on a shirt would be "somewhere" between 10 to 20 nanograms
6 per centimeter. Dr. Ballard indicates that his numbers are from his experience in testing
7 evidence in 12 to 15 different cases. Dr. Ballard's use of these numbers has not been
8 published or subject to peer review. While the presentation of a paper at a conference
9 involves sharing information, it is not peer review because there is no form of rejection of
10 the science that would be recorded from merely presenting a paper at a conference.

11 7. Even if it is not possible to scientifically determine the exact amount of
12 blood in the stain, it is still possible with proper use of controls, to determine if there is a
13 significant difference between the amount of EDTA in the stain compared with areas
14 immediately surrounding the stain. In order to compare the levels of EDTA in the controls
15 taken from the areas immediately surrounding the stain, the stain substrate itself must be
16 suitable for analysis. I am reluctant to offer an opinion regarding the suitability of the blood
17 smear for testing in this case to determine the presence of EDTA preserved blood, because
18 I do not have the benefit of having personally examined the T-shirt in question.

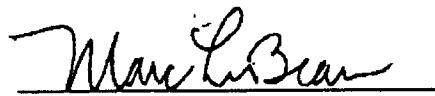
19 8. With proper use of substrate controls from the areas immediately
20 surrounding the stain, and a suitable stain substrate, a difference in negligible and
21 appreciable levels of EDTA can be detected with reasonable scientific certainty.

22 9. The Chemistry Unit of the FBI Laboratory tested for the presence of EDTA
23 in the O. J. Simpson case. It was determined that the level of EDTA in the background
24 material was consistent with the level of EDTA in the blood stain. Dr. Ballard was not
25 involved in the EDTA testing performed in the O. J. Simpson case.

26 10. In my opinion, if there is a significant difference in the amount of EDTA
27 in the stain and the amount of EDTA in the substrate controls from the areas immediate
28 surrounding the stain, then it suggests the source of the stain is EDTA preserved blood.

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I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct, executed on April 29, 2004, at Quantico, Virginia.


MARC LEBEAU