Floyd, Tour de France 2006

- Drug test
- Not positive

Prepared by Arnie Baker, MD.
Baker is a retired San Diego physician. He is a long-time Landis coach and advisor.
While in active medical practice, Baker had over a decade experience in medical peer review and quality assurance.
Baker has written about bicycling medicine for the lay public, International Olympic Committee, and medical community.
We have identified dozens of problems with Floyd Landis’s allegedly positive doping test.
What we’ll show here are some of the most important and easily understood basic problems.
The lab made many errors in its analysis.
One of the easiest examples of lab error to see involves sample identification or labeling.

This is the page summarizing the testosterone and epitestosterone results from the A sample.
The sample number has two parts: The lab identification number and the athlete's identification number.
The lab identification number is wrong.
The lab identification number is 178/07 — not 478/07.
The athlete’s identification number is wrong. 994474 is not Floyd's number.
Floyd’s number is the number in the barcode label taken from his attestation page. It is 995474.
Process Violates WADA Rules

“Any forensic corrections… should be done with a single line through and the change should be initialed and dated by the individual making the change.”

WADA Rules

“Any forensic corrections that need to be made to the comment should be done with a single line through and the change should be initialed and dated by the individual making the change. No white out or erasure that obliterates the original entry is acceptable.” [1]

Ignorance is not an excuse: “All personnel should have thorough knowledge of their responsibilities including the security of the Laboratory, confidentiality of results, Laboratory Internal Chain of Custody protocols, and the standard operating procedures for any method that they perform.” [2]

This page summarizes the results of the A sample. The sample identification number has been overwritten. Again, Floyd’s number is the number in the barcode label taken from his attestation page.
This is the chain-of-custody documentation of the transport of Floyd’s sample from stage 17 to the laboratory.

Either (1) there is a number similar to Floyd’s recording as having been transported, but not Floyd’s, or (2) the handwriting is ambiguous.

The vast majority of people I have surveyed read the number as 995476.

Again, Floyd’s number is the number in the barcode label taken from his attestation page. It is 995474.
This is a summary page of the lab’s record of the abnormalities of the three samples (three different riders tested) from stage 17.
The poor quality of the pages is how we received the document.
Again, Floyd’s sample number isn’t right: The handwritten number is 995475.
WADA recognizes that contaminated or degraded specimens cannot be fairly examined, and should be discarded.

Degradation can result from many factors—including bacterial contamination, improper storage, biological or other chemical contaminants (such as blood), and adulteration.
WADA Contamination Rule Clear

- “The concentration of free testosterone and/or epitestosterone in the specimen is not to exceed 5% of the respective glucuroconjugates.”

- WADA Technical Document TD2004EAAS

WADA rules are that if contamination or degradation levels of free testosterone or epitestosterone exceed 5%, the sample should not be analyzed.
Specimen Clearly Contaminated

<table>
<thead>
<tr>
<th></th>
<th>Epitestosterone</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free</td>
<td>0.44</td>
<td>USADA0283</td>
</tr>
<tr>
<td>Conjugates</td>
<td>5.7</td>
<td>USADA0288</td>
</tr>
<tr>
<td>Ratio</td>
<td>7.7%</td>
<td>(&gt; 5%)</td>
</tr>
</tbody>
</table>

No basis to proceed according to WADA rules

Remember: More than 5% means the specimen is contaminated or degraded and should not be used.
Just like food with mold or maggots, such a sample should not be used.
The table shows the math: 7.7% degraded epitestosterone.
According to WADA protocol, since the epitestosterone level exceeds 5% (it is 7.7%) the specimen should not have been evaluated for an adverse analytic finding.
It should have stopped here.
The relevant screenshots are on the next page.
Here are the relevant screenshots used to calculate degradation from Floyd’s B sample.

Again, the specimen was clearly contaminated. There was no basis to proceed, according to WADA rules.
By the lab’s own methods, repeated sampling of testosterone levels should be within 20%, and repeated sampling of epitestosterone levels should be within 30%.
Here are two confirmation examinations of testosterone and epitestosterone, by the same method, from the A sample. These variations cast doubt on the lab’s ability to repeatably and accurately test a sample for these substances.

* Reference result. Percent error is a math term: The difference between a value and a reference value, divided by the reference value.

Another way to look at it: The values in the second row of numbers are about 300% greater than the numbers in the first row of numbers.
Here is another way to look at the two confirmation examinations of testosterone from the A sample.

If the amount in the first test is represented by 1 waterbottle, the amount in the second test is represented by 2.8 waterbottles.

Again, these variations cast doubt on the lab’s ability to repeatably and accurately test a sample for these substances.
Here are the relevant screen shots.
By the laboratory’s own standards, its testing was unacceptable.
When the sample was screened for T:E ratio, the calculated ratio was 4.4. When the sample was tested to confirm the ratio, it was 11.8.
Variable Results T:E Ratio

Here are the relevant screen shots.
This is the test that has been played up in the press as the gold standard, the test that cannot be challenged: The exogenous test, or proof of synthetic testosterone.

No test is infallible, and the CIR test does have problems.

However, the test wasn't even positive, as we'll show in the next slides.
Isotope Ratio Criteria

- Criteria clearly not met
  - 4 testosterone breakdown products examined
  - Look for absolute numbers > 3.8
  - All must be abnormal for test to be conclusive

- Floyd has only one abnormal

According to published studies and WADA’s own protocols, the metabolites or break-down products should be abnormal.

For more details and discussion about the criteria for a positive test, see lawyer Howard Jacob’s dismissal motion to the Anti-Doping Review Board.
Test Criteria Not Met

- Not positive

Considering the criteria for positive (3.0) and stated accuracy of the lab (±0.8) isotope absolute values must be higher than 3.8.

Only one of Floyd’s four breakdown products examined even arguably met the criteria to determine a positive result.
The strongest, or most robust indicator of anabolic steroid misuse (according to the scientific literature), the $5\beta$Adiol- $5\beta$Pdiol value, does not meet the criteria for a positive test.

It has an absolute value of 2.65.
There are some other points to take into consideration:
The total amount of testosterone in Floyd’s urine was calculated as 45.4 nanograms per milliliter. This is well below the value of 200 that is considered high.
If a high amount is 1 waterbottle, Floyd’s amount is represented by a less than ¼ of a waterbottle (23%).
In other words, there was not much testosterone in Floyd’s urine.
Subject identification to the lab in any study is a problem. Laboratories are supposed to conduct tests without the knowledge of whose sample they are testing.

I am not arguing that the lab was biased— I don’t know that. However, since Floyd was known to have a therapeutic use exemption for the steroids used to treat his dead hip, and since this information was not redacted from his doping control form, sample identification was a relatively simple matter.

This part of the testing process should be improved to help the credibility of the process for all.
Something about the process.

Floyd didn’t accurately provide an explanation for his allegedly positive test initially—because he had not received the documentation package; he didn’t know what the problems were.

After an initial two-week review of the document package, his lawyer Howard Jacobs submitted a dismissal request to the Anti-Doping Review Panel. This request was denied. The denial letter is dated three days before the meeting took place.

Typographical error? Perhaps—at least that is what USADA now claims. Of course, any agency, board, or lab can make errors. USADA did. The French lab did.

What we have shown in the previous slides is that the whole process has been full of errors.
In summary:
There are many problems and errors in the USADA documentation package. In this slide show we have examined a few of the important lines of evidence showing that:
Floyd Landis’s doping test is not positive.
Floyd, Tour de France 2006

- Drug test
- Not positive

*End*