Minutes (Draft)
Scientific Advisory Committee Meeting
August 8, 2006 at 9:00 a.m.
DFS Central Laboratory, Classroom 1

Committee Members Present:

Dr. Jose Almirall
Dr. Frederick Bieber (via teleconference)
Mr. Joseph Bono, Chair
Dr. Dale Carpenter
Mr. Dominic Denio
Dr. Arthur Eisenberg
Dr. Paul Ferrara
Dr. Dan Krane
Ms. Demris Lee
Mr. Kenneth Smith

Committee Members Absent:

Mr. Barry Fisher
Ms. Jo Ann Given
Dr. Alphonse Poklis

Staff Members Present:

Ms. Wanda Adkins, Office Manager
Mr. Jeff Ban, Forensic Biology Section Chief
Dr. David Barron, Central Laboratory Director
Ms. Eileen Davis, Trace Evidence Section Chief
Mr. Doug DeGaetano, Forensic Scientist, Trace Evidence Section
Ms. Katya Herndon, Department Counsel
Ms. Linda Jackson, Forensic Scientist Supervisor, Controlled Substances Section
Ms. Meghan Kish, Committee Secretary
Mr. Josh Kruger, Forensic Scientist Supervisor, Trace Evidence Section
Mr. Pete Marone, Director of Technical Services
Mr. Michael Moore, Questioned Documents Section Chief
Mr. James Pickelman, Firearms and Toolmarks Section Chief
Mr. Steven Sigel, Deputy Director

Call to Order

Mr. Bono called the meeting to order.

Adoption of Agenda

Mr. Bono asked if there were any amendments to the draft agenda, and there were none. The agenda was adopted unanimously.

Election of Chair

Mr. Bono informed the committee that his term as Chair of the Committee ended on June 30, 2006, and asked for nominations for Chair. Ms. Lee nominated Mr. Bono for a second term. No other nominations were made, and Mr. Bono was re-elected unanimously as Chair, to serve from July 1, 2006 until June 30, 2007.

Adoption of Minutes

Mr. Bono asked if there were any amendments to the draft minutes from the Committee meeting held on February 7, 2006. Dr. Krane asked that line 140 be amended to include "(not necessarily the adoption)" after the term research, to more accurately describe the spirit of the Committee's endorsement of the Department's research into new technologies. Ms. Kish added that a technical correction was also necessary; Ms. Alka Lohmann's name had been misspelled in the list of staff members present at that meeting.

Dr. Ferrara made a motion that the Committee adopt the minutes as amended. The motion was seconded, and passed unanimously.

Chairman's Report

Mr. Bono informed the Committee that at the May 10, 2006 meeting of the Forensic Science Board, the Board had considered the specific case review that had been requested in the Winston case. Mr. Bono explained that, after discussion, the Board voted to decline the request for review. Mr. Bono then asked Dr. Eisenberg to advise the Committee of the results of the re-review that he and Ms. Lee had performed at the request of Judge Humphreys.

Dr. Eisenberg explained that, upon reviewing the material, he and Ms. Lee had come to the conclusion that the case file had been complete when the team conducted its original review, and that all protocols had been followed. Dr. Eisenberg also reported that the Department had adopted all four recommendations that had been made by his panel after their original review. He indicated the Department actually went beyond what was recommended by requiring an additional review by a section supervisor in all cases involving homicides and complex mixtures. There were no questions posed by the Committee.

Mr. Bono next addressed the membership changes that had taken place on the Committee. He reported that Dr. McElfresh had resigned, and was replaced by Mr. Barry Fisher, Director of the Los Angeles County Sheriff's Department Crime Lab. Mr. Fisher could not be present at this meeting due to scheduling conflicts. Mr. Bono congratulated Dr. Almirall, Dr. Carpenter, Dr. Poklis, and Dr. Krane on their reappointments to serve an additional four years on the Committee. Mr. Bono also informed the Committee that

he had accepted a position as the Director of the United States Secret Service Laboratory in Washington DC.

Director's Report

Dr. Ferrara informed the Board that the Department currently employs over 300 full-time employees, and operates under a budget in excess of $30 million. He then reported on the funding the Department had received during the last General Assembly. Dr. Ferrara explained that the General Assembly had provided $65.5 million in general funds to build a 106,000 square foot laboratory facility to replace the current Northern Laboratory, to be completed in November of 2008. Additionally, Dr. Ferrara told the Board that the Department had received funding to lease the third floor of the Biotech 8 building, scheduled for completion in the summer-fall of next year. He stated that the new building, which will be located across the street from the Central Lab facility, will house the administration and training sections, and will provide more space for laboratory expansion in the current building.

Dr. Ferrara reported that the Eastern laboratory expansion is also currently underway, adding 6,000 square feet to the current facility. He explained that the Department is also now looking into the possibility of purchasing land adjacent to the Western Laboratory, and an appraisal of that land is pending.

As for the new Mitochondrial DNA Laboratory, Dr. Ferrara reported that the construction is nearly complete. He informed the Board that the only problem is the inability to find experienced examiners to staff the new lab.

Dr. Ferrara discussed the new law, § 19.2-188.1(B), which became effective July 1, 2006, that enables law enforcement officers to testify to the results of field tests in any trial for a violation of § 18.2-250.1 regarding whether or not any plant material, the identity of which is at issue, is marijuana. The Department tested, selected, and began distributing marijuana field tests to law enforcement agencies across the state using an online ordering system. He explained that roughly 30% of the Department's drug caseload is composed of marijuana possession cases, and the implementation of use of the marijuana field tests should reduce the number of submissions. He added that any samples that result in unclear field test results will be submitted to the Department for analysis and given priority.

Dr. Ferrara next reported that the Department had only been granted $225,000 of the requested $1.4 million for equipment replacement, and had only received half of what had been asked for to replace breath alcohol instrumentation.

Dr. Ferrara announced that the statewide backlog had decreased during the month of July, and that the backlog total, as of the end of the month, was 14,835 cases, half of what it was last year.

Dr. Krane inquired as to the status of the search for new breath alcohol instruments to replace the Intoxylizer 5000, which Section Chief Alka Lohmann had reported on at the

last meeting. Mr. Marone explained that four instruments are being evaluated to determine the desired features and the selected features will be used to develop bid specifications. Dr. Krane asked that Ms. Lohmann provide an update at the Committee's February 2007 meeting.

Gunshot Residue (GSR) Report Language

Mr. Doug DeGaetano, Forensic Scientist in the Trace Evidence section of the Department's Central Laboratory, discussed the current DFS GSR report wording and compared and contrasted it to the report wording recommendations discussed at the June 2005 FBI GSR symposium and the wording used in the ASTM (American Society for Testing and Materials) Standard Guide for GSR analysis by SEM/EDS (Scanning electron microscope and energy dispersive x-ray).

Proposed report wording changes to the current DFS report language included: changing the terminology for three component particles from "Identified as primer residue" to "Highly specific to primer residue"; continuing to use "primer residue" rather than "gunshot residue" to describe these particles; continuing to use "indicative of primer residue" to describe two component particles; adding qualifiers to the reports instead of listing only results and adopting an eight hour time limit for the analysis of primer residue collected from the hands of a living individual. If more than eight hours have elapsed from the shooting event and the collection of the sample the GSR kit will not be analyzed. A table of proposed qualifiers was presented.

Mr. DeGaetano mentioned that these qualifiers are what examiners routinely testify to in court. Including them in the report allows for clearer interpretation of the results and hopefully less need for court testimony by examiners.

General discussion followed on wording possibilities.

Dr. Krane made a motion to also include the qualifier statement addressing how primer residue can be deposited on the hands in reports that conclude the particles found "were indicative of primer residue." The motion was seconded and passed unanimously.

Dr. Krane made a motion to include a parenthetical qualifier that the "test itself cannot determine the relative likelihood of these alternative sources," after the qualifier addressing how primer residue can be deposited on the hands. There was no second, so the motion failed.

Dr. Krane made a motion to amend the wording in the same qualifier to delete the circumstance "in proximity to the discharge of a weapon" and replace it with broader language such as in an environment where a weapon has been fired. The motion failed for want of a second.

Dr. Almirall made a motion to recommend the proposed changes with the one amendment to the Board. The motion was seconded. Dr. Krane objected to the motion. The motion passed 8-1.

Mr. Denio provided the Committee with a statement from Dr. Marc LeBeau, Chemistry Unit Chief of the FBI Laboratory, refuting an article in the May 26, 2006 issue of the *Baltimore Sun* which offered "misleading impressions" as to the reason why the FBI has discontinued gunshot residue analysis. Mr. Denio, in concurrence with the article, reaffirmed that the science of gunshot residue analysis is valid; however, he noted that the few cases that the FBI received per year were not numerous enough to justify maintaining an entire unit.

Senate Bill 286

Senate Bill 286 was carried over to the 2007 Session by the Senate Courts of Justice Committee. In carrying the bill over, the Courts Committee expressed an interest in getting feedback from the Department's new policy and advisory boards on the issue. Mr. Bono suggested an amendment to the bill, which addresses the admissibility of DNA evidence in criminal proceedings, and would require that "[a]ll DNA analyses offered as evidence shall have been performed by laboratories certified to perform such analyses." He explained that the word "certified" applies to individuals, while the word "accredited" applies to laboratories. Dr. Eisenberg agreed, and began a discussion on whether the statute should list the accrediting bodies.

Dr. Krane made a motion that the word "certified" be replaced by "accredited by a recognized accrediting body". The motion was seconded. After a discussion on other phrasing possibilities, the motion passed unanimously.

Storage and Retention of Evidence

Pursuant to a request during the February Committee meeting, Ms. Herndon gave a presentation addressing the storage, preservation, and retention of human biological evidence in the Commonwealth.

Qualification Standards for Director's Position

Mr. Marone explained that, in accordance with the statute, the Committee needed to recommend qualification standards for the Director's position. The proposed standards were included in Dr. Ferrara's Employee Work Profile (EWP). Referencing the organizational objective section of the EWP, Dr. Krane noted that it did not reflect that the Department conducts examinations for the defense. Dr. Ferrara explained that the user agencies listed were taken directly from the statute, and that defense attorneys could not directly submit evidence to be analyzed. Rather, defense requested examinations are conducted upon court order.

Dr. Eisenberg made a motion to recommend the document to the Board as is. The motion was seconded and passed unanimously.

Drug Sampling and Reporting Requirements

Mr. Marone updated the Committee on minor changes that were made to the drug sampling and reporting procedures which require enough samples to be analyzed to meet the weight thresholds from the statutes and the sentencing guidelines.

Familial Searches

Dr. Ferrara explained that on occasion there are cases in which a search of the DNA profile from an evidence sample against the DNA databank results in a moderate stringency match to a very similar (but not exact) profile, suggesting a familial relation. He asserted that current Department policy does not allow the reporting of these moderate stringency hits.

Mr. Jeffrey Ban, Forensic Biology Section Chief, reported that there are also situations when a suspect sample is submitted for direct comparison with the evidence, and analysis reveals a similar profile that suggests a familial relationship, but not a match. The reports issued in these cases do not currently reflect any of this information.

The Committee discussed the fact that databank searches for those with familial relationships would require capabilities that the Combined DNA Index System (CODIS) software does not yet possess. Due to the limitations of the current available CODIS search algorithms, the CODIS software may miss a relative in the databank whose profile is similar to that of the evidence, but does not share an allele in common with the evidence at one locus. In addition, the software may also provide hundreds of possible candidates if the evidence profile contains common alleles, which requires a significant amount of time on the part of the law enforcement agencies and the crime laboratory to resolve when in reality none of the possible candidates are related to the true perpetrator.

Discussion followed on whether or not direct comparisons were a separate issue from databank searches.

After a discussion in which several Committee members stated that they felt the Department would be remiss if such information was not provided to law enforcement, Dr. Eisenberg made a motion that the following interim policy be recommended to the Board: In cases when a suspect known is submitted to DFS and the suspect is excluded, however the examiner recognizes there is a familial relationship, the likelihood ratio should be utilized and the information should be provided to the submitting agency as an investigative lead. The motion was seconded. The motion passed unanimously.

Dr. Krane made a motion that Mr. Bono form a subcommittee of two Committee members to further discuss familial searches and to develop objective criteria for performing such searches. The motion was seconded, and carried, 9-0.

Selection of Future Meeting Dates

The Committee scheduled its next meeting for February 6, 2007 at 9 a.m. Dr. Krane asked that at that time, the Committee evaluate the possibility of holding an interim meeting at one of the Department’s other labs. He also requested that the Department

evaluate the suggestions made in the publication on DNA mixtures that he distributed at the February, 2006 meeting, and address them at the February, 2007 meeting.

Public Comment

Mr. Bono asked if any members of the public wished to address the Committee. No members of the public provided comment.

Adjourn

The Meeting Adjourned at 12:15 pm.