

1 Draft Minutes  
2 Scientific Advisory Committee Meeting  
3 August 5, 2008  
4 DFS Central Laboratory, Classroom 1  
5

6 Committee Members Present:  
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8 Mr. Joseph Bono  
9 Dale Carpenter, Ph.D.  
10 Mr. Dominic Denio  
11 Arthur Eisenberg, Ph.D. (via teleconference)  
12 Mr. Barry Fisher, Chair  
13 Ms. Deborah Friedman  
14 Dan Krane, Ph.D.  
15 Mr. Peter Marone  
16 Alphonse Poklis, Ph.D.  
17 Norah Rudin, Ph.D.  
18 Mr. Kenneth Smith  
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20 Committee Members Absent:  
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22 Jose R. Almirall, Ph.D.  
23 Frederick Bieber, Ph.D.  
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25 Staff Members Present  
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27 Ms. Wanda Adkins, Office Manager  
28 Ms. Elizabeth Ballard, Forensic Scientist, Forensic Biology  
29 Mr. Jeffrey Ban, Central Laboratory Director  
30 David Barron, Ph.D. Technical Services Director  
31 Ms. Guinevere Cassidy, Legal Assistant  
32 Mr. Doug Chandler, Manager, Information Technology Services  
33 Ms. Angie Cunningham, Forensic Scientist, Forensic Biology  
34 Ms. Leslie Ellis, Human Resources Manager  
35 Mr. Tom Gasparoli, Public Information Officer  
36 Ms. Michele Gowdy, Department Counsel  
37 Susan Greenspoon, Ph.D. Forensic Molecular Biologist  
38 Ms. Katie Hall, Lab Specialist, Forensic Biology  
39 Ms. Linda Jackson, Controlled Substances Section Chief  
40 Mr. Bradford Jenkins, Forensic Biology Section Chief  
41 Ms. Melissa Kennedy, Section Supervisor, Breath Alcohol Section  
42 Mr. Ronald Layne, Director of Administration and Finance  
43 Ms. Alka Lohmann, Breath Alcohol Section Chief  
44 Mr. Butch Martin, Human Resources Analyst  
45 Ms. Elise Mirza, Grants Administration/Policy Analyst  
46 Ms. Carisa Onorato, Administrative Specialist, Breath Alcohol

47 Mr. Kevin Patrick, Western Laboratory Director  
48 Mr. Stephen Rodgers, Forensic Scientist, Forensic Biology  
49 Mr. Brian Shannon, Forensic Scientist, Forensic Biology  
50 Mr. Steven Sigel, Deputy Director  
51 Mr. Sherwood Stroble, Manager, Policy, Planning and Budget Services  
52 Ms. Susan Uremovich, Eastern Laboratory Director  
53 Ms. Lisa Schiermeier-Wood, Section Supervisor, Forensic Biology  
54 Ms. Amy Wong, Northern Laboratory Director  
55 Mr. Robin Young, Section Chief Latents

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57 Call to Order:

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59 Chairman Fisher called the meeting to order at 9:00 a.m.

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61 Chairman Fisher acknowledged Wanda Adkins as the temporary secretary for the meeting.  
62 Chairman Fisher also introduced Guinevere Cassidy the new secretary for the Scientific  
63 Advisory Committee and new legal assistant to the Department of Forensic Science (DFS).

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65 Adoption of Agenda

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67 Chairman Fisher asked if there were any additions or changes to the draft agenda. Norah Rudin,  
68 Ph.D. (Rudin) added to New Business the Scientific Advisory Board By-Laws. Mr. Bono made  
69 a motion to adopt the agenda with the additional item, seconded by Mr. Smith and adopted by  
70 unanimous vote.

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72 Adoption of Minutes

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74 Chairman Fisher asked if there were any changes that needed to be made to the draft minutes  
75 from the May 5, 2008, meeting. Ms. Friedman asked that her comment be included in the  
76 minutes from the May meeting; that all DFS validation and high volume materials be sent to the  
77 Scientific Advisory Committee at least 30 days in advance before the meeting. Mr. Bono made a  
78 motion to accept the draft minutes with the addition, seconded by Rudin and accepted by  
79 unanimous vote.

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81 Chairman's Report

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83 Chairman Fisher acknowledged that the three sub-committees reconvened on Monday, August 4,  
84 2008, to continue their review of the new methodologies and protocols for Y-STR,  
85 Mitochondrial-DNA and New Breath Alcohol Instrumentation. Chairman Fisher thanked the  
86 Scientific Advisory Committee members and the outside experts for all their hard work and  
87 diligence in completing their reviews. Chairman Fisher also expressed his appreciation to all the  
88 DFS for their cooperation.

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93 Director's DFS Report

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95 Mr. Marone expressed his appreciation to all the sub-committee members for all the hard work  
96 and long hours they had spent to review the new methodologies and protocols.

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98 Building Updates: The Northern Virginia Laboratory construction is continuing with an  
99 expected move-in date in April of 2009. The Central Laboratory old administrative space is  
100 being converted into examiner office space so that more laboratory space can be made available.  
101 The Eastern Laboratory is adding space on the fifth floor, eventually to include the entire fifth  
102 floor. We expect to begin the renovations of that space by next summer. There is language in  
103 the budget to negotiate with Roanoke County for space near the Western Laboratory for future  
104 expansion.

105  
106 Update on Budget: There are no new grants; we are still awaiting word on the post-conviction  
107 testing grant.

108  
109 The Department of Planning and Budget Best Management Practices Team has been contacted  
110 by the DFS to conduct a potential study which may or may not include: communication, agency  
111 organization, training and operations.

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113 Presentation to Scientific Advisory Committee

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115 Mr. John Butler with the National Institute of Standards and Technology (NIST) gave a  
116 presentation to the Committee on Y-STR.

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118 Contextual Bias

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120 As requested by the Scientific Advisory Committee at one of the previous meeting, a  
121 presentation on contextual bias was presented by Mr. Brad Jenkins, Section Chief in the Forensic  
122 Biology Section. Mr. Jenkins explained new DNA verification procedures that will be  
123 implemented in the forensic biology section. There were several comments from some of the  
124 committee members, but overall the Scientific Advisory Committee was pleased with the  
125 changes that DFS is making in this area. Rudin made a motion that the Scientific Advisory  
126 Committee accept the changes offered by Brad Jenkins to the DNA unit and advise the Forensic  
127 Science Board, second by Arthur Eisenberg, Ph.D. (Eisenberg) and passed by unanimous vote.

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129 Sub-committee Reports

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131 **Y-STR Sub-Committee** – Dan Krane, Ph.D. (Krane) addressed the Scientific Advisory  
132 Committee regarding the final report from the sub-committee on the review of Y-STR  
133 validations studies and testing protocols. The sub-committee made several observations and  
134 recommendation in a report to the Scientific Advisory Committee that is attached as Addendum  
135 “A”.

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137 Mr. Marone made a motion that the sub-committee recommend adoption of the Y-STR protocols  
138 and implementation of casework including the changes agreed upon, seconded by Mr. Bono and  
139 passed by unanimous vote.

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141 **Mitochondrial-DNA Sub-Committee** – Rudin addressed the Scientific Advisory Committee  
142 regarding the final report from the sub-committee on the review of the mitochondrial DNA. The  
143 sub-committee made several observations and recommendations regarding the mtDNA protocols  
144 and implementation of mtDNA testing. The report is attached as Addendum “B”.

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146 Rudin made a motion that the sub-committee recommend adoption of the mtDNA protocols and  
147 implementation of the casework including the changes agreed upon, seconded by Mr. Bono and  
148 passed by unanimous vote.

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150 **Breath Alcohol Instrumentation Sub-Committee** – Dale Carpenter, Ph.D. (Carpenter)  
151 addressed the Scientific Advisory Committee regarding the final report from the sub-committee  
152 on the review of documentation, protocols and validating software. The sub-committee felt that  
153 all elements for a strong responsible program were present in the documentation and they would  
154 recommend adoption of the procedures.

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156 Carpenter made a motion that the Breath Alcohol section move forward to adopt and implement  
157 their protocols, seconded by Mr. Bono and with Ms. Friedman abstaining the motion passed.

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159 Carpenter made another motion that the Breath Alcohol Section move forward with  
160 implementation of the instrument in the field, seconded by Mr. Bono with Ms. Friedman  
161 abstaining the motion passed.

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163 New Business

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165 Rudin raised the subject of amending the Scientific Advisory Committee by-laws regarding  
166 appointment of sub-committee members. There is no provision currently written in the By-Laws  
167 regarding outside experts serving as members of sub-committee. After general discussion of this  
168 subject, Chairman Fisher asked Rudin to draft her proposed change to the by-laws. Rudin will  
169 solicit input from other committee members and send out a draft proposal prior to the next  
170 Scientific Advisory Committee meeting. This proposed change will be placed on the agenda for  
171 the January meeting.

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173 Public Comment – None

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175 Next Meeting – The next meeting of the Scientific Advisory Committee is scheduled for January  
176 13, 2009 at 9:00 a.m.

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178 Adjournment – The meeting adjourned at 10:50 a.m.

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ADDENDUM A

August 4, 2008  
Commonwealth of Virginia Scientific Advisory Committee  
Sub-committee report on Y-STR testing validation and protocols

Dan E. Krane, Chair (member, VA SAC)  
Robin Cotton (appointed by Chairman Fisher)  
Deborah Friedman (member, VA SAC)  
Ann Gross (appointed by Chairman Fisher) [comments received by e-mail]  
Norah Rudin (member, VA SAC)

The subcommittee approved the draft minutes from its first meeting on May 5, 2008. It first reviewed the validation studies that the Department of Forensic Science performed in association with Y-STR testing and then turned its attention to the Department's proposed Y-STR testing protocols.

The subcommittee makes the following general observations and recommendations:

1. The sub-committee was provided with amended validation summaries, as well as summaries of new validation studies (two of which were only provided on the morning of the subcommittee meeting).
2. The sub-committee agreed that the revised validation studies are much improved and that the Department was responsive to the recommendations made at the previous meeting of this subcommittee. All the validation studies were changed relative to the version that was originally provided to the subcommittee and the subcommittee accepted most of the validation studies with little additional discussion. A few of the validation studies were discussed in greater detail including: a signal intensity study (where the Department was encouraged to add explicit language that was consistent with their standing policy of not generating "composite profiles" from two or more amplifications or injections of a sample); a major/minor profile designation study (where the Department agreed to draw firmer conclusions regarding the criteria that must be met for a major and minor profile to be identified); a sensitivity study (where the Department agreed that its data best supported an optimum DNA template range of 0.5 to 1.0 ng), and a limit of detection study (the Department was encouraged to perform frequent evaluations of the noise levels observed in control samples as a QA/QC measure).
3. The sub-committee was provided with protocols that had been significantly amended and improved in response to recommendations made by the subcommittee on its previous meeting.
4. Numerous edits were recommended by the subcommittee to each of the chapters of the proposed protocols. Most of the proposed changes were relatively minor but a few, which the Department agreed to implement, were more substantive such as: the inclusion of tables that contain all observed alleles in reports; and the inclusion of language in all reports that clarifies what is meant by "paternal relatives" in the context of Y-STR testing. The subcommittee also recommended that the Department consider a number of additional substantive changes to the proposed protocols such as: minimizing or eliminating the determination if a sample constituted "probative evidence" or not by analysts; and the inclusion of more affirmative language throughout the interpretation guidelines that minimizes the opportunity for context effects.
5. The sub-committee recommends adoption of the Y-STR protocols and implementation of casework.

## ADDENDUM B

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- August 4, 2008  
Commonwealth of Virginia Scientific Advisory Committee  
Sub-committee report on mtDNA protocols
- Norah Rudin PhD, Chair (member, VA SAC)  
Carna E. Meyer (appointed by Chairman Fisher) [comments received by e-mail]  
Catherine M. Knutson (appointed by Chairman Fisher)
- Deborah Friedman (member, VA SAC) also provided comments specifically on QA issues.
- The subcommittee makes the following observations and recommendations regarding the mtDNA protocols and implementation of mtDNA testing:
1. This report reflects general observations and recommendations. A more detailed documentation can be found in the notes taken by the secretary, Brian Shannon, as well as notes taken by Brad Jenkins.
  2. The sub-committee was provided with amended protocols and validation summaries, as well as additional validation studies.
  3. The sub-committee agreed that the revised validation studies now support the protocols. Minor edits to the validation summaries were discussed.
  4. The sub-committee agreed that the protocols have been much improved and are ready for implementation. Minor edits to the protocols were discussed.
  5. The laboratory gave full consideration to all of the comments made by the sub-committee and implemented all of the recommendations upon which the sub-committee members agreed.
  6. The lab showed leadership in adding specific guidelines to minimize context effect.
  7. Several issues about which the subcommittee members disagreed remain strong advisories by one or more sub-committee members or SAC members:
    - a. Whether or not to re-amplify or re-extract a negative control that shows contamination that does not match the corresponding sample.
      - i. If the sample has been consumed or circumstances direct that any remaining sample or extract be reserved, whether the sample should be reported, along with information about the associated contaminated control sample, or without this information.
    - b. Whether or not a contamination log should be kept for the purpose of troubleshooting.
    - c. Statistical guidance should be sought for the best way to report the evidentiary strength for mitotypes occurring in databases of less than 100.
  8. The sub-committee recommends adoption of the mtDNA protocols and implementation of casework.