

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

6 Committee Members Present:
7

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
19

20 Committee Members Absent:
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22 Jose R. Almirall, Ph.D.
23 Frederick Bieber, Ph.D.
24

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

56
57 Call to Order:

58
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).

64
65 Adoption of Agenda

66
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.

71
72 Adoption of Minutes

73
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.

80
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.
97

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.
112

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.
117

118 Contextual Bias

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120 As requested by the Scientific Advisory Committee at one of the previous meetings, 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.
128

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".
136

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.

140
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”.

145
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.

149
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.

155
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.

158
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.

162
163 New Business

164
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-committees. After general discussion of
168 this subject, Chairman Fisher asked Rudin to draft her proposed change to the by-laws. Rudin
169 will 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.

172
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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180
181 ADDENDUM A
182

183 August 4, 2008

184 Commonwealth of Virginia Scientific Advisory Committee

185 Sub-committee report on Y-STR testing validation and protocols

186 Dan E. Krane, Chair (member, VA SAC)

187 Robin Cotton (appointed by Chairman Fisher)

188 Deborah Friedman (member, VA SAC)

189 Ann Gross (appointed by Chairman Fisher) [comments received by e-mail]

190 Norah Rudin (member, VA SAC)

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

195 The subcommittee makes the following general observations and recommendations:

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

228 **ADDENDUM B**

229

230 August 4, 2008

231 Commonwealth of Virginia Scientific Advisory Committee

232 Sub-committee report on mtDNA protocols

233 Norah Rudin PhD, Chair (member, VA SAC)

234 Carna E. Meyer (appointed by Chairman Fisher) [comments received by e-mail]

235 Catherine M. Knutson (appointed by Chairman Fisher)

236 Deborah Friedman (member, VA SAC) also provided comments specifically on QA issues.

237 The subcommittee makes the following observations and recommendations regarding the
238 mtDNA protocols and implementation of mtDNA testing:

- 239 1. This report reflects general observations and recommendations. A more detailed
240 documentation can be found in the notes taken by the secretary, Brian Shannon, as well
241 as notes taken by Brad Jenkins.
- 242 2. The sub-committee was provided with amended protocols and validation summaries, as
243 well as additional validation studies.
- 244 3. The sub-committee agreed that the revised validation studies now support the protocols.
245 Minor edits to the validation summaries were discussed.
- 246 4. The sub-committee agreed that the protocols have been much improved and are ready for
247 implementation. Minor edits to the protocols were discussed.
- 248 5. The laboratory gave full consideration to all of the comments made by the sub-committee
249 and implemented all of the recommendations upon which the sub-committee members
250 agreed.
- 251 6. The lab showed leadership in adding specific guidelines to minimize context effect.
- 252 7. Several issues about which the subcommittee members disagreed remain strong
253 advisories by one or more sub-committee members or SAC members:
- 254 a. Whether or not to re-amplify or re-extract a negative control that shows
255 contamination that does not match the corresponding sample.
- 256 i. If the sample has been consumed or circumstances direct that any
257 remaining sample or extract be reserved, whether the sample should be
258 reported, along with information about the associated contaminated
259 control sample, or without this information.
- 260 b. Whether or not a contamination log should be kept for the purpose of
261 troubleshooting.
- 262 c. Statistical guidance should be sought for the best way to report the evidentiary
263 strength for mitotypes occurring in databases of less than 100.
- 264 8. The sub-committee recommends adoption of the mtDNA protocols and implementation
265 of casework.
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