

1 Minutes (Draft)
2 Scientific Advisory Committee
3 Subcommittee on Familial Searches
4 August 6, 2007 at 2:30 p.m.
5 DFS Central Laboratory, Classroom 1
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8 Subcommittee Members Present:
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10 Dr. Frederick Bieber (via teleconference)
11 Mr. Dominic Denio
12 Dr. Arthur Eisenberg
13 Dr. Dan Krane, Chair
14 Dr. Norah Rudin
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16 Staff Members Present:
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18 Ms. Wanda Adkins, Office Manager
19 Mr. Jeff Ban, Forensic Biology Section Chief
20 Dr. David Barron, Technical Services Director
21 Ms. Michele Gowdy, Department Counsel
22 Dr. Susan Greenspoon, Forensic Biologist
23 Ms. Meghan Kish, Committee Secretary
24 Mr. George Li, CODIS Administrator
25 Mr. Pete Marone, Department Director
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27 Call to Order:
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29 Dr. Krane called the meeting to order at 2:30 pm. He apologized for the delayed start, but
30 explained that flight trouble had required him to change the meeting time from 1:00 pm
31 until 2:30 pm.
32

33 He introduced Dr. Norah Rudin, who had been appointed to the Scientific Advisory
34 Committee to the seat of Forensic Biologist, succeeding Ms. Demris Lee.
35

36 Adoption of Agenda:
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38 Dr. Krane asked if there were any additions or corrections to the agenda. There were
39 none, and the agenda was adopted by unanimous vote.
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41 Approval of minutes from May 8, 2007 meeting of the subcommittee:
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43 Dr. Krane asked if there were any changes to be made to the minutes from the May 8,
44 2007 meeting of the subcommittee. There were none suggested. Dr. Eisenberg made a
45 motion to approve the minutes. Dr. Rudin seconded the motion. The motion passed, and
46 the minutes were approved.

47 Summary of previous meeting:

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49 Dr. Krane presented a brief summary of the previous meeting, referencing the minutes.
50 He explained that the Subcommittee had viewed a video report on familial searches that
51 had been provided by Dr. Bieber, had received updates on legal issues from Ms. Gowdy,
52 and heard reports from Mr. Li and Mr. Ban. Dr. Krane summarized the presentation that
53 he had given on Likelihood Ratios using Kinship Analyses, and reminded the
54 subcommittee members that Mr. Ban had been asked to report on the use of Y-STRs for
55 prescreening purpose. The meeting had wrapped up with a discussion of ethics, led by
56 Dr. Bieber.

57

58 Report on impact study regarding Y-STR profiling:

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60 In response to a request from the Subcommittee at the May meeting, Mr. Ban gave a
61 presentation on the cost analysis of using Y-STRs as a tool in casework. Discussion
62 followed.

63

64 There was discussion on the two possible uses of Y-STRs, either as a comparison
65 (searching the autosomal database, then using Y-STRs to compare the results) or as a
66 prescreening tool. Dr. Krane asked if Mr. Ban could make his presentation available to
67 the other subcommittee members. Mr. Ban agreed.

68

69 Dr. Bieber next explained that, in the UK, the driving force of these types of familial
70 analyses comes from the law enforcers, rather than the database people. He explained
71 that, when the constables run out of leads, they approach the database as a tool. They do a
72 rank order analysis based on the numbers of allele shared. They then, depending on the
73 size of the jurisdiction, print out the top matches, and then use other non-DNA
74 investigative information to narrow down that list. Dr. Bieber explained that science was
75 not the driving factor, but rather police work was. He suggested that prosecution and
76 police should be driving the familial searches, not CODIS administrators. He also
77 asserted that using familial searches in only the most important of cases was a key
78 consideration.

79

80 Present and future capacity of CODIS for familial searching:

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82 Dr. Krane explained that, at the May meeting, it was commented that the Subcommittee
83 wished to hear from Dr. Tom Callaghan, Chief of the CODIS unit, regarding the current
84 and future capabilities of CODIS. Unfortunately, Dr. Callaghan's busy schedule
85 prevented him from speaking to the Subcommittee, but he did provide a memorandum
86 detailing the capabilities of NG (next generation) CODIS.

87

88 Discussion followed regarding Dr. Callaghan's memo. Dr. Eisenberg explained that the
89 initial intent of NG CODIS was in the area of missing persons, and that he was not aware
90 of any intent to use those algorithms for familial searches. He further explained that it is
91 likely CODIS will not have that capability for many years.

92

93 There was discussion that, although CODIS may not provide any solution to the problem
94 of familial searches, perhaps commercially available software packages used
95 simultaneously could provide assistance. Dr. Bieber agreed, suggesting that there were
96 other possible methods. Dr. Eisenberg concurred. Dr. Krane volunteered his company's
97 services, should Virginia chose to move in that direction.
98

99 Dr. Bieber suggested that, as a Subcommittee, perhaps they could help determine what
100 education program could be developed to bring detectives from local jurisdictions into
101 the discussion of familial searches. He explained that metadata, gathered through
102 investigation, can supplement DNA information to make familial searches more
103 plausible. He suggested that they might have an easy time agreeing on mathematical
104 approaches, but that detective work will be essential for success. Dr. Krane and Dr.
105 Eisenberg were in agreement.
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107 Dr. Rudin also agreed, asserting that it makes more sense for these searches to be case
108 driven, as opposed to data bank driven.
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110 Review of other policies and strategies for familial searches:
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112 Dr. Krane explained that the two main methods of familial searches had already been
113 discussed: the crude approach of allele counting, as well as the more sophisticated
114 approach of kinship analyses.
115

116 Dr. Bieber expressed that the problem currently facing familial searches is that no state
117 has taken the lead. There will either be a "poster child" case where suddenly this all
118 makes sense to everyone, or there will be an embarrassment case which will set familial
119 searches back considerably. He then moved on to discuss how the simple methods of
120 Mendelian genetics can help to generate investigative leads, not unlike police work,
121 where some false leads are followed prior to an accurate one. He gave an example of a
122 recent Massachusetts case involving a brother killing a brother, within a family with a
123 history of criminal behavior. He used this point to explain that the tragic reality is that
124 oftentimes criminal behavior trends run within families, and to ignore the potential of
125 these trends would be regrettable.
126

127 Mr. Denio echoed these thoughts, and expanded on them. He explained that he felt
128 privileged to serve on a committee with a leadership role in this field. He stressed that
129 legal issues also had to be taken into consideration, so that future generations of CODIS
130 could be stimulated to move in a forward direction that can stand up to legal challenges.
131

132 Dr. Eisenberg explained that the first few successes in the field of familial searches have
133 been "accidental." He further stressed that any approach in Virginia would have to be on
134 a case-by-case basis, not haphazardly. Anything else runs the risk of being pointless, or
135 expensive. He stated that, since no other state has done the legwork, it would be wise to
136 examine the steps taken in the UK.
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138 Dr. Rudin agreed, informing the subcommittee that the UK has developed a formalized
139 and published intelligence database

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141 Ethical issues from a medical genetics perspective:

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143 Dr. Krane drew the Subcommittee's attention to the articles that he had provided with the
144 materials. The first is an article by Daniel Grimm published in the June 2007 publication
145 of the Columbia Law Review entitled "The Demographics of Genetic Surveillance:
146 Familial DNA Testing and the Hispanic Community." The second was a memorandum
147 provided by Sheldon Krimsky, a Visiting Scholar for the American Civil Liberties Union.
148 Dr. Krane suggested that these ethical questions had been submitted to the Subcommittee
149 for consideration. He also suggested that the role of the Subcommittee was not to make a
150 judgment regarding these issues, but rather to draw the policy board's attention to it.

151
152 Dr. Bieber stated that, if case driven, many of the potential concerns of genetic
153 surveillance are assuaged. He asserted that no one was advocating large-scale random
154 searches. Dr. Eiserberg concurred, stating that genetic profiles were included in the
155 database, not population information.

156
157 Discussion continued regarding ethical considerations.

158
159 Dr. Bieber inquired if Mr. Marone had received any inquiries or input from user agencies
160 regarding the possibility of using familial searches to generate more investigative leads.
161 Mr. Marone responded that not one request had been received from law enforcement.

162
163 Mr. Marone continued, suggesting that prior to bringing in investigators in on
164 discussions, the Department needed to know what capabilities even exist for these types
165 of searchers. He expressed concern that, not only do we not have all of the answers, but
166 we don't even know all of the questions.

167
168 Dr. Bieber expressed surprise that inquiries have not been made, since familial searches
169 over in Europe are driven almost exclusively by requests from law enforcement. Dr.
170 Rudin suggested that perhaps the answer in cultural, that here in the U.S. individual
171 liberty is a higher concern.

172
173 Mr. Marone concurred with her statement, explaining that the Department is not even
174 allowed to share statistical data with anyone other than law enforcement in furtherance of
175 a criminal investigation.

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177 Discussion continued on the involvement of law enforcement in different aspects of
178 familial searches.

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180 Current research on familial searches:

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182 Dr. Krane prefaced the next topic by explaining that the sub-topics had already been
183 discussed. The three methods: Monte Carlo simulations, kinship analysis likelihood ratios
184 with thresholds and pre-screening, and attaching weight to subsequent matching profiles,
185 were re-summarized briefly.

186
187 Discussion then turned to the result of the Subcommittee's meetings. Dr. Rudin expressed
188 an interest in meeting with the policy makers to discuss familial searches, and the ground
189 that had been covered by the Subcommittee. Dr. Krane agreed, reiterating his belief that
190 the Subcommittee had an obligation to draw attention to the ethical issues, and leave it at
191 that. He explained that his ambition was to create a brief, substantive report for the
192 Committee, including ethics, mathematical components, and investigative considerations.
193 General discussion ensued.

194

195 Recommendations for the SAC and FSB:

196

197 After some discussion, Dr. Krane stated that it was his intent to create a report for the
198 Subcommittee to present to the Committee, summarizing the discussions that had taken
199 place at the prior two meetings. A draft of this report was circulated, and discussion
200 ensued.

201

202 After lengthy discussion, a full report was drafted. Dr. Bieber suggested that perhaps the
203 report should be submitted as a draft to allow for later edits, but general consensus was to
204 create a final report and allow the SAC to make changes as they desired. Dr. Bieber then
205 made a motion to submit the report as is to the SAC. Dr. Eisenberg seconded the motion.
206 The motion carried unanimously.

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208 Public comment:

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210 Dr. Krane asked if there was any public comment. There was none.

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212 Selection of future meeting date(s):

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214 There was discussion of whether or not to schedule a tentative meeting of the
215 Subcommittee prior to the next Committee meeting. The consensus of the subcommittee
216 was to wait until the Scientific Advisory Committee met, and allow the larger body to
217 determine whether another meeting was necessary.

218

219 Dr. Eisenberg made a motion to await guidance from the Scientific Advisory Committee
220 prior to scheduling any further meetings of the Subcommittee. Mr. Denio seconded that
221 motion. The motion passed unanimously.

222

223 Adjourn:

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225 The meeting was adjourned at 7:03 pm.

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