Bode Cellmark
FORENSICS
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Forensic Case Report
December 4, 2015

To:
Det. M/Sgt. George Pigford
Wilmington Police Department
300 N. Walnut Street
Wilmington, DE 19801

Bode Cellmark Case #: CCC1520-0400
Agency Case #: 30-15-72585

List of evidence received on October 7, 2015 for possible DNA analysis:

Bode Cellmark Sample Name	Agency Sample ID	Agency Description
CCC1520-0400-E01	HL-1a	Labeled as "One set of swabs from grip of handgun"
CCC1520-0400-E02	HL-1c	Labeled as "One set of swabs from trigger of handgun"
CCC1520-0400-E03	HL-1d	Labeled as "One set of swabs from cartridges of handgun"
CCC1520-0400-E04	HL-1e	Labeled as "One set of swabs from blood on handgun"
CCC1520-0400-R05	BM-5	Labeled as "One blood card from Jeremy McDole"

DNA Processing, Results, Conclusions, and Statistics:

The evidence was processed for DNA typing by analysis of the 13 CODIS Short Tandem Repeat loci, the Penta E locus, the Penta D locus, and the Amelogenin locus using the Promega PowerPlex® 16 kit.

1. A DNA profile was obtained from sample CCC1520-0400-R05 (Jeremy McDole).

2. The same DNA profile was obtained from samples CCC1520-0400-E01 and CCC1520-0400-E04 and is consistent with a male contributor.

   The DNA profile matches the DNA profile obtained from sample CCC1520-0400-R05 (Jeremy McDole).

   The probability of randomly selecting an unrelated individual with this DNA profile at 15 of 15 loci tested is:
   1 in 76 septillion in the US Caucasian population
   1 in 550 quintillion in the US African American population
   1 in 5.8 septillion in the US Hispanic population

3. The DNA profile obtained from sample CCC1520-0400-E02 is consistent with a mixture of at least two individuals including at least one male contributor.

   The individual associated with sample CCC1520-0400-R05 (Jeremy McDole) cannot be excluded as a possible contributor to the mixture DNA profile obtained from sample CCC1520-0400-E02.

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DNA Processing, Results, Conclusions, and Statistics (continued):

The estimate of the proportion of individuals in the general population that would be included as possible donors to the mixture at 4 of 15 loci tested is:

1 in 340 individuals in the US Caucasian population
1 in 240 individuals in the US African American population
1 in 250 individuals in the US Hispanic population

The following loci were not used in the statistical calculation due to the possibility of allelic drop out: D3S1358, TH01, D21S11, D18S51, Penta E, D13S317, D7S820, Penta D, vWA, TPOX, and FGA.

4. The DNA profile obtained from sample CCC1520-0400-E03 is consistent with a mixture of at least two individuals including at least one male contributor. Due to the possibility of allelic drop out, no conclusions can be made on this mixture profile.

See **Table 1** for summary of alleles reported for each sample.

Notes:

1. Testing performed for this case is in compliance with accredited procedures under the laboratory's ISO/IEC 17025 accreditation issued by ASCLD/LAB and ANAB. Refer to certificates and scopes of accreditation for certificate numbers ALI-231-T and AT-1672, respectively.
2. The DNA profiles reported in this case were determined by procedures that have been validated according to the standards established in the FBI's Quality Assurance Standards for Forensic DNA Testing Laboratories.
3. Any reference to body fluids in evidence descriptions are based on the written descriptions of the samples by the submitting agency.
4. The DNA extracts and submitted evidence will be returned to the Wilmington Police Department.

Report submitted by,

Jennifer Sampson, MFS
Senior DNA Analyst I

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Table 1: Analysis of Short Tandem Repeat Loci

Locus	CCC1520-0400-E01a1	CCC1520-0400-E02a1	CCC1520-0400-E03a1	CCC1520-0400-E04a1	CCC1520-0400-R05a1 (Jeremy McDole)
D3S1358	15, 16	15, 16, 17, (18)	15, 16	15, 16	15, 16
TH01	8, 9	(7), 8, 9	8, 9	8, 9	8, 9
D21S11	28, OL 33.1	(26), 28, OL 33.1	28, OL 33.1	28, OL 33.1	28, OL 33.1
D18S51	15, 19	15, 17, (18), 19	(15), (16), 19	15, 19	15, 19
PentaE	8, 9	8, 9, (11)	8, 9	8, 9	8, 9
D5S818	9, 12	9, (11), 12	9, (11), 12	9, 12	9, 12
D13S317	12, 12	(11), 12	12, 12	12, 12	12, 12
D7S820	10, 11	(8), 10, 11	10, 11	10, 11	10, 11
D16S539	8, 12	8, (9), (11), (12)	8, (11), 12, (13)	8, 12	8, 12
CSF1PO	8, 11	7, 8, 11	8, 11	8, 11	8, 11
PentaD	2.2, 10	2.2, (9), 10, 12	2.2, 10	2.2, 10	2.2, 10
Amelogenin	X, Y	X, Y	X, Y	X, Y	X, Y
vWA	17, 18	(15), 17, 18	17, 18	17, 18	17, 18
D8S1179	14, 15	14, (15)	(13), 14, 15	14, 15	14, 15
TPOX	8, 9	8, 9, (11)	8, 9, (11)	8, 9	8, 9
FGA	19, 20	19, 20, 22	19, 20	19, 20	19, 20

() = Minor Allele OL = Off Ladder Allele

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