



STATE OF MICHIGAN
DEPARTMENT OF STATE POLICE
FORENSIC SCIENCE DIVISION

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LABORATORY REPORT

Laboratory No. : GR19-4968
Investigating Ofcr. : Kristin Case
Agency : BLPD
Agency No. : 15-963

Record No. : 4
Date Received : June 27, 2019
Time Received : 10:52 a.m.
Date Completed : July 24, 2019

Nature of Offense:

1100-1 - Sexual Assault CSC 1st

Suspect(s):

Miller, Thomas

Evidence:

GR19-4968-1Ce Vaginal wall/cervical swabs-nonsperm fraction (*analyzed under record #2*)

GR19-4968-1Cs Vaginal wall/cervical swabs-sperm fraction (*analyzed under record #2*)

GR19-4968-3Ad Thomas Miller- DNA cutting
GR19-4968-3Ax Thomas Miller (extracted DNA)

Results of Examination:

DNA recovered from the above submitted sample(s) was processed using the polymerase chain reaction (PCR) and the PowerPlex® Y23 system.

Conclusions:

A Y-STR haplotype was obtained from item **GR19-4968-3Ax**

The Y-STR results for item **GR19-4968-1Ce** (vaginal wall/cervical swabs- nonsperm fraction) indicate the presence of at least two male contributors. The major Y-STR haplotype identified in item **GR19-4968-1Ce** (vaginal wall/cervical swabs- nonsperm fraction) matches the Y-STR haplotype from item **GR19-4968-3Ax** (Miller, T.) and would be expected to match all other paternally related males. No comparisons or conclusions can be made regarding the minor types obtained from item **GR19-4968-1Ce** (vaginal wall/cervical swabs- nonsperm fraction).

This report contains the conclusions, opinions, and/or interpretations of the laboratory analyst whose signature appears on this report. This analyst is qualified by education, training, and experience to perform this analysis and does so as part of his or her regular duties. The analysis was conducted in an MSP laboratory accredited under the ASCLD/LAB international testing program since July 26, 2012. The relevant supporting data upon which the expert opinion or inference was made are available for review/inspection.
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Conclusions (cont.):

The major Y-STR haplotype observed in item **GR19-4968-1Ce** (vaginal wall/cervical swabs- nonsperm fraction) was searched against a known database and would be expected to be observed in

Population Database	Haplotype Frequency	Profile Probability	Match Probability
Caucasian males	3 in 7348	1 in 962	807 times
African American males	1 in 6190	1 in 1316	1042 times
Hispanic males	0 in 4728	1 in 1580	1201 times

The Y-STR results for item **GR19-4968-1Cs** (Vaginal wall/cervical swabs-sperm fraction) indicate the presence of at least two male contributors. Due to the complexity of the mixture, the observed results are inconclusive.

Population Statistics:

Population statistics are offered to estimate the frequency of occurrence of the reported Y-STR haplotype in the general population. Y-STR markers are found on the non-recombining region of the Y chromosome. The markers are said to be linked because recombination does not generally occur. The counting method is used for these reasons. The Y-STR database located at <http://usystrdatabase.org> utilized to estimate the frequency of the haplotype in the general population. The haplotype frequency corresponds to the number of individuals in the population database that have a matching haplotype to the evidence. The profile probability incorporates a 95% confidence interval and corresponds to the probability of selecting a male at random from the population that has a matching haplotype to the evidence and is not paternally related to the evidentiary haplotype. The match probability is the number of times more likely that the reference individual is the source of the evidentiary haplotype than a randomly selected male in the population that is not related to the reference individual.

Disposition of Evidence:

The known reference sample associated with this record number was consumed during analysis and will not be returned to the submitting agency. All other DNA evidence and extracts will be returned to the submitting agency.



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