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VETERINARY GENETICS LABORATORY
SCHOOL OF VETERINARY MEDICINE
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VGL FORENSICS, an ASCLD/LAB International Accredited Laboratory

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DAVIS, CALIFORNIA 95616-8744

April 23, 2014

Dennis Thibeault, D.V.M.
Green Valley Veterinary Services
122 Atwoodville Rd.
Mansfield Center, CT 06250

Re: Canine Hybrid Testing

Items Received

On April 7, 2014, the VGL Forensic Laboratory received swab samples submitted by you for the purpose of identifying wolf genetic input. The samples arrived with intact seals and were assigned the following laboratory case numbers:

- FCD386-1 981020011134762
- FCD386-2 981020011095079
- FCD386-3 981020011142737
- FCD386-4 981020011122960
- FCD386-5 981020011125812
- FCD386-6 981020011115378
- FCD386-7 981020011098339

Tests Conducted

DNA extraction and quantification were performed according to standard operating protocols. The extracts were tested with a panel of 38 canine-specific autosomal short tandem-repeat (STR) DNA markers, two sex-linked markers, and a panel of 7 Y-chromosome markers. The extracts were also sequenced for the canine hypervariable region one (HVI) according to standard operating protocols. Resulting sequences were compared to the VGL-Forensics database and NCBI's GenBank. Y-chromosome haplotypes were compared with the VGL-Forensics Y-chromosome database.

Population assignment with the Structure software program was performed on the autosomal markers using our dataset of wolves and domestic dogs including German Shepherds and Arctic wolves.

Results and Conclusions

The mitochondrial DNA haplotype found in the submitted samples is commonly observed in domestic dogs and not in wolves. The Y-chromosome haplotype found in the submitted samples has been observed in dogs and in a single wolf in our database, so it is inconclusive for the presence of wolf genetic input.

Population assignment using Structure¹ did not identify wolf genetic contribution in any of the samples that meets our reporting threshold for hybrids. It is my opinion that the individuals tested as FCD386-1 through FCD386-7 have no recent wolf ancestry.

¹ Pritchard *et al.* (2000)

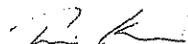
Disposition

Remaining samples will be returned to you within 30 days of this report. All DNA test results will remain on permanent record at the Veterinary Genetics Forensic Laboratory. A full record of the work is available at the VGL Forensics laboratory.



Digitally signed by Elizabeth Wictum
DN: cn=Elizabeth Wictum, o=UC
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email=ejwictum@ucdavis.edu, c=US
Date: 2014.04.23 16:30:36 -0700

Elizabeth Wictum
Analyst, VGL Forensic Laboratory
UC Davis School of Veterinary Medicine



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Teri Kun
Forensic Scientist, VGL Forensic Laboratory
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