Research Activity Report Supported by "Leading Graduate Program in Primatology and Wildlife Science"

(Please be sure to submit this report after the trip that supported by PWS.)

| | 2017.6.4 |
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| Affiliation/Position | Wildlife Research Center/M1 |
| Name | Momoko OKA |
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1. Country/location of visit

WRC, Kyoto

2. Research project

Genome Science Course

3. Date (departing from/returning to Japan)

2017.5.22-5.26 (5days)

4. Main host researcher and affiliation

Dr. Murayama, Professor at WRC, Kyoto University

5. Progress and results of your research/activity (You can attach extra pages if needed)

Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.

This is a schedule of Genome Science Course.

5/22 DNA extraction, PCR amplification

5/23-25 Electrophoresis (for sexing), Running by 3130xl sequencer genetic analyzer

5/26 Data analysis and preparation for poster presentation

5/30 Poster presentation (International seminar)

Our aim was to understand the way to analyze the DNA which is extracted from fecal samples. This genome science course focused on animal DNA and we conducted sex identification and genotyping of behavior-related candidate genes.

(1) Sex identification

We used the region which is located on sex chromosome and the length of which is different between X and Y chromosomes. In this region, male samples yield around 224bp and 445bp bands, while female sample yield 224bp band only.

We used 25 samples which was collected at Yakushima, and we succeeded to identify the sex of 20 samples.

(2) Genotyping of catechol-O-methyltransferase (COMT)

COMT is a modulator of dopaminergic neutral transmission. T carrier shows high cortisol level and they are less aggressive. We compared allele frequency of monkeys in Yakushima with those in other groups.

As a result, two individuals in Shodoshima had a haplotype (HT4:T-T SNPs), which was not reported in the previous study. As for the T-allele frequency in intron 4, Shodoshima and Yakushima were higher than Koshima.

During this course, I learned about the method of DNA sequence analysis. We worked as a team and shared valuable experience working together and finishing a project. It was very wonderful experience for me.

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At the International seminar: with Monkey group

6. Others

I would like to thank the PWS for the all support for this course. I also thank professor Murayama and staffs for helping me during this course. Thank you.