**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.)

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| | 2015. 08. 04 |
| **Affiliation/Position** | Primate Research Institute/D2/L4 |
| **Name** | Rafaela Sayuri Takeshita |

**1. Country/location of visit**

Italy (Rome), Austria (Vienna)

**2. Research project**

European Federation for Primatology, visit the Unit of Cognitive Primatology & Primate Center in Rome and the University of Vienna

**3. Date (departing from/returning to Japan)**

2015.08.24 – 2015. 08. 04 (12 days)

**4. Main host researcher and affiliation**

Dr. Elisabetta Visalberghi, Istituto di Scienze e Tecnologie della Cognizione, CNR

Dr. Bernard Wallner, Department of Anthropology, University of Vienna

**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.

About one year ago, when Dr. Elisabetta Visalberghi became my officially language mentor, we started to exchange emails about a possible visit of me to Rome, especially after my supervisor and I came up with an idea of a project to conduct in the future with the capuchin monkeys at their institute.

Coincidentally, the next European Federation for Primatology would be held in Rome, so that would be a perfect timing to meet researchers, to get to know more about the ongoing studies in Europe, and to practice one of my foreign languages.

The conference lasted four days (including a welcome reception), and approached many topics in primatology, including endocrinology, behavior, cognition, and reproduction. It was not as big as IPS, but it was very informative and well organized.

Following the conference, I met with Dr. Elisabetta and other researchers at the Istituto di Scienze e Tecnologie della Cognizione. They kindly showed me the enclosure of the capuchin monkeys. In total, there are 27 individuals, between 5 and 33 years old. They are separated in 4 groups, and the number of animals per group varies from 5 to 14, including males and females in all groups. One interesting thing about this setting is the birth control. Not all individuals are sterile, but in one group either males or females are castrated or vasectomized. Thus, it is still possible to breed animals by mixing fertile males and females from different groups.

I could also follow one experiment, conducted by the student Francesca di Petrolli and Antonia. The study was about perception of economy in monkeys. They were in the training phase, for 3 conditions: (1) Tokens valid and familiar; (2) tokens valid and unfamiliar (novel objects); and (3) tokens unvalid. The subjects were very collaborative and willing to participate in the study. I noticed that even outside the experimental set up, some animals like to hand over small objects through the fence, because they are used to the tasks. This also seemed very good as enrichment for the group. Unfortunately I was not allowed to take any pictures due to their policy, but I really enjoyed watching the monkeys and the study.

After the experiment, we discussed about the possibility of conducting a study there in the future. In my current research, I compare the hormonal pattern between one species of the old world (Japanese macaques) and one ape (orangutan). The next step would include a species of the new world. Moreover, the hormones I'm focused on seem to have a relationship to memory and cognition. For this reason, the capuchin monkeys would be a perfect model to fill in the gaps of hormonal changes in an evolutionary scale and with cognitive ability, which could be useful for studies on

the development of medical treatment for cognitive disorders such as Alzheimer and dementia. Dr. Elisa approved the suggestion and said that she would be happy to collaborate with us. I hope I can get funding after my PhD in order to conduct this study in the future.

After Rome, I flew to Austria to meet Dr. Bernard Wallner and Lena Pfluger from the department of Anthropology of the University of Vienna. They showed their department and talked about their ongoing studies, including research with humans, guinea pigs and primates. Lena is a PhD student working on genetics of a semi free-ranging group of Japanese macaques in Austria. Unfortunately I could not go to the field site because my visit was short, but they told me that in 1997, around 40 monkeys from Mino city in Osaka were relocated to Carinthia in Austria. The animals are kept in a 4 ha vegetated enclosure, and are fed daily with fruits, wheat, and pellets. Currently, there are 155 monkeys in the site. To control the population, the females are castrated after giving birth to the third infant. Because the climate in Austria is similar to Japan, the monkeys also have seasonal changes, with mating season in winter and birth season in spring.

Lena told me about her plans to study the genetic diversity of macaques in Japan in order to find out more about the history of the animals and the differences among the many populations. She took me to the veterinary university, where she conducts the genetic analysis. I was amazed by the technology that they have in the lab. Her colleagues showed me the machines one by one and even some results of their tests to prove how precise their techniques can be. As I my supervisor Mike told me after he visited them, I believe I would gain a lot of experience if I could spend some time there after my PhD to conduct research and learn their techniques. Lena, on the other side, would benefit in Japan due to the wild populations of Japanese macaques. Dr. Bernard also agreed to collaborate with us and is willing to help me to go there as well. Thus, we had a long chat about possible funding to make this exchange possible, with Mike hosting Lena at PRI if she could come.

In summary, this trip was very productive for me. It improved my knowledge on European primatology, on cognitive studies, increased my social network and opened the doors for my future on science.

Endocrine lab at the University of Vienna

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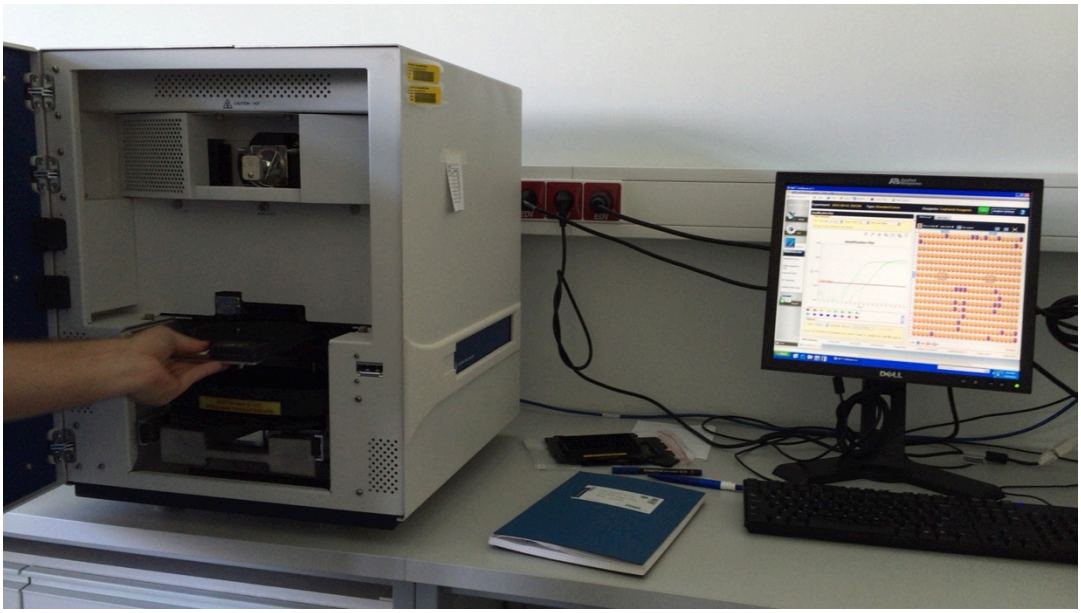

Genetics lab at the veterinary university in Vienna

Horses at the veterinary university in Vienna

## 6. Acknowledgements

I would like to express my sincere gratitude to the PWS program and Prof. Tetsuro Matsuzawa for supporting this trip. I also thank my advisors, Prof. Michael Huffman for the contact with my prospect collaborators and Prof. Fred Bercovitch for his guidance and support. Many thanks to Dr. Elisabetta Visalberghi and the students Francesca and Antonia for showing me the capuchin monkeys and for letting me watch their experiments; and specially to Dr. Bernard Wallner, Lena Pfluger and colleagues for hosting me in Vienna and showing me the labs and the beautiful city.

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