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.)

	2018.08.31
Affiliation/Position	Primate Research Institute/M2
Name	Xiaochan Yan

1. Country/location of visit

Indonesia, Sulawesi

2. Research project

Field work of Macaca nigrescens in Sulawesi Island

3. Date (departing from/returning to Japan)

2018. 8. 5 – 2018.8.11 (7days)

4. Main host researcher and affiliation

Dr. Bambang Suryobroto, Dr. Kanthi Arum Widayati (Lecturer, Bogor Agriculture 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.

During this visit, I conducted research on *Macaca nigrescens*, closely relative to *Macaca nigra*. I collected saliva samples and conducted avoidant behavioral experiment. The schedule was following,

2018/8/5 Left for Jakarta 2018/8/6 Arrived at Manado, Sulawesi 2018/8/7-9 Field work in Gorontalo and Manado, northern Sulawesi 2018/8/10 Backed to Manado 2018/8/11 Left for Japan

From August 6 to 11, I visited Sulawesi Island accompanying by Dr. Bambang, Dr. Kanthi. During this trip, I enhanced my skills of taking saliva from monkeys and conducting behavioral experiment. It's a chance for me to get very close to monkeys and have communication with them. Based on previous studies on PTC and salicin avoidant behavioral experiments, 2 mM PTC and 40 mM salicin were adopted to test avoidant behavioral. Totally, 10 individuals participated in my experiment, 1, 6, 3 of *Macaca nigra, Macaca nigrescens* and *Macaca hecki*, respectively. Surprisingly, one individual of *Macaca nigrescens* showed non-sensitivity to PTC, which was not found in our previous result. So far, by studying bitter taste receptor TAS2R38 in total four species in northern Sulawesi, we found that *M. tonkeana* and *M. nigra* exhibited independent evolution of PTC non-sensitive phenotype. In the near future, I will conduct genetic analysis of the individual of *Macaca nigrescens* to carry out the genetic mechanism of non-sensitive phenotype. Then, I can discuss the evolution of bitter taste in the four species.

In addition to monkeys, I tested bitter sensitivity of Cuscus, a large marsupial species. It showed entire acceptance to PTC and salicin. Saliva sample was collected as well.

Finally, I would like to express my gratitude to Dr. Bambang, Dr. Kanthi and Dr. Terai, without their help, I cannot conduct my experiment. Thank PWS a lot for supporting this trip.

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Fig 1. Juvenile of M. nigrescens



Fig 2. Building relationship with infant



Fig 3. Welcome to Indonesian National Revolution day





Fig 4. Captive cuscus