JSPS Short-term fellowship report

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Host supervisor: Prof. Shinya Kuroda

Period of stay in Japan: January to July 2010 (6 months)

In 2010, I got the opportunity to do two things I had wanted to do for a long time, one professionally, and one personally. After a PhD in computational neuroscience, I wanted to spend some time in a laboratory doing biochemical experiments that would put my computational theories to the test. And after years of fascination with Japanese culture and language, I wanted to spend a longer period of time in that wonderful country.

A JSPS-supported visiting fellowship gave me the opportunity to do both. I spent six months in Prof. Shinya Kuroda's lab at the University of Tokyo to study the intriguing activation patterns of CaMKII, a key protein in learning and memory. Systems neuroscience being quite a young and interdisciplinary field, there are very few laboratories in the world that combine a track record in experimental research with an expertise in computational modelling. Prof. Kuroda's group is one of these, aiming for students and post-docs to become "bilingual" in both experimental and computational biology. This gave me an ideal environment to learn some cell culture and biochemistry techniques and apply them to my problem, while at the same time being able to further develop my computer models. The combination of theory and wetlab work yielded valuable new insights into how the proteins that mediate memory interact and regulate each other under different conditions.

People in the group were extremely helpful, both in scientific matters and in questions of daily life, such as helping me find accommodation, open a bank account and register with the civic center. This was especially important, since the tight 12-hours-a-day work schedule did not leave much room to deal with such things. Spending long days in the lab, I came to appreciate the proximity

of my accommodation (within walking distance, just 15 minutes across campus) and the ubiquity of 24-hour "conbini" stores, which provide everything needed for survival (food, drink, protective face masks, manga).

Unfortunately, I had less time than I would have liked to systematically improve my Japanese, although I suspect I picked up a lot from listening to people, deciphering e-mails and watching breakfast TV. To new fellows going to Japan, I would strongly advise learning some of the basic phrases beforehand. It is also worthwhile spending an afternoon to learn katakana, which is the script used to encode words of foreign (i.e. often English) origin. This is especially helpful in science, where many of the terms used are international, and many samples or pieces of equipment will be labelled in katakana.

Apart from that, enjoy your work, try to see as much as possible of Japan and do not (repeat: not!) attempt to climb Mount Fuji during rainy season.