# Final Report of the short-stay study abroad program in FY 2008

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## I. Basic Information

# II. University of California at Berkeley (UCB)

The University of California at Berkeley, founded originally in the mid 19<sup>th</sup> century, has been and still is one of the most prominent universities worldwide, with high academic credentials and innovative researches in various fields ranging from engineering and "pure" science to social sciences, arts and humanities. Until today twenty faculty members from various fields and scientific backgrounds have won Nobel prices, while the institution became well known, among others, for the discovery of vitamin E and the identification of the flu virus.

UC Berkeley numbers 35,409 students, among who 25,151 are undergraduates and 10,258 graduate students, with 130 academic departments and more than 80 interdisciplinary units. UCB is divided into 14 colleges and schools subdivided into departments with Electrical Engineering, Computer Science, Molecular and Cell Biology and Political Sciences being the most popular fields of study.

(For further information on the history and achievements of UCB see http://berkeley.edu/about/).

### **III.** Preparation and Departure

Palaeopathology and the study of diseases and health of the past populations is an intriguing new field of Anthropology/Archaeology which provides valuable information on the lifestyle of the past populations and the History of Medicine and diseases in ancient times. As part of my PhD research on the living conditions and health of Edo period populations (17<sup>th</sup>-19<sup>th</sup> centuries AD), I focus on metabolic and infectious diseases, stress indicators, stature and growth as important factors affecting the quality of life of those individuals. Bone mass and bone density can provide significant information on the quality of life, nutritional status and possible implications of the environment to the

general health of those individuals. Questions concerning gender and social status in relation to the presence of the disease can shed more light to its causation, origins and clinical expression.

The proposal for collaboration with Dr. Sabrina Agarwal from UCB on the bone mass and density of the rural population of Kawaguchi from Saitama prefecture, in combination with the permission for analyses related to histology and radiometry granted by the Kawaguchi city council, was a good opportunity to further elaborate and investigate the lifestyle of that specific population. In summary, the results of this analysis combined with those of the macroscopic and radiographic observation of the pathological conditions of the people of Kawaguchi will be able to reconstruct a more complete profile of the post-medieval rural Kanto areas.

This collaboration would not have been possible to take place without the Short Study Abroad program offered to graduate students by The Graduate University for Advanced Studies, which came to my attention through my supervisor Dr. Hasegawa Mariko, Department of Evolutionary Studies of Biosystems. The application procedure was quite straightforward and included re-entry visa in Japan for the applicant, completed application form explaining the reasons for applying for the current fund, a recommendation letter from my supervisor at Sokendai, a letter of support from the collaborating supervisor at UCB, a detailed financial plan, detailed itinerary and a pledge to Sokendai.

In addition to the procedures at Sokendai, further documentation and contact with the academic coordinator of the Department of Anthropology at UCB was necessary. The initial contact took place in the early November in order to start the procedures necessary for obtaining a J1 (Visiting Scholar) visa in the US, which resulted in receiving the necessary visa documentation after a month. These documents were then submitted to the American Embassy in Tokyo along with the additional documents necessary for any general visa application.

Prior to the trip to the US in early March, accommodation was a strong issue, as UCB cannot offer accommodation to any visitor apart from students. The Department was very helpful in suggesting alternative solutions and brought me into contact with current students who would be able to offer some help from that aspect.

In conclusion, the six month preparation period prior to the trip scheduled in March was very important and necessary in obtaining all the permissions required from both sides as well as arranging all the details concerning accommodation.

#### IV. Study/ Research at UCB

Through the first week of the arrival at Berkeley, meetings concerning the final procedures related to medical coverage, visa payment and acquisition of the university card and privileges took place. In addition, after permission, I audited three classes, one of Dr. Junko Habu, "Anthropology 129C: Hunter-Gatherer Archaeology", another of Dr. Steve Shackley "Anthropology 134B: Archaeological Practicum" (on X-ray Fluorescence Spectrometry (XRF)) and "Anthropology 231: Advanced Topics in Bioarchaeology" of Dr. Sabrina Agarwal. Moreover, we had to actively participate in weekly lab meetings during which we would discuss new articles or research topics related to the Skeletal Biology lab. At this point it is necessary to mention, that contrary to other universities in Europe and Asia, in the US, graduate seminars and lectures are more focused on the student who is required to actively participate in the class, lead the discussion, express his/her opinions and ideas in a logical manner with supporting arguments, promote the conversation and offer a new aspect to the topic under study. The professor in charge would have minimal participation, limited to the role of the co-coordinator of the discussion and ask questions to intrigue the students and think of possible other aspects of the same topic.

As far as research is concerned, during my stay in Berkeley, I received training in all the stages of preparation of the samples both for the histology and the radiometry analyses. I was in charge of preparing and analyzing all the Edo samples brought to UCB under the guidance and supervision of Dr. Sabrina Agarwal and her graduate students. The Skeletal Biology lab bore all the expenses of the x-rays necessary for the radiometry analysis as well as for the chemicals and equipment of the histological analysis. The investigation is still under study and the results will be available in the following months.

UCB offers an excellent educational environment to both students and visiting scholars with a wide range of activities additional to the classes and various seminars. Theatre, sports facilities and numerous conference rooms with invited speakers in a weekly routine from all over the world, are open to everyone and provide the opportunity to any visitor, student and even local resident to experience a whole new world in the field of arts and sciences.

### V. Expenses

Round trip/Air fare	89,000¥
Round trip from and to the airport	6,000¥
Living expenses	170,000¥
Fee for Overseas travel insurance	10,000¥
Departmental fees/Access to privilages/Other	100,000¥
Total expenses: 375,000¥	

#### VI. Advice to future applicants

UCB is an excellent academic environment for any applicant who wishes to study and do research. The University can boast excellent educational facilities, numerous and rich libraries, a wide variety of online resources in various fields from Biology, Astronomy to Arts and Humanities. It is a center of knowledge where scientists from all over the world meet, exchange ideas and promote science, giving the opportunity to any visitor to discuss and exchange ideas on in his/her research field, get accustomed to new scientific techniques, network and achieve collaborations with universities worldwide.

However, in order for all the above to take place the prerequisite of excellent or good knowledge of the English language is of significant importance. Any applicant interested in visiting UCB or any other university in the US would be advised to try and achieve a high level in English. As already mentioned classes are based on the active participation of the students and not of the professor therefore it is essential for any participant in the program to have excellent knowledge of English from a daily and academic point of view. This would help not only in a better transition to the educational and academic system in the US, but also to a better interaction with the people/students in an everyday level.

Closing this short report I would like to thank both Dr. Mariko Hasegawa and Sokendai that gave me the opportunity, through this short study program abroad, to be able to collaborate and do research in a world famous University which boasts academic excellence in all fields, as UCB. Through this program I was able to gain experience and training in new techniques related to histology and radiometry, attend classes of world famous professors in their fields and exchange ideas and discuss about my research with students and professors specialized in Bioarchaeology/Bioanthropology. Last but not least, I would like to thank Dr. Sabrina Agarwal and the Department of Anthropology at UCB for all the support and help that they gave me during my stay there, the patience they showed with any difficulties that I may have had due to the differences in the educational system and the knowledge, advice and help they offered both from a scientific and everyday point of view.