

Form B-5

Date (日付)

29/09/2012 (Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-
(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): Phuong Thi Thu Le (ID No. P11776)
- Participating school (学校名): Saitama Prefectural Urawa Daiichi Girls' High School
- Date (実施日時): 29/09/2012 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): Investigating mitochondrial DNA replication and transcription in body louse (in English)
- (in Japanese)
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

Mitochondria are complex organelles frequently referred to as the "powerhouse of the cell", playing a central role in metabolism, respiration and energy (ATP) production. Virtually all eukaryotic cells require the essential function of the mitochondria. A vast array of molecular and biochemical approaches have been used to acquire a greater understanding of the structure and function of this organelle. In the past three decades considerable effort has been devoted to the study of the mitochondrial genetic systems, particularly those systems involved in regulating mitochondrial DNA (mtDNA) replication and transcription. The mitochondrial genome's size, shape and gene organisation are extraordinarily diverse amongst different organisms. Many representatives of the higher animals, fungi, protists and plants are known to have their mitochondrial genetic information encoded on a single circular chromosome. Interestingly, in the human body louse, *Pediculus humanus humanus*, the mitochondrial genome is fragmented into 18 circular mini-chromosomes. Each mini-chromosome is approximately 3 kb and has 1-3 genes. My research concentrates on understanding the replication and transcription of the 18 mini-chromosomes.

Towards the end of the lecture, the students extracted total DNA from Kiwi fruit and Small

tomatoes.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 30 min (分)

◆Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

Presentation using Microsoft powerpoint. Experiment: Eight students volunteered get involved in extracting DNA from Kiwi and Tomatoes_____

◆Interpretation (ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

assistance by accompanied person_____

◆Name and title of accompanied person (同行者 職・氏名)

Professor Koichiro Tamura (Professor of Biology)_____

◆Other note worthy information (その他特筆すべき事項):

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。)