

(For JSPS Fellow)

Form B-5

Date (日付)

24/02/2015 (Date/Month/Year: 日/月/年)

1. 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): Dhermendra Kumar Tiwari (ID No. PU14010)
- Participating school (学校名): Kyuyo Senior High School, Okinawa
- Date (実施日時): 20/02/2015 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Fluorescent Protein and Bioimaging
(in Japanese) 蛍光タンパク質とバイオイメージング
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

Scientific ground:

Fluorescent proteins are the fluorescence emitting proteins found in many living organisms. Green fluorescent protein is the first fluorescent protein, which was discovered by Japanese scientist, Osamu Shimamura. This was the such a great scientific discovery that he got Nobel prize in 2008. In science dialogue lecture, I first introduced basic concept of fluorescence phenomena and commonly available fluorescent materials in our nature. I further introduced the brief method for the use of fluorescent proteins. Afterward, I introduced a few great applications of fluorescent protein in medical, scientific and daily life. At the end, I gave the brief introduction of photoswitching phenomena in a special class of fluorescent protein and their applications in high-resolution microscopy imaging. I summarized my talk with the future applications and the necessity of fluorescent proteins in science and in our life and the scientific future in this research field. Finally, I conducted a small 5 minutes quiz with students and they answered most of the questions in few attempts.

Non-Scientific ground:

At the end of my talk, I also introduced some cultural aspects, traditional food and famous historical destinations in India.

- Language used (使用言語): English
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 80 min (分), Q&A time (質疑応答時間) 20 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))
Projector for power point, scientific videos and brief discussion
 - ◆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))

Assisted by professor Takeharu Nagai

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

Takeharu Nagai (Professor), ISIR, Osaka University

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

Science dialogue lecture at high school was a great experience. I not only presented but learned lot of things from this lecture. I conducted a small 5 minutes quiz after the talk and most of the questions were answered by students with one or two attempts.

- 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。):

以前同様の企画で同行者として参加した時には、講義時間が 50 分と短かったが、今回は十分な講義および質疑応答の時間を取ることができた。そのため、より突っ込んだ話題提供と質疑応答ができたと思われる。目的が生徒との交流ではあるが、教師の方たちとの交流の時間を取ることができれば、教師自身のグローバル教育への積極性をもっと高まるかもしれない。