

(For JSPS Fellow)

Form B-5

Date (日付)

26/09/2014 (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): Utsunomiya Girl's High School
- Date (実施日時): 22/09/2014 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Fluorescent Protein
(in Japanese)
- 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 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 one or two 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) 50 min (分), Q&A time (質疑応答時間) 10 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, small experiment for fluorescent display, 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

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

Takeharu Nagai (Professor), ISIR, Osaka University

- ◆ Other note worthy 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. Although I feel that the time was very tight to explain basic scientific concepts of talk to high school students. However, I conducted a small 5 minutes quiz after the talk and most of the question was quickly 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。):

SSH に指定されている高校であったためか生徒のレベルが高感じられた。質問も多岐にわたり、生徒のみならず講演者にとっても有意義であったと思われる。惜しむらくは 50 分×1回という講義時間の短さである。例えば午後に 2 ないし 3 コマ開催できれば、より突っ込んだ話題提供が可能になり良いのではないだろうか。