

Form B-2
(FY2022)
Must be typed

Date (日付)
14日11月2022年 (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): Gabriel Martínez Gálvez (ID No. P21382)

- Name and title of the lecture assistant (講義補助者の職・氏名)

Suji Lee, Graduate Student

- Participating school (学校名): 美方高等学校

- Date (実施日時): 10日11月2022年 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目):

No title

- Lecture format (講義形式):

◆ Onsite ・ Online (Please choose one.) (対面 ・ オンライン (どちらか選択ください。))

◆ Lecture time (講義時間) min (分), Q&A time (質疑応答時間) min (分)

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

(講義方法 (例: プロジェクター使用による講義、実験・実習の有無など))

Lecture slideshow with videos using projector, DNA sequence alignment activity

- Lecture summary (講義概要): Please summarize your lecture within 200-500 words.

The lecture summarizes the scientific research I have conducted since my time as an undergraduate student. It covers basic topics in synthetic biology, genetics and gene editing, and induced pluripotent stem (iPS) cell biology. More specifically, I discuss the undergraduate and high school international genetically engineered machine (iGEM) competition and the use of engineering design principles for the generation of novel biological functions. I review the central dogma of molecular biology (process from DNA to protein), introduce DNA double-strand breaks and their subsequent repair as hallmarks of gene editing via CRISPR technology, and finally define important concepts in iPS cell biology such as pluripotency, cell differentiation and reprogramming, and their relevance in the context of personalized medicine. I conclude the lecture by talking about my how my current research combines the disciplines previously introduced, as it involves gene editing of iPS cells. I also introduce my research laboratory at Kyoto University, and take time to encourage students to persevere in their English education as a means to expand their world view and increase their competence for globalized interactions. In between the science talk, I take time to introduce myself as a person, my interests, as well as basic geographical and cultural aspects of my country, Colombia.

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

NA

- Impressions and comments from the lecture assistant (講義補助者の方から、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。):

今回の Science Dialogue に参加できて、すごく有意義な時間を過ごすことができました。研究をしながら高校生との交流の機会がほぼなかったため難しかったのですが、なるべく一般の方にも伝わるように発表の内容を調整していく中で私にもだいぶ勉強になった貴重な時間でありました。英語の講義だったのにもかかわらず、思ったより学生の皆さんが活発に参加してくれたこともあり、このプログラムがもっと拡大されてもっと多い学生に経験していただきたいと思っております。