

様式 A-1
(FY2023)

令和 5 年 10 月 4 日

サイエンス・ダイアログ 実施報告書

1. 学校名・実施責任者氏名: 千葉市立千葉高等学校・坂巻 諒一
2. 講師氏名: Dr. Yue Zhang (Mr.)
3. 講義補助者氏名: 大野 湧仁 様
4. 実施日時: 令和 5 年 9 月 29 日 (金) 14:00 ~ 15:30
5. 参加生徒: 1 年生 47 人、 2 年生 47 人、 3 年生 0 人 (合計 94 人)
備考: 理数科の生徒、普通科SSHコースの生徒、WSCプログラムの生徒、及び物理化学部の生徒
6. 講義題目: Exploring the Synergy of Organic Synthesis and Biology
7. 講義概要: O-フタルアルデヒド基を用いたペプチドの高効率マクロ環化とその応用
8. 講義形式:
対面 ・ オンライン (どちらか選択ください。)
 - 1) 講義時間 70 分 質疑応答時間 20 分
 - 2) 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)
プロジェクター使用による講義
 - 3) 事前学習
有 ・ 無 (どちらかに○をしてください。)
使用教材 講師からの講演要旨・英単語リスト、講義補助者による2日前の事前講義
9. その他特筆すべき事項:
特になし

Form B-2
(FY2023)
Must be typed

Date (日付)
30/09/2023 (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): Yue Zhang (ID No. P22334)

- Name and title of the accompanying person (講義補助者の職・氏名)
Yuto Ohno, PhD Student from Suga Lab

- Participating school (学校名): 千葉市立千葉高等学校

- Date (実施日時): 29/09/2023 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目):
Integrating Organic Chemistry and Biology to Solve Unanswered Questions

- 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) 60 min (分), Q&A time (質疑応答時間) 15 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))
Projector with slides

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

During the lecture, I began with a brief introduction to my educational background and explained my motivation for pursuing research, emphasizing what makes research so appealing to me. To illustrate these points, I provided several examples and discussed the advantages of participating in research studies. Subsequently, I took a more direct approach to explain what a PhD study is and showed how PhD study really related to the whole human knowledge. In the main section, which focused on the scientific topic, I introduced students to the fundamental concepts of chemistry, organic synthesis, and chemical biology. In the following learning section, I provided a comprehensive introduction to DNA and RNA, elucidating how our bodies utilize these molecules to produce the most vital components within us: proteins.

We then delved into the topic of protein and peptide, emphasizing the distinctions between them. In the final section, I introduced the students to how PCR (Polymerase Chain Reaction) works, helping them grasp the technology that play crucial role during the COVID-19 pandemic. Additionally, I offered a brief overview of our work at the Suga lab, where we are actively

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developing new peptide drugs targeting disease-related proteins.

After the lecture, students asked questions about the science topics that piqued their interest and inquired about their potential future plans in the field of research. Overall, my hope is that the lecture has ignited the curiosity of students already enrolled in the science high school, inspiring them to consider pursuing research in their future endeavors.

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

- Impressions and comments from the accompanying person (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。):

