SD 4445
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（学校用）

様式 A-1
(FY2023)

6 年 1 月 30 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：愛知県立岡崎高等学校・足立輝明

2. 講師氏名：Dr. Deborah M, SCHATZ-DAAS

3. 講義補助者氏名：なし

4. 実施日時：6 年 1 月 29 日（月） 16 : 00 ～ 18 : 00

5. 参加生徒：1 年生 22 人、 2 年生 28 人、 3 年生 0 人（合計 50 人）
   備考：文理混合

6. 講義題目：RNA 編集過程の研究

7. 講義概要：RNA 編集複合体の再構築とそのメカニズムについて

8. 講義形式：
   1) 講義時間 90 分　　質疑応答時間 30 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＋実験演習

   3) 事前学習
      ㊒ ・ 無 （どちらかに〇をしてください。）
      使用教材　講師からの講義概要をあらかじめ渡して、読ませておく。

9. その他特筆すべき事項：
   RNA のミクロな世界を身近に感じさせ、さらに的確な解説で興味深く伝えてもらいました。

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Form B-2
(FY2023)
Must be typed

Date（日付）
06/02/2024 （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）: Deborah Schatz （ID No. P22762 ）

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

- Participating school（学校名）: Okazaki High School

- Date （実施日時）: 29/01/2024 （Date/Month/Year:日/月/年）

- Lecture title（講義題目）:
How to developp a new technic to identify protein interactions

- 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） 70 min（分）, Q&A time（質疑応答時間） 30 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））
  I projected powerpoint slides with the hightschool projector

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

First lecture: I presented France, its culture, iconic food, monuments and few cities. Then I explained where my passion for science and research comes from and what does the researcher career looks like.
Second lecture: Mitochondria are small compartments present in almost all eukaryotes (fungi, plants, animals). Their role is to provide energy to the cell through oxidative phosphorylation, if mitochondria are not functioning correctly, it leads to severe diseases and often the death of the organism. My research at Kyoto university is about the RNA of plant mitochondria. The information contained in genomes is transcribed with high fidelity to RNA and then translated in proteins. But sometimes, the RNA undergoes precise sequence modifications, converting a Cytidine (C) into a Uridine (U) by a complex called Editosome. The editosome is in fact composed of several proteins that are essential for the activity but can vary depending of the target. Some of them have already been identified but we know that some essential factors are still missing. Classical approaches like Co-immunoprecipitation and Yeast two hybrid, have been used but can only detect strong and

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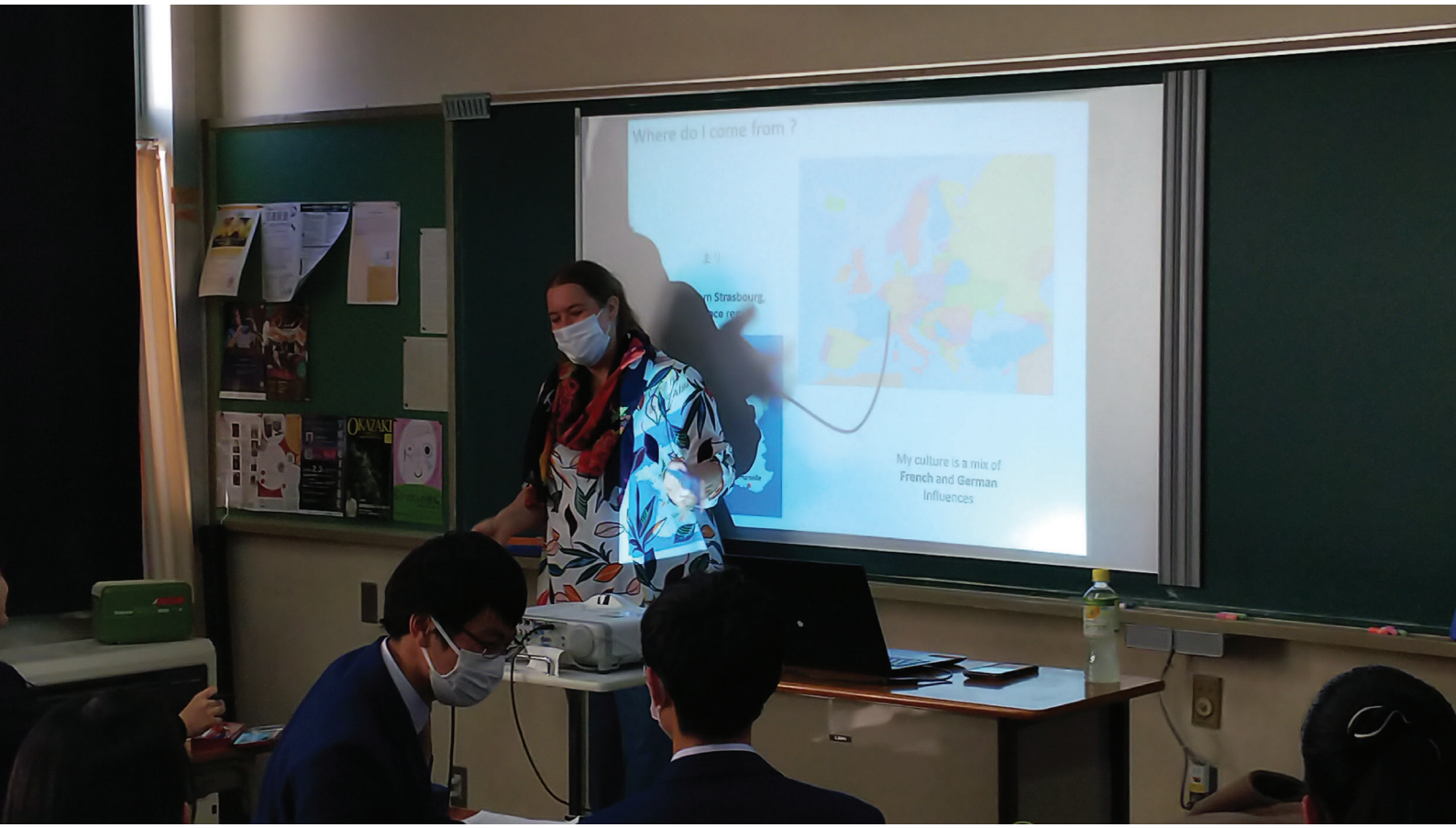
stable interaction, we therefor suspect that missing proteins to have an essential role but to interact only transitorily with the core complex. My research goal is to find innovative and efficient way to identify these proteins. For this purpose, we will adapt the proximity labbeling with TurboId approach to plant mitochondria. TurboID is a protein that work like a stamp that will label everything that pass nearby. By fusing this TurboID to our protein of interest, we are able to label proteins interacting with our bait even during transient interactions. We will then purify these proteins and identify them before confirming the interaction by yeast two hybrid.

◆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。）:


Where do I come from ?
My culture is a mix of
French and German
influences