

様式 A-1
(FY2023)

2024 年 7 月 12 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: 長野県諏訪清陵高等学校

講師氏名: Dr. Sammy Gamal Al-Sied Metwally

講義補助者氏名: 福士法子 特任研究員

2. 実施日時: 2024 年 11 月 29 日 (金) 14 : 30 ~ 17 : 00

3. 参加生徒: 1 年生 6 人、 2 年生 15 人、 3 年生 0 人 (合計 21 人)

備考: (例:理数科の生徒) 年度末の研修に参加を希望する生徒 および科学クラブ員

講義題目: 牛伝染性リンパ種ウイルス安定感染ヒト細胞株の確立とCRISPスクリーニング

4. 講義概要: 人間が健康に暮らすために必要なこと

5. 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 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)

生物標本、スライドなど視覚媒体を使用。

3) 事前学習

事前学習を実施

使用教材 動物由来感染症に関する英文教材を作成し、配布。

6. その他特筆すべき事項:

今回も、十分な準備ができたとは言えませんが、講義そのものが生徒を飽きさせず、楽しめる工夫されており、且つ科学的な啓発に充ちた講義になっており、学ぶものが多い講義であったと思います。

実施責任者が英語教師で科学は専門外であるため、十分な準備教材が作れないことが心苦しいです。高校時代に理系分野の学習に手を抜いたことの報いか……と後悔します。

Form B-2
(FY2024)
Must be typed

Date (日付)
02/12/2024 (Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-
(サイエンス・ダイアログ 実施報告書)

- Fellow's name (講師氏名): METWALLY SAMY (ID No. P24097)

- Name and title of the lecture assistant (講義補助者の職・氏名)
Dr. Fukushi Noriko, Project Researcher

- Participating school (学校名): Suwa Seiryō High School

- Date (実施日時): 29/11/2024 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目):

Hotspots on the threats of emerging zoonotic diseases

- 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) 90 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))

Powerpoint presentation and activities

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

The lecture was carried out in three sessions based on presentation using PowerPoint and projector followed by Q&A. In the first section, I shared an introduction about myself and my research achievements with the students, so that they were motivated to the next sessions of the lecture. In the second section, I shared some information about my country and the good relationship with Japan. This encouraged the students to recognize different cultural aspects and know more about foreign experiences and collaboration. After the second session, I answered several questions from the students about the history and culture of Egypt.

The third session included the main topic of the lecture followed by scientific questions from the students. This session focused on zoonotic diseases and their hotspots (places where zoonotic diseases have spread widely). The students were able to understand what are zoonotic diseases? Under what conditions do zoonotic diseases occur? Where have zoonotic diseases caused major outbreaks in the past? Where might zoonotic diseases occur in the future? And how can we prevent zoonotic diseases?

At the end of this lecture, the students were able to understand the ONE HEALTH concept and the relationship between animal, environment, and human beings. Several points were discussed to prevent the zoonotic diseases and improve the general health such as:

①Improving Surveillance and Early Detection: Monitoring animals for signs of new diseases, especially in high-risk regions, can help detect potential outbreaks before they spread to humans.

②Strengthening Animal Health and Veterinary Systems: Ensuring proper care, vaccination, and disease control for livestock and pets can reduce the risk of diseases spilling over from animals to humans.

③Promoting Safe Farming and Animal Practices: Implementing better hygiene practices in farms, reducing the close contact between wildlife and livestock, and ensuring proper handling of animals in markets can minimize the risk of zoonotic transmission.

④Regulating Wildlife Trade: Strict regulations on the trade of wildlife and the handling of bushmeat can prevent exposure to diseases carried by wild animals. Bans on certain wildlife markets can also reduce risks.

⑤Environmental Conservation: Protecting natural habitats and preventing deforestation can reduce human-wildlife interactions, limiting the chances of zoonotic spillover.

⑥Public Health Education: Educating people about how zoonotic diseases spread (e.g., avoiding contact with sick animals, using proper protective gear) can help reduce the risk of infection.

⑦Improved Sanitation and Healthcare Infrastructure: Strengthening healthcare systems, improving sanitation, and providing access to clean water can help prevent outbreaks from spreading and allow for quicker containment.

⑧Global Collaboration: International cooperation in research, disease surveillance, and emergency response is critical for preventing and managing zoonotic diseases. Sharing data and resources can help track and contain outbreaks more effectively.

⑨Addressing Climate Change: Mitigating climate change can reduce shifts in animal behavior and the spread of diseases. By addressing factors like rising temperatures and changing ecosystems, we can minimize the risk of new diseases emerging in different areas.

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

I thoroughly enjoyed this experience and would be willing to do it again. Generally, this lecture motivated the students for science.

- Impressions and comments from the lecture assistant (講義補助者の方から、本プログラムに対する意見・感想等がありましたら、お願いいたします。):

Dr. Fukushi enjoyed the experience and she was able to help facilitate some of the questions from the students, particularly about the highly scientific points of epidemiological terms and the ONE HEALTH concept.