

(For JSPS Fellow)

Form B-5

Date (日付)

09/03/2015 (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): Cindy Yuet-Yin Kok (ID No. P13750)
- Participating school (学校名): Saga Prefectural Chienkan Senior High School
- Date (実施日時): 07/03/2015 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Using viruses to study and treat liver disease
(in Japanese) N/A
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

The liver is an amazing organ which has the ability to regenerate itself after it is damaged. The liver plays a key role in metabolism. Without this function, simple foods such as proteins could become toxic to humans. People who regularly eat high fat foods have an increased risk of developing liver cancer. This is known as non-alcoholic steatohepatitis (NASH). I am using a mouse model of this disease, which has diabetes and is fed a high fat diet. Similar to humans, these mice have an increased risk of developing liver cancer. The aim of my research is to study how tumors form and what cells they originate from. This is known as lineage tracing, and involves using the adeno-associated virus (AAV) to deliver marker genes into the liver cells. The virus has been modified so that the parts that normally cause sickness are removed, and are replaced with a gene known as green fluorescent protein (GFP). The modified virus, known as a virus vector, is injected into the liver and causes the cells to glow green. This allows us to observe how the cells change as the disease becomes worse. Understanding this concept will allow us to create treatments which can hopefully stop the disease from developing.

- Language used (使用言語): English
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 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))
Powerpoint presentation using a projector
 - ◆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))

Assistance by accompanied person

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

Mr Len Katsumata

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

N/A

- 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。):

It was a great opportunity to join Dr. Kok to interact with the students of Chienkan High School. The lecture was arranged very simply and comprehensible so that the students could understand the context of the research and its significance. The presentation was very motivative, and the students seemed very enthused, as demonstrated by many students asking questions after the lecture for an active discussion. It will be a pleasure if the students who participated in the lecture choose to enter the field of science for their future.