

(For JSPS Fellow)

Form B-5

Date (日付)

09-03-2017 (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): Yi-Lun Tsai (ID No. P16406)

- Participating school (学校名): Kyuyo Senior High School

- Date (実施日時): 22/02/2017 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Interaction between plant seeds and parasitic nematodes

(in Japanese)

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

My lecture briefly covered three topics: my background and home countries, my current research, and my experience as a scientist. First, I introduced my home countries Taiwan and Canada, where I talked about their basic information, culture, and my experience living in these countries. I also briefly discussed the reasons of why I chose my career path in academia. Secondly, I introduced my research. My current work focuses on the interaction between plants and parasitic nematodes. I began by outlining the importance of plants to the human culture and various industries, and the fact that interactions between plants and other organisms can greatly affect plants' growth and development. Next, I introduced the model system that I employ for my research – the interaction between the model plant *Arabidopsis* (*Arabidopsis thaliana*) and the significant plant parasite the root-knot nematodes (*Meloidogyne incognita*). Root-knot nematodes normally infect plant roots by targeting an unknown chemical signal secreted by plant roots. To further characterize the interaction between plants and nematodes, I investigated whether nematodes target other below-ground plant tissues, namely plant seeds. I found that nematodes are attracted to *Arabidopsis* seeds, and a specialized structure called the seed coat mucilage is needed for this attraction. I discussed how I characterized this interaction, and how my findings can be applied to other plant species to potentially improve pest resistance in agriculture. Lastly, I talked about my personal experience as a scientist, my day-to-day work and the advantages/disadvantages of working in academia. Hopefully these information will be helpful for students to decide whether they want to consider research as a future career option.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 50 min (分), Q&A time (質疑応答時間) 30 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))

Lecture with slides 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 with my accompanied person

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

Mr. Morihiro Oota, graduate student

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

- 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。):

皆、Dr, Tsai の講演を、英語にも関わらず、大変興味を持って聞いてくれている印象でした。特に質疑応答の時間、内容をしっかりと理解できていないと質問できない様な質問が数多くきて、驚いたのと同時に、とても感心しました。