

(For JSPS Fellow)

Form B-2
(FY2018)

Date (日付)
04/11/2018 (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): Munkhtsetseg TSEDNEE (ID No. P17097)
- Participating school (学校名): Tokyo Metropolitan High School of Science and Technology
- Date (実施日時): 27/10/2018 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): Plant responses to soil nutrients: low and high Boron
- Name and title of your accompanying person (講義補助者 職・氏名)
Ms. Yukari Kawata, M1 student at The University of Tokyo
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 80 min (分), Q&A time (質疑応答時間) 10 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))
Used projector the presentation
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

On the assigned day, to the students at high school, I delivered a lecture entitled as "Plant responses to soil nutrients: low and high Boron". Accordingly with lecture general content asked by the school and SD program, my lecture topics were followed as short introduction to home country, my motivation to becoming a scientist, background introduction to my research, and finally my recent research outcomes. As this is my second lecture at high school, I tried to deliver a different type of information although some introduction parts were overlapped with the content of my previous lecture at different high school. In the research background part, by discussing about the contents together with the students, I tried to explain and remind the students that how critically and closely the plants have been associated with human being's life, especially in our daily food source. Since my research focuses on plant nutrition, I next discussed about plant food source, the mineral nutrients, that required for plant growth and development, and eventually impacts on agricultural production and human food supply. We further discussed about soil nutrient contents as a primary reason to cause the nutrient deficiency and excess to plants. After such discussions in the background introduction part, I explained how boron nutrient particularly affects plant growth and production, and how plants deal with boron deficiency and boron excess stress conditions. One major response of plants to boron stress is control boron

entry to roots through regulating the expression of boron uptake transporters such as increasing the expressions under low boron and decreasing the expressions high boron in order to increase and decrease the boron uptake. Finally, in my research part, I discussed about my recent researches on the functional studies of our newly identified transcription factor, NGAL1, that has involved critically in boron transporter regulation in a model plant Arabidopsis, in its response to a range of boron conditions, low and high boron. In the end of the lecture, I had a small quiz for the students to verify the key points of the lecture.

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):

The lecture was a really nice experience to me although this was my second lecture at high school. With my first experience, I tried to talk with students by asking related questions in every few slides, that helped the lecture to be more interactive. The accompanying person, Ms. Kawata, M1 student from our lab, helped me a lot again to explain some details of researches in Japanese. School teachers of science and english helped us a lot this time too by explaining some points in Japanese while actively discussing about the lecture contents with me during the presentation. The teachers were prepared lecture place nicely to be ready for the presentation and talk, and additionally a warm welcoming board with my name and nice flowers in the end of my lecture. So, I really appreciate their kindness and cooperation to work with us. I therefore recommend the fellows to participate in the program as to have another wonderful and fruitful experience in Japan

- 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。)