

(For JSPS Fellow)

Form B-5

Date (日付)

25/01/2018 (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): Kumagaya Girls' High School

- Date (実施日時): 16/01/2018 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Ribosome mediated regulation of gene expression in response to boron nutritional conditions

- Name and title of your company (同行者 職・氏名)  
Laboratory of Plant Nutrition and Fertilizers, The University of Tokyo

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 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 for the presentation

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

In my lecture, as following the content asked by the school, I first introduced shortly myself, my origin and my motivation for becoming a scientist. Then I discussed about my research topic starting with background introduction. Since my research is focused on plant nutrition, in the research background, I explained how plants are been used for our daily life, what factors are needed to be maintained for a stable agricultural production, why mineral nutrients are important for both plants and human beings, and what causes the nutrient deficiency and nutrient excess in plants. In the following research content, I discussed about our recent research findings on how plants regulate the nutrient uptake process using a post-transcriptional regulation of gene expression with the case of a diffusion facilitator of Boron, *NIP5;1*. To avoid the excess uptake, under high Boron presence conditions, the plants destabilizes *NIP5;1* mRNA through a ribosome stalling at AUGUAA sequence in its 5'-UTR. The more recent results of a such regulation of gene expression performed in yeast system has also been discussed while comparing with the results obtained in plants. I finally discussed about the application of our research knowledge and outcomes to agriculture and medical researches together with the students.

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

Overall lecture was a nice experience for me as I recommend the fellows to participate in the program. I have prepared few questions to ask from the students during the presentation, that helped us to communicate closer and easily. The accompanied person, Ms. Kawata, from our lab was a good help too to explain some details in Japanese as if the students have missed some points from the researches. Teachers, both of English and Biology, at school worked with us very nicely as a team, and their pre-lecture (a week earlier than my lecture) on my research topic helped a lot students to understand my presentation on the lecture day.

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

- Impressions and opinions from a company (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。)