

Form B-2
(FY2022)
Must be typed

Date (日付) 8/11/2022

(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): UDDIN MD NASHIR (ID No. JP 21396)

- Name and title of the lecture assistant (講義補助者の職・氏名)

SHIMOSHIGE CHIKAKO

- Participating school (学校名): Tochigi Prefectural Utsunomiya Girls High School

- Date (実施日時): 7/11/2022 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目):

How do plants move their roots towards higher nutrition (植物の根が栄養を求めて動く仕組み)

- 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) 60 mins (分), Q&A time (質疑応答時間) 20 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))

Used projector, conducted hands-on experiment by engaging students

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

Being sessile in nature, plants cannot move when they need food for survival or maintenance. However, they possess a unique ability known as "nutritropism" to redirect their root growth towards higher nutrition in order to acquire nutrients efficiently. This phenomenon was recently discovered in rice at my host Professor Dr. Fujiwara Toru's lab at the University of Tokyo, Japan. In my lecture, I initially explained plant nutrition, various types of tropisms and their importance in Biology. Then I described 'nutritropisms' and the procedures of conducting nutritropism test in agar growth media (in vitro system), including rice seed preparation, agar media preparation, sowing of seeds, growth of plants in a growth chamber, putting nutrition (treatment) and comparison with the control using photos and videos in power point slides as well as by showing apparatus at their hands. Students touched the apparatus and engaged in the experiment. I also expounded them to relate these tasks to find the required gene(s) for nutritropisms, use pf genome editing technology, genetic engineering etc. to use this discovery to improve rice production. Before going into the details of the topic, I introduced myself as well as my country Bangladesh to the students. I pointed out the geographical location, main interest or on what it is

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best known, notable personality, political system of Bangladesh as well as the Japan-Bangladesh bilateral cultural relationships.

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

Hands-on experiment helped the students to learn more and understand the topic clearly. I found they listened with higher concentration which made me happy.

- Impressions and comments from the lecture assistant (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。):

Shimoshige Chikako san helped me very much, and she was very supportive to explain the information.