

(For JSPS Fellow)

Form B-5

Date (日付)

17/11/2017(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): Dr. SAUMYA AWASTHI (ID No. P 16090)

- Participating school (学校名): TOKAI UNIVERSITY SHIZUOKA SHOYO SENIOR HIGH SCHOOL, SHIZUOKA, JAPAN

- Date (実施日時): 28/10/2017 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) THE TRANSPORTER (ABC)
(in Japanese)

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

ABC transporters are involved in the export or import of a wide variety of substrates ranging from small ions to macromolecules. Membrane-bound ABC proteins consist of four major subunits, two transmembrane domains (TMD) and two nucleotidebinding domains (NBD) which cooperate during ATP hydrolysis to drive active transport. A **transmembrane protein** (TP) is a type of integral membrane **protein** that spans the entirety of the biological membrane to which it is permanently attached. Many **transmembrane proteins** function as gateways to permit the transport of specific substances across the biological membrane. ABC transporters constitute one of the largest protein families and are present in organisms ranging from bacteria to humans. ABC transporters have frequently been shown to be involved in such diverse processes as pathogen response, surface lipid deposition, phytate accumulation in seeds, and transport of the phytohormones, auxin and abscisic acid. Therefore, ABC transporters play an important role in organ growth, plant nutrition, plant development, response to abiotic stress, and the interaction of the plant with its environment. Thus, I am trying to characterize an Arabidopsis Transposon Tagged line (Pst 14558) to study its expression analysis (through qRT-PCR) and identify the binding protein through co-immunoprecipitation technique.

- Language used (使用言語): English, (I prepared Japanese slides also which were helpful for students)

- Lecture format (講演形式):

◆Lecture time (講演時間) 45 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))

Used 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))

By myself

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

◆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。):