

(For JSPS Fellow)

Form B-5

Date (日付) 07/01/2013
(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): MD. SHAMIM HOSSAIN (ID No. P13094)

- Participating school (学校名): Nobeoka High School

- Date (実施日時): 01/11/2013 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): **Mechanisms of learning and memory-related gene expression in hippocampus during neuroinflammation**

環境因子による神経炎症に起因する海馬学習記憶
関連遺伝子の発現機序解明

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

In the first half of my lecture, I have talked about my research focusing the molecular mechanism of memory formation. In these slides I tried to explain the basic knowledge as well as the research techniques that I have employed in my research. For the better explanation, I tried to include many pictures and images with some very important Japanese terms. After explanation of the basic knowledge and the techniques, I have explained my research data showing that Plasmalogens (PIs, a special phospholipids extracted from the chicken skin) enhance the memory in adult mice. To the mechanism of memory formation, two main events are important, one is the new neuron formation in the hippocampus and second is the increase of dendritic spine formation of the hippocampal neurons. I have shown that PIs can enhance both of these events by enhancing the activation of two major signaling molecules Akt and ERK.

In the later half, I have explained them about my country specially about the education, people, culture, foods, transportations, festivals, cloths etc. I tried to focus the educational and the cultural differences between Bangladesh and Japan. I introduced the old and exciting transport systems that are still existing in my country and students were very excited to hear in detail about those. My professor Dr. Toshihiko Katafuchi helped me to translate many of the English words in Japanese that helped me a lot to introduce my country to the students through easy English. Sometime, I used few Japanese terms to explain several English words that was unknown to few students.

After my presentation, I received about 10 minutes to get some questions from the students. To those questions, I tried to give appropriate answer in English. I also requested the students to make questions to me even in Japanese to reduce their hesitation and I got some Japanese questions. With the help of the high school teachers and my boss Dr. Toshihiko Katafuchi, I could

give the answer in simple English mixed with some Japanese sentences to satisfy those students.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 70 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))

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))

Sometime by myself and other time by accompanied person

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

Dr. Toshihiko Katafuchi; Associate Professor, Kyushu University

◆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。):