

(For JSPS Fellow)

Form B-5

Date (日付)

17/07/2014 (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): SHAILENDRA KUMAR SINGH (ID No. P 13407)

- Participating school (学校名): IKEDA GAKUEN IKEDA HIGH SCHOOL

- Date (実施日時): 16/07/2014 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Scientific Venture of an Indian Fellow in Japan

(in Japanese)

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

I started my lecture with a brief introduction of my country and then, I explained in detail about Indus Valley Civilization and history of Mathematics and Sciences in India. I showed them my education in India as well as Japan. I also described them during my higher studies I was so much fascinated about research work especially in Immunology and Molecular Biology. Finally I explained in detail that what kind of advance research work, I am doing in Japan.

I explained the human body constantly faces attack from foreign invaders that can cause infection and disease, such as bacteria, fungi, parasites, viruses, nonliving toxins, and chemicals. The immune system recognizes and destroys the foreign substances and organisms that enter in the body. This is because our body can produce the specific antibody against any kind of invading substances as the adaptive immunity. During the adaptive immune responses B-lymphocytes produce antibodies against antigens. Antibody contains specific antigen-binding sites; this region is known as the hypervariable region and binds with specific antigens. The diversity of antibodies allows the immune system to recognize many kinds of antigens.

After finishing the general introduction of immunology I started to teach them the molecular mechanism how antibody diversity is generated after encountering the pathogenic antigens. I also demonstrated them the importance of mutations during immune responses, and then I have introduced a molecule named GANP that was discovered in our laboratory and plays an important role during immune

responses. During my lecture the student's reaction were excellent, they looks exited, they were listening my talk very carefully. After finishing my lecture I was encountered by several general questions as well as scientific questions asked by the students.

- Language used (使用言語): English

- 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))

PowerPoint presentation on video projector assisted by laser pointer

◆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))

My lab staff, Assist. Prof. K. Maeda provided explanation in Japanese

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

Assistant Professor Kazuhiko Maeda, Kumamoto 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。):

今回のサイエンスダイアログプログラムでは、Dr. Singh 並びに教室員一同、大変有意義な経験となりました。研究室では多国籍の留学生を受け入れて国際色豊かに研究活動に勤しんでいます。講演先の若い学生諸君に分かりやすく伝えるためにはどのようにすれば良いのか、どうすれば興味を抱いてもらえるのかということを考えながら、取組みました。このような機会は、双方向で相乗効果ももてる良いプログラムだと感じました。今後ともこのような活動が広まり、継続することを願っています。