

Form 3

Date (日付)

24/02/2011 (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 (参加外国人研究者氏名): Alka Saxena (ID No. P 09745)

Participating school (参加機関(受入学校名)): Tsuru High school, Yamanashi prefecture

Date (実施日時): 18/02/2011 (Date/Month/Year:日/月/年) Time: from 13:06 to 14:53

Lecture title (講演題目): (in English) MOLECULES INVOLVED IN LEARNING DISORDERS

(in Japanese)

Lecture summary (講演概要):

My research investigates molecular and genetic pathology of learning disorders which are classified as neuro-developmental disorders. In our cells, genes switch on and off depending on requirement. Before birth, in our brain cells (neurons), only genes that promote cell growth are switched on. After birth, our neurons also switch-on genes that help in learning. This helps us to learn language, walk and use our hands purposefully as well as to learn social behavior. When we learn, neurons make connections with each other called synapses. To remember what we have learnt, these synaptic connections must be maintained.

Learning disorders result if

- 1) The genes for learning are not switched on properly or**
- 2) The synaptic connections are not maintained.**

In both cases, we have problems in learning, the consequence of which is intellectual impairment. Examples of learning disorders include autism, mental retardation and Rett Syndrome. My research focuses on the molecular mechanisms and genetic reasons leading to intellectual disability with the aim of developing a therapy for such disorders.

In my talk, I will describe my journey from the clinic to the bench and explain more about my work.

molecular: 分子, genetic pathology: 遺伝病理学, learning disorders: 学習障害,

synapse: シナプス, intellectual impairment: 知的障害

Language used (使用言語): English / Japanese

Lecture format (講演形式):

○Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 20 min (分)

○Lecture style (examples: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、プレ実験など))

Power point slides

○Interpreter (example: assistance by host or colleague, provided Japanese explanation by yourself)

(通訳 (例: 受入研究者によるサポート、外国人研究者本人による日本語説明))

Assistance by colleague

Name and title of assistant (協力者 職・氏名) (example: host or colleague)

Takahashi Hazuki

○Other note worthy information (その他特筆すべき事項):

Impressions and opinions of assistant (協力者から本事業に対する意見・感想等がございましたら、お願いいたします。):