

(For JSPS Fellow)

Form B-5

Date (日付)

21/01/2015 (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): **MUZEMBO BASILUA ANDRE** (ID No. **P 13099**)
- Participating school (学校名): **Tokushima Jonan High School** _____
- Date (実施日時): 21/01/2015 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Occupational Lung Disease: Does Indium compounds responsible for a new pneumoconiosis? _____
(in Japanese) 職業性呼吸器疾患:インジウム化合物は新たなじん肺に関係するか _____

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

The lecture was divided in the following four sections: a brief self-introduction, Occupational lung disease (pneumoconiosis and indium lung disease), my country and my plan in the future (my dream). We talked about common forms of pneumoconiosis (such as asbestosis, silicosis and coal worker's pneumoconiosis), and their causes. Pneumoconiosis is a broad term that refers to a range of diseases due to the inhalation and accumulation of dust in the lungs. Pneumoconioses remain an issue of public health because they are among the leading causes of morbidity and mortality. Approximately 125,000 lives are lost every year due to pneumoconioses. Although pneumoconioses can be prevented by controlling exposure to hazardous dust, they still remain a significant problem worldwide. For this reason, increased awareness of occupational vulnerability to pneumoconioses is required.

We also explained to students the health impact of air pollution (pollution with PM 2.5) which can lead to lung cancer even among young people (the youngest patient with lung cancer was found in China, 8 years old girl). Then we talked about our ongoing research: Indium lung disease.

Indium lung disease is a new lung disease that develops in workers who use, produce or reclaim indium tin oxide (ITO). Indium tin oxide is a mixture of 90% of indium oxide and 10% of tin oxide. ITO is mainly used to produce electronic devices such as screens for mobile phones, personal computer, touch screens, plasma TVs, monitors and liquid crystal display, etc. ITO is mainly used in Japan, but also in China, South Korea, Taiwan, and the USA. People suffering for indium lung disease have symptoms such as dyspnea, poor appetite, chest pain and cough. The first case of indium lung was reported in 2003 in a Japanese patient who were working in a factory producing ITO, unfortunately this patient had died.

We talked about the negative effect of cigarette smoking on lung health (Tobacco smoking increases the risk of pneumoconiosis), preventive measures for pneumoconiosis in general, and for indium lung disease in particular as efficacy of available drugs is very poor to cure these diseases. We also talked about the mechanisms, behind lung disease caused by inhalation of indium tin oxide, based on our research findings.

- Language used (使用言語): English

- 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 (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))

We 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))

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

None

◆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。):