Must be typed

（For JSPS Fellow）

Form B-5

Date（日付）
2016/06/24 （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）: Shiou-Ling LU （ID No. P16119 ）

- Participating school（学校名）: 武庫川女子大学附属高等学校

- Date （実施日時）: 2016/06/04 （Date/Month/Year:日/月/年）

- Lecture title（講演題目）: How does Taiwan's woman survive in research field in Taiwan vs. in Japan?
台湾人女性研究者がどのように日本で活躍するか？

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

1. Introduction of Taiwan. The climate situation, geography, politic system, Indigenous Taiwanese, traditional culture festivals (the ones not related to Japan), Taiwan specific animals, traditional foods and desserts were introduced in the first section. And, of course, the travel hot spots were also recommended for audience.
2. Education system in Taiwan, the way leads me to science. Since I had been stayed in Japan for six years, I understood the basic education system here. Comparing to Taiwan, the differences of the system were pointed out to descripted how Taiwan's students are developed their thought to face their future selection. Also from my own experience, I share the way gradually develop my scientific soul.
3. Specific research. From host body to a small invisible level, cell and intracellular organelle, the simple immune system and intracellular defense system "autophagy" were introduced to explain "How host defense against bacterial infection." My target microbe is group A streptococcus (GAS), *Streptococcus pyogenes*, which causes a wild spectrum of human disease, such as sepsis, necrotizing fasciitis, and a GAS-induced hyper inflammation shock syndrome. Using mice skin infectious model to mimic GAS-infected necrotizing fasciitis, we studied the anti-inflammatory and protective effects of an anti-oxidative protein, kallistatin, KS. KS was originally generated from host body and secreted into blood circulation. This finding showed that one of the mechanisms defense pathogen by host liquid agents. Next, we currently seek to GAS-infected cell response, especially in endothelial cells, which was a potential target cell of bacteria, while patient suffering sepsis. GAS was originally identified as an extracellular bacterium, mean it can not survive inside a cells. However, we found GAS can survive and even replicate inside endothelial cells. We tried to find the mechanisms how GAS survive and growth inside endothelial cells and had found the defective acidification and ubiquitination,

tow important issues required for intracellular clearance by autophagic recognition and lysosomal digestion, in GAS-infected endothelial cells. We expected our finding could provide new insight for clinical treatment that antibiotic should be available to penetrate into cells to kill GAS, especially sepsis patient.

- Language used（使用言語）: English

- Lecture format（講演形式）:

◆Lecture time（講演時間） 120 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））

プロジェクター使用による講演。

◆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））

同行者によるサポートによる日本語説明

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

鵜飼洋史, PhD students

◆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。）:

I really appriciated my accompanied person, who provided me appropriate asistance and translation.