

(For JSPS Fellow)

Form B-5

Date (日付)

26/09/2016 (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): Aw Wan Ping (ID No. P15395 )
- Participating school (学校名): Yamanashi Prefectural Yoshida High School
- Date (実施日時): 23/09/2016 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) "Nutriomics: A novel approach promoting good food and healthy living"

(in Japanese) ニュウトリロミクスから食と健康の関係に迫る

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

In modern day where increased life expectancy and high quality of life is of increasing importance, maintaining and promoting good health via a healthy dietary lifestyle is vital. Via metabolomics and other omics-based studies, we comprehensively analyze the beneficial effects of functional foods system-wide. Multi-omics evaluation towards good food for healthy living strives towards accomplishing one of the core goals of nutritional research which is to understand how diet can influence metabolic regulations system-wide and how we can use the scientific evidence derived to improve health and well-being using dietary recommendations. Data from various omics platforms will be integrated and these data will be used to visually compare the responses of nutrition on multiple metabolic pathways simultaneously.

In this lecture, we would present an example of metabolomics-based multi-omics analysis of Wolfberry (WOL, Lycium barbarum), a traditional Chinese medicinal food that has been reported to have antiaging, anticancer, health-promoting, and immune-boosting properties will be described in its role for optimal IBD management. Using nutriomics, we aimed to elucidate the anti-inflammatory molecular mechanisms of WOL in a dextran sodium sulphate (DSS) induced colitis model. There would also be a discussion session on how we can apply nutriomics to Vanadium-rich Mt Fuji mineral water.

We envision that the methods of this study—nutriomics, a first in the field of nutrition, will serve as a clarion call to uncover new dietary intervention strategies designed to recover normal homeostasis in disease states and to maintain healthy well-being, bringing forward a new evolution in nutritional science.

- Language used (使用言語): English and some Japanese

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 min (分), Q&A time (質疑応答時間) 45 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 and active discussion

◆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))

I used Japanese when the students looked confused.

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

◆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。):