

(For JSPS Fellow)

Form B-5

Date (日付)

20/10/2014 (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): Susana de Vega (ID No. PU14014)
- Participating school (学校名): Ichikawa Gakuen High School
- Date (実施日時): 17/10/2014 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Angiogenesis Inhibition for Treatment of Diseases
(in Japanese) 疾患の治療のための血管形成阻害
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

Angiogenesis, the growth of new capillary blood vessels in the body, is an important natural process used for healing and reproduction. The body controls angiogenesis by producing a precise balance of growth and inhibitory factors in healthy tissues. When this balance is disturbed, the result is either too much or too little angiogenesis. Abnormal blood vessel growth, either excessive or insufficient, underlies many deadly and debilitating conditions, including cancer, skin diseases, age-related blindness, diabetic ulcers, cardiovascular disease, stroke, and many others. Therefore, targeting angiogenesis is a powerful tool for preventing these pathologies.

The extracellular matrix (ECM) serves as a source of both stimulatory and inhibitory angiogenesis factors. Several angiogenesis inhibitors derived from the ECM have proved its importance as a precious source of therapeutic agents for angiogenesis-driven diseases, including cancer growth.

Few years ago, we identified Fibulin-7 (Fbln7), an extracellular matrix protein (ECM), which is a cell adhesion molecule and bind to heparan-sulfate receptors and integrins (de Vega et. al., 2007). Recently we have found that a fragment of the protein, Fbln7-C, inhibits the endothelial cell adhesion and blood vessel-like tube formation, indicating that it inhibits angiogenesis in vitro (de Vega et al., 2014). Because of this, Fbln7 can be the base to develop new drugs for treatment of diseases associated with angiogenesis. We are currently focused on inhibiting the angiogenesis associated with Cancer and Age-related Macular Degeneration (AMD), which is a deterioration or breakdown of the eye's macula, causing neovascularization in the retina. AMD is the leading cause of vision loss.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 30 min lecture/ 40 min experiment observation (分), Q&A time (質疑応答時間) 10 min/ Any time during the experiment observation (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))

Lecture presentation using projector/ Brought fixed cells for observation under the microscope

◆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 included Japanese explanations in the slides and provided a vocabulary list in advance. Kouhei Yamada, the accompanied person, assisted when further clarification was needed

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

Kouhei Yamada- 3rd Grade Medical Student in Juntendo 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。):