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（For JSPS Fellow）

Form B-5

Date（日付）
19/07/2014 （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）: Taryn MARCH （ID No. P13744 ）

- Participating school（学校名）: Okinawa Prefectural Kyuyo Senior High School

- Date （実施日時）: 20/02/2015 （Date/Month/Year:日/月/年）

- Lecture title（講演題目）: Life as a chemistry researcher − an introduction to natural product synthesis and catalysis

（in Japanese）

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

My lecture consisted of four main areas: first, I showed the class the varied geography and climate of Australia and some of our famous inventions. This was accompanied by a map showing all of our universities, together with an encouragement to the students to study in Australia. This was followed by both natural product synthesis and catalysis topics, and lastly some career advice for those interested in studying science. The discussion of natural products described what natural products are and why they are useful, and was illustrated using various well-known examples of medicines and drugs from plants and animals. The process that chemists use to first identify the chemical structure of a bioactive compound, then to synthesize it through artificial means in a laboratory was described. This involved discussion of my own research on the synthesis of antibacterial compounds from Australian plants. The next major component of my lecture gave students an introduction to catalysis and described the mechanism of a catalytic cycle and how catalysts are used to help perform chemical reactions. Examples of industrially important processes that use catalysts were given, together with the everyday products made using these methods, which allowed students to gain an appreciation of how important catalysis is to society. This introduction was followed by a discussion of some drawbacks associated with current catalysts, and why there is a need to develop new catalysts that perform more like enzymes. Here, I discussed my efforts to synthesise new catalysts as part of my work at Kyoto University. Finally, I gave the students some advice on pursuing a career in science, pointing out some general positive and negative aspects of a research job, as well as the things they should consider when choosing which degree to study at university. The importance of learning English—as one of the 'global languages' and also the international language of science—was also emphasised.

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- Language used（使用言語）: English

- Lecture format（講演形式）:

◆Lecture time（講演時間） ~60（分）, Q&A time（質疑応答時間） 30-40（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 screened with a 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））

Assistance provided by an English language teacher at the school (喜舎場牧子)

◆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。）: