

(For JSPS Fellow)

Form B-5

Date (日付)

19/03/15

(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): Ashraf Mohamed Ahmed (ID No. PU14012)
- Participating school (学校名): Fukuyama Jr. and Sr. high school, Hiroshima University
- Date (実施日時): 18/03/15 (Date/Month/Year:日/月/年)
- Lecture title (講演題目): (in English) Antimicrobial Resistance in Pathogenic Bacteria
(in Japanese)
- Lecture summary (講演概要): Please summary your lecture 200-500 words.
 Since the 1940s, antibiotics and similar drugs, together called antimicrobial agents, have been used for treating patients with bacterial infections. Antibiotics are one of the most important therapeutic discoveries in medical history. In addition to their central role in human medicine, antimicrobial drugs have been used extensively in livestock and poultry for the treatment, control, and prevention of animal diseases, as well as for production purposes in some regions (e.g., to enhance growth, improve feed efficiency). Antimicrobial resistance (AMR) is resistance of a microorganism to an antimicrobial drug that was originally effective for treatment of infections caused by it. When infections become resistant to first-line drugs, more expensive therapies must be used. A longer duration of illness and treatment, often in hospitals, increases health care costs as well as the economic burden on families and societies. The evolution of resistant bacterial strains is a natural phenomenon that occurs by mutations or when resistant genes are exchanged between them. The global use and misuse of antimicrobial agents in human and veterinary medicine, agriculture and aquaculture has promoted and fastened the emergence of drug-resistant bacteria. Microbes will always find a way to overcome the therapeutic effect of new drugs; therefore, preventing of infections by vaccination is essential to control the spread of infectious diseases. Continuous efforts are urgently needed at global and national levels to combat and control AMR.
- Language used (使用言語): English
- Lecture format (講演形式):
 ◆Lecture time (講演時間) 60 min (分), Q&A time (質疑応答時間) 10 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 using 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))

The lecture was mainly in English, however, Prof. Tadashi Shimamoto provided Japanese translation for some scientifically difficult slides and questions.

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

Prof. Tadashi Shimamoto, Laboratory of Food Microbiology and Hygiene, Graduate School of Biosphere Science, Hiroshima University

- ◆ Other note worthy information (その他特筆すべき事項):

We thanks staff members of Fukuyama Jr. and Sr. high school, Hiroshima University for their kind hospitality

- 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。):

高校生に対して外国人研究者から最先端の研究について話を聞くこのような機会は貴重なものであり、高校生にとって極めて有益であると思いました。また、外国人研究者にとっても良い経験になります。是非とも今後もこのような試みを続けてください。