

(Abroad Domestic) Official trip report form (Student)

2016/04/05 (Year/Month/Day)

Name	Yogendra SHAH
Laboratory	Divison of Bioresources, Research Center for Zoonosis Control
Year (Grade)	D3
Destination	Dublin, Ireland (University College Dublin)
Period of trip	March 11 to 21 March , 2016
Purpose of trip	To attend the Advances in Infection Biology course 2016. The main purpose of trip are to learn key concepts in infection biology on the molecular basis of host-pathogen interaction animal models, systems biology, approaches population level studies, issues in global health, therapeutics and vaccines.

Summary of activities about 800 words, provide photos, tables and figures that clearly show the activities during the period)

I arrived Dublin, Ireland on March 12, 2016. The three days module start from 14-16th March 2016 at Veterinary Science Center, University College Dublin (UCD), comprises of 6 sessions in morning and afternoon basis on the different topics and lectures given by renowned professors. From March 14, I attended the course coordinating by Prof. Stephen Gordon. The main themes of courses are to understand the key concepts in infection biology on the molecular basis and acquired knowledge on the field of board infectious diseases research by applying different kinds of approaches like systems biology, population level studies and one health.

The first day, March 14th, was started with topics on host-pathogen interaction and antimicrobials consists of two sessions at Veterinary sciences center. The morning sessions were described about the host pathogens interactions on the virus or bacterial infection in human and animal populations. Afternoon session were focused on mechanisms of micro-organism resistance to antibiotics. I attended all lectures were delivered on different topics of infection biology module as follows.

- Introduction
- Human and bovine TB
- Oncogenesis and viral infection
- Bacterial interactions with platelets
- Currents limitations in diagnosis and management of infectious disease
- Antimicrobial resistance
- Gram positive bacterial cell wall as a target for antimicrobials

The second day, March 15th, was started with two main topics on vaccines and global health consists of two sessions at Veterinary sciences center. The morning sessions were mainly focused on vaccine developments of parasite diseases like liver fluke, tuberculosis vaccination for novel approaches and overall basic fundamentals to develop the vaccine. Afternoon sessions were focused on global health impact caused by bacterial as well as viral diseases worldwide situation. I attended all lectures were delivered on different themes by top class professors and researchers as follows.

- Parasite vaccine development
- Fundamentals of vaccinology
- Novel approaches to TB vaccination
- Viral epidemiology in Africa
- Childhood pneumonia
- HIV

The Last day of the lecture, March 16th, was started with multiple topics on zoonosis, experimental design and grant writing also consists of two sessions at Veterinary sciences center. The morning session were mainly focused on zoonotic diseases i.e *Campylobacter jejuni*, prion disease and arbovirus (including dengue, chikungunya and zika virus). Afternoon session were focused on animal experimental design, how to improve the skill for writing the scientific paper and grant writing techniques as well as applying grant to funder. I also attended all lectures were delivered on different themes by renowned professors as follows.

- Campylobacter
- Glial cell activation in prion diseases
- Arbovirus interactions with the mammalian innate system
- Ethics of animal experimentation
- Experimental design
- Grant writing and overview of assessment



Veterinary teaching hospital tour

Besides the three days lectures, March 18 morning was started with presentation given by the Hokkaido University, UCD and Trinity College students on their PhD/MSc research work and afternoon session was organized to visits Veterinary teaching hospital, UCD facilities for large and small animals. Finally, I returned back to Japan from Dublin on March 19 and arrived on mid-day of March 21. I found this course was very informative and important to know key concepts in infection biology. Also support the students in developing the research as well as career plan. I would like to sincerely thank to leading office and Research Center for Zoonosis control especially Prof. Motohiro Horiuchi, Yuki Maki San, Prof. Yasuhiko Suzuki, Prof. Chie Nakajima sensei, Prof. Stephen Gordon and Yuko Hidaka San for helping me to attend this course and sincerely look forward to getting the opportunities in the future.



Group discussion



Discussion with Prof. Barry

Approval of supervisor	Institution • Official title • Name : Hokkaido University Research Center for Zoonosis Control Professor Yasuhiko SUZUKI
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