


## Student Free Design Activities (One Health Collaborative Training)

### 報告書 Report

#### 報告者 [Reporter]

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#### 活動報告 [Activity Report]

※活動内容が判る様な写真や図表を加えて下さい。 / Provide photos, tables and figures that clearly show the activities during the period.

タイトル [Course Title]	Training for multidisciplinary collaboration in foodborne disease inspection at Osaka Public Health Institute.
実施期間 [Periods]	July 7 to July 12
共同実施者 [Other participants]	
言語 [Language]	English
実施場所 [Location]	Osaka Institute of Public Health

#### 申請時計画の実施報告 [Report how you carried out your plan in the application form]

Did you follow the schedule you initially planned? Did you get the outcome(s) you expected? Please describe what you did during the activity period in detail.

The outcomes were as expected, with additional unexpected insights. I learned about the institute's structure, its collaboration with public health centers, and its role in monitoring and controlling infectious diseases. I gained practical experience in the lab, particularly in detecting common foodborne pathogens. I also observed the implementation of standard operating procedures (SOPs), which was a new and valuable experience.

#### Activities During the Period

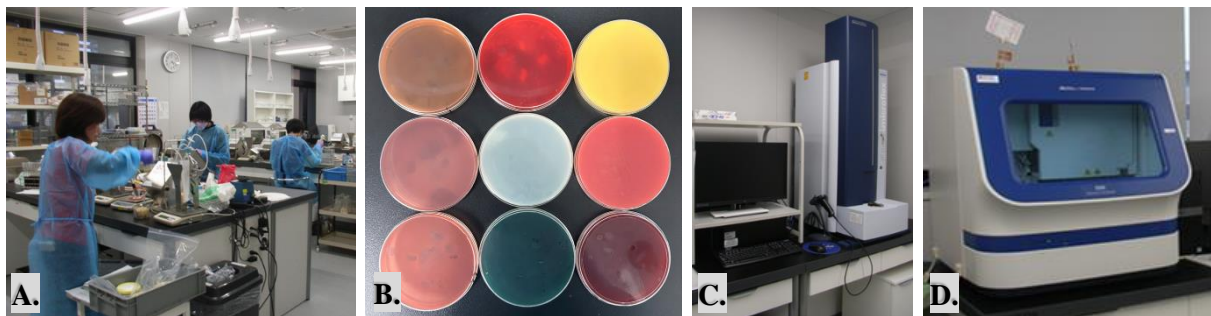
**Introduction to OIPH:** On the first day, Dr. Yuji HIRAI (a graduate of our school) and his laboratory members introduced me to the structure and functions of the OIPH. The institute is divided into several departments, including Public Health, Microbiology, and Hygiene Chemistry. The Bacteriology division, where I trained, focuses on bacteriological hygiene monitoring of commercial foods, investigating foodborne diseases, and preventing the spread of foodborne diseases, and conducting epidemiological analysis.



**Figure 1.** Osaka Public Health institute **A.** Building, **B.** Main entrance, **C.** Bacteriology laboratory

**Laboratory Training:** The training included observing and participating in bacteriological testing. The OIPH collects food samples from retailers and other entities through nine public health center staff. Every september they planned their Bacteriological hygiene monitoring of commercial foods yearly plan. On average, each specialist handles about 10 samples per week, allowing for timely analysis. During my stay in July, the laboratory focused on analyzing samples of chicken, fish, pickles, and ice candy. The tests were conducted to detect pathogens like *Campylobacter*, *Enterohemorrhagic E. coli*, *Salmonella*, *Vibrio parahaemolyticus*, and *Vibrio vulnificus*. Since the consumption of seafood in our country has increased notificately every year, learning the method of detecting *Vibrio parahaemolyticus* and *Vibrio vulnificus* was one of the important things I gained from this course. The testing followed specific SOPs for each pathogen, ensuring consistent and accurate results.

During my training, there was a Salmonella outbreak in Osaka linked to a drinking bar. I saw the entire process of detecting Salmonella infection, which provided practical insights into handling and using human samples for analysis.



**Figure 2.** **A.** Laboratory analysis, **B.** Agars plates, **C.** MALDI-TOF **D.** DNA sequencer

Also, I observed the systematic approach to public health surveillance and data collection. The OIPH's coordination with public health centers and other institutions was impressive and provided me with a broader perspective on how public health systems can operate efficiently.

目的達成状況報告 [Report how you achieved your goal/objectives listed in the application form]

Did you achieve all the goals you initially planned? If not, please describe why you failed to fulfill your objectives.

I achieved my main objectives of learning about the institute's structure, bacteriological testing methods, and understanding the procedures for detecting foodborne pathogens. This knowledge is crucial for enhancing diagnostic capabilities in Mongolia, where the detection and identification of foodborne pathogens need improvement. While I was limited in conducting hands-on laboratory training due to institutional regulations and national laws that restrict non-staff members from directly handling certain laboratory tasks. Despite these restrictions, this training experience was enough to understand the operational methods used in public health.

One Health Approach実践報告 [Report how your activity could link to One Health Approach]

Did you have a chance to experience One Health approach (collaboration with people from other academic areas)? Please describe some of the examples of One Health approach you implemented in your activity. Otherwise, explain the possibility(ies) how you could link this activity to One Health approach for your future.

OIPH activities helped me understand the One Health concept, as the organization integrates human doctors, veterinarians, microbiologists, chemists, and other professionals who collaborate to protect public health. It was particularly to see how professionals from different fields worked together on samples from various sources. For example, a human doctor, microbiologist and a veterinarian detected samples taken from salmonella patient and drinking bar swab samples. Their collaboration was a clear example of multidisciplinary collaboration to understand. Also, OIPH collaborates with other research institutions to conduct studies and offer training for public health professionals. During my training period, public health centers 4 staffs trained there. I had the opportunity to talk to them and ask about their work, which provided further insights into their roles and the broader public health network. In the future, I believe it is possible to apply this knowledge in Mongolia to enhance diagnostic capabilities, improve food safety practices, and promote multisectoral collaboration, thereby addressing health issues at the human-animal-environment.

備考 [Remarks]

Although it was short in duration, I am very happy that this course provided me with knowledge and experience that I could not find elsewhere. I learned several ideas that I can use in my future work, particularly in adopting OIPH's sample management and some methods within my own organization. This course broadened my perspective, allowing me to see public health issues more comprehensively and understand the value of multidisciplinary approaches.

- ※ 報告書を作成後、担当教員に確認をお願いし署名をもらってください。PDFファイルとしてVetlogから提出してください。  
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- ※ Please ask your instructor to check this report and get his/her signature. The scanned report is to be submitted through Vetlog 「Student Free Design Activities Report」 .