

2018 HICARE/IAEA Internship Report

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1. Overview of Internship

Duration: 01/10/2018 – 31/12/2018

Dispatching agency: Hiroshima International Council for Health Care of the Radiation-exposed (HICARE)

Agency: International Atomic Energy Agency (IAEA)

Section: Department of Nuclear Sciences and Applications

Division of Human Health

Directors Office (DIR-O)

Purpose: To develop human resources who understand the significance and necessity of health care of the radiation-exposed with a global perspective, and succeed to the achievement and research activities in the field of the treatment of the radiation-exposed in Hiroshima prefecture.

I worked at IAEA as an intern for three months through an internship program supported by HICARE. NAHU aims to support the fight against many diseases using radiation. This internship was an interesting and priceless experience for me because I am majoring in medicine.

During my internship period, I was involved in an STS project in Fukushima and saw many conferences. The details of my internship are as follows.

2. Activities during internship period

My main tasks during this period

1. STS project in Fukushima
2. Literature review about radiation-induced hippocampus damage

Also, I was involved in a Human Health Seminar and many conferences at the Vienna International Center. The details are as follows.

1) STS project in Fukushima

After the Great East Japan Earthquake, IAEA-NAHU and Fukushima Medical University have been working on a Science, Technology and Society (STS) project in Fukushima (NA16, NA17, NA22, NA24). Until now, they have held conferences and developed guidelines regarding radiation exposure and human health. In these projects, they focused on how scientific research and technology innovation affect society. During my internship period, I was mainly involved in a new project named NA9/39 from August 2018 following the previous project, NA24.

The title of NA9/39 is **”Living at the site after a nuclear accident-the role of Sciences Technology and Society (STS): Rationale and Communication-”** and this project aims to support the residents in former evacuation sites. NAHU is collaborating with Fukushima Medical University on the project. The First Consultancy Meeting was held on January 16 -17th.

The project has 4 themes, ”Guidance for Methodology of Monitoring Environment” “Biodosimetry Methodology” “Guidance for Methodology of Self-Measurement” and “Radiation risk communication”.

At the beginning of my involvement in the project, I needed to know the current situation of Fukushima and the idea of IAEA on radiation. So I read the STS handbook that was written as a result of past projects and an IAEA report about the Fukushima Nuclear Power Plant (The Fukushima Daiichi Accident-Report by the Director General).

My main tasks in this project were preparing for the First Consultancy Meeting in Fukushima. Through these tasks, I gained the ability to use Microsoft software such as

word or power point. In my classes at university, I had few opportunities to use this software. So, this experience gave me a chance to develop my computer skills.

Also, I got a better idea about the purpose and role of IAEA. Before my internship, I thought IAEA is a kind of leader in nuclear-related matters. But after the internship, my view changed. The main role of IAEA is consultant. My colleague said to me several times “Our task is to present the options”.

Another thing I learned from my internship was how Fukushima is viewed from outside of Japan. Regarding the Fukushima accident, we hardly see any news about Fukushima compared to a few years ago in Japan. But at IAEA, the Fukushima accident is still a big concern. Through involvement in the STS project, I gained a new perspective on the Fukushima accident from outside Japan.

My experiences during the STS project gave me many new perspectives on Japan that I didn't have before.

2) Literature Review

Dr. Abdel-Wahab, who is the director of NAHU, suggested me to write a literature review about hippocampus and radiation so I wrote it during my internship period.

In early November, we started to search on Web of Science about radiation hippocampus damage. Using Web of Science, we could focus on major journals and more influential articles. Also, we used PubMed and MEDLINE to search for literature.

Through writing a literature review, I learned the process of thinking scientifically. And the task of writing gave me a chance to train my logical thinking.

Regarding writing, I received a lot of support from Dr. Abdel-Wahab. I really appreciated her help and advice.



My supervisor Dr. Abdel-Wahab (at NAHU Christmas Party)

3) Human Health Seminar

Human Health seminar is held irregularly and the purpose is to share the current situation of medicine. I joined the seminar twice during my internship period. One seminar is about Boron Neutron Captured Therapy (BNCT) and Japanese consultant Dr. Kazuyo Igawa from Okatama University gave a presentation. Another seminar was about management of malnutrition in children. They talked about the relation between malnutrition and outcomes of child cancer treatment and medical systems in Botswana.

Both seminars gave me ideas about the current situation of medical techniques and medical requirements in developing countries.

4) Consultancy Meeting on Global Radiotherapy: Future Directions

Consultancy Meeting on Global Radiotherapy was held in Vienna International Center (VIC) for two days. The purpose of this meeting was to support radiotherapy worldwide and discuss research and development of radiation techniques.

The most impressive idea from the presentation at this meeting was the superhospital. The concept of superhospital is similar to general hospital. To develop radiotherapy, we need

to place a superhospital at the center of the medical system. And we need to unite different specialists such as doctors, nurses and technicians from the early stages of education.

Also, I got the concept of the consultancy meeting regarding Fukushima.

5) **Ministerial Conference**

From 28- 31 November 2018, the Ministerial Conference on Nuclear Sciences and technology: Addressing Current and Emerging Development Challenges was held in VIC. For this conference, many people from IAEA, WHO, FAO and other organizations were invited as speakers. In the session about medicine, I learned about the technical and political side of things. Also, they mentioned radiotherapy in developing countries. This conference was a great opportunity to know about many different perspectives on medicine.

6) **International Symposium on Understanding of Malnutrition for Effective Interventions**

From 10-13 December-2018, a Symposium on the double burden of malnutrition was held. The double burden of malnutrition is characterized by the coexistence of undernutrition along with overweight and obesity, or diet-related non-communicable diseases within individuals, households and populations across the life course. This problem exists in one-fourth of the world's countries. In this symposium, they discussed many things regarding the nutrition situation in the world.

I had never known about the double burden of malnutrition and the relationship between health and malnutrition. This symposium gave me a new concept of medicine.

3. **Summary of the internship**

Through this internship, I have experienced and learned so many priceless things. Working at IAEA for three months as an intern gave me new ideas on things such as the role of

international organizations and their processes, and multiple new perspectives on Japan as seen from the outside.

Before the internship, I had few chances to think about the role of international organizations and felt they were very far from me. However, after the internship, I came to understand their role and started to think about working in international organizations as a future career option. Also, being involved in a project regarding Japan from outside of Japan helped me to gain new ideas about my country, because in Japan we have limited opportunities to know about opinions of my country from foreign countries. Through this experience, I was able to expand my perspective.

Lastly, I would like to express my appreciation for the generous support I received from HICARE and the Hiroshima Prefectural Government.



IAEA buildings (Vienna, Austria)



Certificate of internship