

MERIT Internship Program (Domestic) Report

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Period

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Host Institution

Nanotis Inc.

Abstract

As a MERIT internship program, I participated in the internship at Nanotis Inc., which is a venture company established in June, 2016. The main work of this company is to develop novel medical diagnostic chip which can realize early and simple diagnosis by utilizing micro diagnosis system, MEMS technology, bio-molecular recognition, and so on.

In this program, I conducted R&D to realize the medical chip, and also proposed a roadmap, market research, needs survey, and management / technology strategy. Through the program, I experienced unique R&D of a start-up venture company.

Research Activities

In realizing the micro diagnostic system, I made a strategy from the perspective of both management and R&D. Specifically, I clarified the strengths of the products we are trying to develop after market research, survey and comparison of domestic existing products, and established the foundation for the R&D project. In this process, a specific model design was conducted, and the optimum material was selected for application of the new analytical technique. Experiments were conducted on the candidates thus obtained and evaluated from the viewpoint of device reliability and rapid response. These tasks include core research and development processes for prototype creation. While repeating discussions, an experimental flow as the foundation of R&D was established and we contributed to the early realization of the prototype.

In addition, I immediately experienced swift and fluid management decisions unique to the start-up venture company. I have taken charge of a proposal on value proposition and preparation and explanation of technical materials related to management in a small part. Not only did I learn the basics about risk management and team building as a company, but also made a sense of the flow to start using my own research as core technology.

Summary

In this internship, it was a great experience that I learned about the management policy and R&D of basic venture companies. Compared with universities and other research institutes conducting research on academic novelty and leading companies that often conduct highly transparent R&D in a certain budget / framework, venture companies are required to conduct rapid R&D. Management judgment, policy of research and development, of course, it was necessary to constantly build priorities and build a way to realize proof of concept on the shortest route. The process of tackling the tasks while making multiple plans for attaining the goal at all times was very exciting and I was able to have a fulfilling experience.

Also, if I got a chance to start a business in the future based on my own research, I was able to have a concrete image on what kind of flow I started with business, how to advance R&D and make profits. I learned about the world that I would not be contacting with, and recognized the common points and differences and deepened the experience. I believe that experience in this internship program will be useful as a business experiences even if I go to any industry, academia or government way in the future.

Acknowledgment

We would like to express our sincere gratitude to Nanotis Corporation, the host company of this internship program, for acceptance of this internship program. To Ms. Sakashita and Mr. Arata who took charge of acceptance, I spent a great deal of time with many supports from Ms. Sakashita and Mr. Arata. Also, I would like to express my gratitude to Professor Ryo Yoshida, a supervisor, for permitting me to join the internship program. Finally, I would like to express my sincere gratitude to the MERIT program for giving me valuable learning opportunities as a long-term internship program.