Research Does Not Go as Planned: Kakenhi is Tailored to Magnanimously Support Such Researches

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"Reversible control of the number of water molecules bound on polymerized ionic liquid" (Grant-in-Aid for Scientific Research (A))

For three years, from April 2010 to March 2013, I concurrently served as a Senior Program Officer of the Japan Society for the Promotion of Science (JSPS) Research Center for Science Systems. In this capacity, I was involved in the selection of candidates for reviewing applications for the Grants-in-Aid for Scientific Research (Kakenhi), the discussions on what Kakenhi should be, and proposing a plan to reform the JSPS program screening system. One of my tasks at the time was to seek scientists who will write research topics for the "KAKENHI NEWS." I never imagined that I myself would be chosen as a writer for the "Kakenhi Essay Series" a few years after the end of my assignment. But since I have been asked, how could I decline.

My relation with Kakenhi goes back to a research project: Grant-in-Aid for Encouragement for Young Scientists in 1986. Up until then I had received Kakenhi as a co-investigator, but this was the first time I received Kakenhi as a principal investigator. I still remember how thrilled I was in spite of the small amount of funding. Subsequently, I moved to Tokyo University of Agriculture and Technology, and the research of my team has continuously been supported by Kakenhi, beginning with a Grant-in-Aid for General Scientific Research (C) in 1991, followed by the Grant-in-Aid for Scientific Research on Priority Areas, Scientific Research (C), Scientific Research (B), Exploratory Research, and Scientific Research (A) in 2002 and 2005. In 2009, my application for a Grant-in-Aid for Scientific Research (S) was selected, and as a result, my research project made considerable progress. The year after my research project was selected for the Scientific Research (S), I was asked to serve as a Senior Program Officer of the aforementioned Research Center for Science Systems. This I could not turn down either. Looking at all of my research themes in the Kakenhi database, I realize that all of my researches have the same

keyword “ion” but they covered diverse subjects which I enjoyed. In principle, I enjoy research only when I find it interesting. I have been engaged in research dealing with ionic liquid (intriguing salts, namely, component ions are designed to significantly drop the melting point, and accordingly, these salts are in a liquid state at room temperature without adding water or other liquids) for the last 15 years or so; all of my researches have been supported by Kakenhi. Every research project I applied for was one I strongly wished to carry out, and I am grateful that my enthusiasm got through to the reviewers of my application every time.

Three years ago, I had a chance to receive research funding from a different ministry. It required, however, that research (use of research funding) be conducted in strict compliance with the initial plan. I had a very hard time with this because I do not have the ability to fully predict the outcomes and direction of my research a few years ahead.

When experiments were carried out matter-of-factly according to the initial plan, they could not really be called “research.” But if they tell you, “Research funding is distributed under a contract, and therefore, it is fundamental that research be carried out strictly according to the initial plan,” then you have no choice but to comply. It seemed as though I was simply “going through the motions.”

In comparison, Kakenhi is much more magnanimous. It allows up to about 50% of the funding to be diverted to other expenditure items. Furthermore, uses for auxiliary purposes are allowed, along with more flexible execution of the research funding, including through the provision of the Grant-in-Aid Fund (multi-year funds). Kakenhi is truly easy to utilize. Your equipment may unexpectedly break down, or a new idea may spring to mind and you may want to try a better approach than the one stated in your initial plan. I consider that Kakenhi, which can adapt flexibly to unforeseen research developments, constitutes research support funding that is truly designed from the researcher’s perspective. The program officers at the JSPS Research Center for Science Systems are active researchers and make recommendations on system reforms. This makes it all the more why Kakenhi is a fit with researchers who are eagerly pursuing their research, and has become an indispensable source of research funding. I hope that this basic approach of Kakenhi will remain unchanged and that Kakenhi will continue to be the best supporter of researchers.

There are various large-scale research funding assistance these days. Focused supports are needed for ongoing research to keep up with the world's. On the other hand, assistance is also needed to support small-scale researches that have significant potential to grow in the near future. Such small-scale research funding should support the start of future great researches in Japan. Over ten years ago, I once helped Professor Shin-ichi Yamamoto of University of Tsukuba conduct a study on the correlation between research funding and research outcomes. The findings of this study funded by the Grant-in-Aid for Special Purposes showed that the larger the research funding, the greater the research outcomes delivered, but that once research funding exceeded a certain amount, the slope of the relation became smaller. In other words, there is a suitable range of funding amount to get research fruits most efficiently. Of course, it depends on the field and the scale of research, and a sweeping judgment cannot be made. Nevertheless, I believe researchers will agree that maintaining the present scale of Kakenhi is critically important for supporting basic research in Japan. In addition, basic research would be undermined if funding adopted the stance of: "We provided support, so you have to deliver outcomes." In my personal opinion, I find no need to conduct research that produces results as planned or as expected. Exciting research is one in which the results are unpredictable. I dream of the day when the question asked in research reports for the evaluation of research is not "Did your research proceed according to plan?" but "Did you enjoy your research?"

Kakenhi is beginning to be referenced frequently in the acknowledgement section of papers and is increasingly gaining worldwide recognition. We researchers should be much more appreciative of Kakenhi and endorse the current Kakenhi approach, so that young researchers can also perform good research freely without constraints. Stating "Kakenhi" in the acknowledgement section of papers is important for returning its achievements to society. All of us researchers need to collectively thank and support Kakenhi. In the near future, all the papers from Japan will always acknowledge Kakenhi.