To begin my personal reflection of Circulation Research, I would like to congratulate Eduardo Marbán and all the Editors in commemoration of 50 years of this venerable journal. It is really a most honorable privilege for me to write this editorial, for Circulation Research was highly influential in encouraging me as a clinical cardiologist to become a scientific researcher.

In 1970, I started research on myocardial myosin by a biochemical approach to examine myocardial plasticity, whereby external physical (mechanical) stimuli exert significant effects on the cell interior. At that time, it was recognized that three types of myosin exist in muscle cells: red skeletal myosin, white skeletal myosin, and cardiac myosin. The enzymatic characteristics of cardiac myosin were similar to those of red skeletal myosin. While I studied at Tufts University under Dr. M. Raben, we demonstrated that cardiac myosin obtained from rats and mice (small animals) had a high ATPase activity, that is, similar to the characteristics of white skeletal myosin. We were the first to find out that two types of myosin exist in cardiac muscle, and these two types were interchangeable by thyroid hormone. We were then able to present these results in Circulation Research. This called forth a great response and became the start of an investigation of the mechanism of switching gene expression of myosin isozenymes by using thyroid hormone. Thereafter, I published several manuscripts in Circulation Research, which I regard as among my most important research work. Owing to these works, I was able to have the honor to be at the frontier of molecular biology in the field of cardiovascular research.

I suppose this was the reason I was invited to be an Associate Editor of Circulation Research in 1993. The Editor in Chief was Dr. Stephen F. Vatner in the years when I was involved with Circulation Research as one of the Editors. In those years, it became an epoch-making instrument to use international teleconferences to discuss editorial matters. However, because of the time difference among the countries of the participants, quite often I was forced to work until midnight, which has now become a memorable thing of the past. Another memorable event was when I had the opportunity to meet Dr. Vatner at overseas symposia. Dr. Vatner would bring with him a full trunk of documents and ask me to look over those manuscripts for him. I remember that I was very surprised and, at the same time, I held respect for him for his positive attitude toward his work with Circulation Research. The present Editors undoubtedly rely on laptops rather than trunks of papers in order to achieve their impressive efficiency.

In the 1970s, there had been several breakthroughs in developments of molecular biology studies. First, it was the remarkable development of the method of purification of proteins due to the technological development of column chromatography and gel electrophoresis. Second, in the latter half of the 1970s, development of monoclonal antibodies made possible further progress in protein molecule research. And in the 1980s, by introducing gene technology, trenchant methods were expanded to new fields of investigation, which led to the extraordinary vigor of heart research in the present day. It was worthwhile and fortunate for me that I could be actively involved in molecular biology studies throughout the 1970s, 1980s, and 1990s. As studies became modernized, so did Circulation Research, by changing its structure from an old one to a new organization. It was again fortunate for me to be present at this turning point of Circulation Research.

As the era of electronic journals dawned in the 1990s, owing to this media, figures and images in the journal became extremely precise and attractive. I am sure that Circulation Research, by continuing to use new digital technology, will further develop and expand in the medical science field as a major and indispensable journal for all cardiovascular researchers around the world.

References

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