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# Journal of Chromatography B

journal homepage: [www.elsevier.com/locate/chromb](http://www.elsevier.com/locate/chromb)

## Obituary

### In memory of my teacher, Professor Akira Shimizu



Professor Emeritus Akira Shimizu, a former Chairman of the Japanese Society for Biomedical Mass Spectrometry, passed away on January 30, 2008 at the age of 72, under his family's affectionate care. I felt deep sadness and also dismayed at the serious effects of "his death" on daily research activities, the education of students, clinical laboratory operations, and activities of scientific societies, realizing the impact of this immeasurable loss. Now, almost 1 month after his death, I would like to look back on the 24 years I was fortunate enough to both know and work with Professor Shimizu, as my deep tribute to him.

Professor Shimizu graduated from the Department of Medicine, Osaka University Faculty of Medicine in 1962, was admitted to the Graduate School of Medicine (Chairperson: Professor Yuichi Yamamura), and obtained a Ph.D. degree in 1967. The following year, he studied (under Professor Frank W. Patnam's supervision) at Indiana University, where he mainly researched the structure and function of immunoglobulin M for 3 years, and returned as an assistant to the 3rd Department of Internal Medicine, Osaka University Faculty of Medicine. After returning, he also continued to research the structural and function of serum proteins including immunoglobulins in patients with myeloma and rheumatism. In 1982, he obtained the post of Director of the Department of Clinical Laboratory at the Osaka Medical Center and Research Institute for Maternal and Child Health on its establishment, and started to diagnose organic acidurias/acidemias by GCMS, which brought him into contact with the Japanese Society for Biomedical Mass Spectrometry, and listed many achievements (e.g., the identification of 3-hydroxy isovaleryl-carnitine/glycine, which were new diagnostic markers of multiple carboxylase deficiency, and developing routine quantitative analysis of urinary organic acids by the stable isotope dilution method).

If my memory serves me correctly, I first met him in my 4th year at the Department of Research and Laboratory, Osaka National Hospital (when Finnigan GCMS4000 was already installed in the laboratory). As he gave me many suggestions concerning diagnosis on metabolic abnormalities through the analysis of urinary organic

acids by GCMS, an indescribable feeling of a disciple–teacher relationship naturally formed between us. In those days, I analyzed urinary organic acids by the Finnigan GCMS4000, and examined the abnormal organic acid profiles after my daily routine work. Every weekend I took the results and clinical data to his office and discussed with him the abnormalities of organic acid profiles in patients' urine and diagnosed metabolic abnormalities. I can remember all these events as if they happened just yesterday.

In 1992, when he was appointed Professor of the Department of Clinical Pathology (presently the Department of Clinical and Laboratory Medicine), Osaka Medical College, he kindly invited me, even though I was not a medical doctor, to be an assistant. Since then, he was my greatest and only teacher. He taught us young researchers the meaning of "Devotion" and educated us by praising rather than scolding, which probably required much patience. He not only carried out this difficult task with composure but also showed a strong leadership. As one of his disciples, I remember feelings of both a great sense of pride and admiration in his presence. Undergraduate and graduate students as well as young researchers visited him at his office day or night, and even on weekends, and he had lively discussions with them. He also surprised us by his intellect and active nature, with which he always obtained the most advanced information and put his newest ideas into practice. On our way home from the laboratory, I had opportunities to personally listen to his opinions on Japanese and foreign Nobel prize winners, his experiences during his stay in the United States, and the promising future of scientific research. Those 15 years gave me the richest experiences of my academic career. He was a critical reviewer at our research presentations and reading sessions of interesting articles each Friday morning, but, when our research came to a standstill, he never failed to give us relevant suggestions for the next experiments. I simply do not know how to thank him.

Professor Shimizu energetically engaged, as a medical researcher as well as a clinician, in research, education, and activities of scientific societies, pioneering the application of MS in medicine, particularly clinical laboratory medicine. He was a member of the Medical Mass Spectrometry Study Group, the predecessor of our present society, and contributed greatly to the development of this JSBMS by leading it as a member of the Board of Directors since 1999, as Vice-Chairman since 2000, and as Chairman since 2003. Also, in 1997, after I returned to Japan from the University of Texas (Professor Richard M. Caprioli), he hosted the 21st Annual Meeting at the Senri Life Science Center, inviting many active researchers in the fields of life science from Japan and abroad to guest lectures and symposia/workshops. There, we had

heard the newest research data regarding the biomedical applications of the MS technique, discussed with many researchers, and could build a new network of our study. Professor Shimizu has consistently promoted the application of MS to the structural analysis of biological high molecular compounds, such as proteins and nucleic acids, and to molecular diagnosis. He presented the data at the Annual meeting of the JSBMS, developed the concept of its establishment, i.e., “application of MS to clinical medicine, particularly the field of clinical laboratory science”. His death was an irreplaceable loss of an active person for not only the JSBMS but also the other scientific societies of Japan.

As for his personality, he had profound love for his family, nature, books, and the arts. I heard from Mrs. Shimizu that he often went hiking in the mountains both near and far, being always accompanied by her, as a break from his work. He had a passion for skiing in his school days, and maintained an outstanding level of physical strength as well as intellect. I do not remember a single occasion that he was absent from the university due to illness. Even when he

suffered illness, I believed he could recover his health and activity, but he passed away after medical treatment for 2 years. I have had indescribable feelings as my mourning and regret of his death. He left us much unfinished research and seeds of new research, and so I believe that our scientific developments are the only way to repay our debt for his life time of devotion.

I offer our lamentations, praying for the repose of the soul of Professor Emeritus Akira Shimizu. He will remain in my mind forever.

*Associate Professor*  
Toyofumi Nakanishi (Ph.D.)  
*Osaka Medical College, 2-7 Daigaku-cho, Takatsuki-city,*  
*Osaka, 569-8686, Japan*  
*E-mail address: [nakanisi@poh.osaka-med.ac.jp](mailto:nakanisi@poh.osaka-med.ac.jp)*

Available online 13 March 2008