

Robert K. Togasaki

Robert Togasaki joined the Department of Botany at IU in Bloomington in 1968 following postdoctoral work at Harvard University. Born in Japan, Bob had earned his undergraduate degree in chemistry at Haverford College and his Ph.D. in biochemistry at Cornell University, where he had worked on photosynthesis with Martin Gibbs. At IU Bob was promoted, tenured, and then promoted to full professor in 1983. Short leaves from Indiana involved work at the Institute of Microbiology at the University of Tokyo, the Carnegie Institution of Washington, and the Institute of Physical and Chemical Research (RIKEN) in Japan.

Bob was recruited to Bloomington to provide research strength in the biochemistry of photosynthesis. Using his expertise with the unicellular green alga *Chlamydomonas*, he undertook genetic experiments that explored several aspects of carbon dioxide incorporation in photosynthesis, seeking mutants that would provide information about basic photosynthetic pathways. Many of his publications elucidated the locations and characteristics of various carbonic anhydrases produced by *Chlamydomonas* under differing growth conditions. Ten Ph.D. students completed their work under his direction, as well as many master's students; a number of them already have prominent careers.

In Bob's research lab attention was paid to new ways of doing things and to the development of new lab tools. His most notable success was the development of a BioNebulizer, which was selected as one of one hundred Discoveries of the Year by *Research and Development Magazine* in 1993. This patented instrument breaks intact cells of algae, bacteria, and yeast, and has proven particularly useful for isolating intact chloroplasts from *Chlamydomonas*.

Bob was also recruited to provide biochemistry and cell biology expertise for the undergraduate curriculum in the Department of Botany. And that he did very well, developing an excellent cell physiology course that became the cell biology course for all biology majors after the fusion of the Department of Botany into the Department of Biology. At that time the department lacked a lab course in cell biology, and again Bob spearheaded the developmental effort. Not only did the course teach biochemical lab concepts, which had never been done for undergraduates before, but it also introduced effective ways to do it that were new to the department. Students formed small groups to undertake each experiment, and each group then was responsible for discussing what had happened, why, and what it meant, using guidelines given to the group that helped it do the analysis effectively.

With a continuing concern about the education of young people prior to their arrival on campus, Bob has always been available to provide advice and guidance to high schoolers or younger students who wanted or needed some exposure to science. And he has been very concerned about the quality of their teachers. For two summers he played major teaching roles in a special six-week departmental workshop on "new biology" for high school teachers. More so than most others on the workshop staff, he maintained continuing contacts with several of the teachers.

There is a very special personal essence to Bob Togasaki. Friendly and warm, he has always been sincerely and overtly concerned about anyone in the department with health problems or other personal difficulties. He has been intensely loyal to the Departments of Botany and later Biology and to IU as an institution, immersing himself in service activities. When his wife, Fumiko, undertook graduate work in Asian art history, he was highly supportive of her endeavors. And when she was offered a permanent academic position in Springfield, Ohio, he encouraged her to accept it and did the requisite traveling to maintain their married life while they worked apart geographically.

Bob's accent was difficult for some young Hoosiers, but they soon learned to understand what he was saying, and they quickly became aware that he was truly concerned about them as well as their learning. When preparing for classes, Bob knew what he wanted to teach, but he was sometimes just slightly disorganized and a bit late in getting all of his teaching materials pulled together. It was common to see Bob scurrying to the Xerox machine at the last minute to get a few additional overheads made. His enthusiasm for biology and for teaching, and his knowledge of his subject matter, carried him through.

Few faculty members have been as willing to do almost anything that is needed for the good of their institution. Whether helping with tenure and promotion work, serving on a search committee, or talking with prospective graduate or undergraduate students, Bob has always been a ready volunteer.

As he enters retirement and reduces his departmental activities, Bob will be missed in many ways.

Albert Ruesink