While the conditions of measurement reported here were such as to maximize the effect (tightly synchronized population and minimal mixing), it is clear that the sensitivity of the Coulter system to particle shape constitutes a potential source of significant error for the measurement of volume distribution spectra, even for such nominally "spherical" objects as mammalian cells in suspension culture. In applications requiring an accurate determination of the detailed shape of the entire volume spectrum [e.g., for estimation of volume growth rates and division probabilities (Bell and Anderson, 1967)], experimental conditions must be developed to minimize this source of error by ensuring complete dissociation of pairs of daughter cells. We have found that pipetting through small apertures (a few tenths millimeter diameter) or 10 min digestion with trypsin are effective, but visual determination of unseparated pairs is recommended as a routine control measure.

This work was performed under the auspices of the U. S. Atomic Energy Commission.

Received for publication 30 June 1967.

REFERENCES

BELL, G. I., and E. C. ANDERSON. 1967. *Biophys. J.* **7**:329.
COULTER, W. H. 1956. *Proc. Natl. Electron. Conf.* **12**:1034.
GREGG, E. C., and K. D. STEIDLEY. 1965. *Biophys. J.* **5**:393.
KUBITSCHEK, H. E. 1962. *Rev. Sci. Instr.* **33**:576.
ROBBINS, E., and P. I. MARCUS. 1964. *Science* **144**:1152.
TOBEY, R. A., E. C. ANDERSON, and D. F. PETERSEN. 1967. *J. Cellular Physiol.* In press.
TOBEY, R. A., D. F. PETERSEN, E. C. ANDERSON, and T. T. PUCK. 1966. *Biophys. J.* **6**:567.

E. C. ANDERSON
D. F. PETERSEN
R. A. TOBEY

Biomedical Research Group
Los Alamos Scientific Laboratory
University of California
Los Alamos, New Mexico 87544

Samuel A. Talbot, 1903–1967

Samuel A. Talbot died on 20 February 1967 in Baltimore at the age of 63. He was one of the pioneers in the areas of biophysics, medical physics and biomedical engineering. He received his Bachelor's degree from Cornell, his Master's degree from Trinity College, and his Ph.D. degree in physics at Harvard in 1935. His doctoral thesis was of a biophysical nature and probably one of the early ones for which a Ph.D. degree was awarded. Dr. Talbot then joined the faculty of The Johns Hopkins School of Medicine to continue work in physiological optics which he had already begun in his doctoral thesis. Eventually he was appointed chairman of a Biophysical Division and later chairman of the Department of Biomedical Engineering within the larger Department of Medicine at Johns Hopkins. In 1966, he was once more organizing a Biomedical Engineering Department at the University of Alabama when he fell ill.

Talbot's research interests covered a broad range of both basic and applied nature. His original work on color vision was theoretical in nature and eventually was confirmed experimentally. He contributed to developments in modern electrocardiography and particularly in ballistocardiography, an area to which he devoted many years of careful and successful work. In addition, he entered significantly into many additional areas as a result of his contacts with his medical colleagues. He always felt that they needed biophysicists and responded eagerly when called upon. Thus, in due time he became a medical physicist par excellence.

When many others chose to enter various biophysical fields after World War II, Talbot was active in the many discussions of the needs and nature of professional societies and journals. It was no accident that he was the chairman of various groups, beginning in 1955, which led to the First National Biophysics Conference in 1957, then secretary of what became the Biophysical Society in 1958, and secretary of the Society until 1962. It was because "Sam" was more widely known, respected, and trusted—and he worked harder—than anyone else in this genesis of the Biophysical Society.

Talbot regretted at times that the very exciting and rapid developments in molecular biology overshadowed to some extent and reduced interest in other potentially important areas of the biophysics. In 1960, he became interested in exploring together with some of his colleagues at Rochester and Pennsylvania appropriate means for developing graduate training programs in biomedical engineering. This activity was initially supported by a study grant awarded by NIH and eventually stimulated the development of biomedical engineering study sections at NIH and the biomedical engineering training opportunities offered by a rapidly increasing number of universities in this country.

Samuel A. Talbot wn exceas allent teacher. He developed a comprehensive course on biomedical engineering topics which was taught at the University of Pennsylvania and at The Johns Hopkins University. The material of this course and its arrangement had ripened sufficiently in repeated presentations to justify a permanent record. Talbot was working on this book when he died.

It was a joy to work and talk with Sam. He always was as interested in what others were doing as he was enthusiastic and critical of his own progress. Although his formal reports were models of brevity, he could and would talk at length and convincingly about his own ideas. As secretary of the Biophysical Society, he was gentle with the succession of other elected officers; but it was not until Sam appeared, with bulging brief case and somber mien, that they could move ahead with confidence.

His friends, colleagues, and the Biophysical Society are grateful to him and regret his loss.

HERMAN SCHWAN
KENNETH S. COLE