

Editorial

Biophysical Chemistry is a journal which has been concerned with interpretation of biological phenomena in terms of the principles and methods of physical chemistry. The terms and areas of coverage for the journal were laid down by Michel Mandel and the Editorial Board when the Journal was founded 20 years ago. On 31st December 1993, Michel Mandel retired as Principal Editor but remains as Founding Honorary Editor of the Journal; he will no longer receive manuscripts for consideration for publication in *Biophysical Chemistry*. Gerhard Schwarz, Bob Steiner, Carl Blomberg, Heini Eisenberg and Hiroshi Maeda still serve on the Editorial Board and provide valuable continuity through a transitional period for the Journal during which a new Principal Editor learns the ropes of the job. John Schellman has also stepped down from the Editorial Board but continues to serve on the Advisory Editorial Board and is actively involved in some important special issues and as a referee.

Papers published in the first volume of *Biophysical Chemistry* focused on hydrodynamics, calorimetry, NMR, infrared, kinetics and ultrasonics of most types of biological macromolecules. Twenty years later, methodology is similar except for some sensitivity enhancements. For example, Fourier transform infra-red now permits IR to be performed on aqueous samples, lasers permit molecular, in particular lipid, dynamics to be determined, and superconducting NMR magnets are commonplace. With respect to the systems being investigated, oligosaccharides have now been far better resolved chemically from biological sources and nucleic acids and proteins can be produced in pure form synthetically and by biological means.

The most significant advance in biophysical study is clearly the use of computers for data capture and analysis. Testing statistical and stochastic models experimentally, impossible 20 years ago, is now realizable. Molecular modelling and molecular dynamics calculations, with reinforcement by experimental evidence from FT-NMR and other fast time-scale methods, means that descriptions of macromolecular structure and function in dynamic terms is now possible. Indeed, molecular information now dominates in volume of papers over more phenomenological reports.

Traditionally, biophysics has been demarked by methodology rather than system, but with more user friendly equipment becoming available, more laboratories appear to be widening their instrumental specializations as well as including more sophisticated means of obtaining a variety of systems for study using, for example, genetic and synthetic methods. *Biophysical Chemistry* will not fundamentally change its range or scope of areas to be covered as described in the first Editorial written by Michel Mandel in 1973, except perhaps to emphasise the importance of studying the biological relevance of particular phenomena made possible through new technologies producing biologically relevant macromolecules.

The original aims of the Journal have been achieved, especially in the short publication times from submission of normally less than six months. For almost every paper submitted, it is the refereeing process which takes longest, sometimes up to three months. Editors continually try to find responsive and effective referees but individuals have different time constraints and workloads which often prevents them from refereeing as much or as quickly as we would like. It is for this reason that the Advisory Board Editors will be used more frequently in the future in the hope that this group will feel more able to show commitment to *Biophysical Chemistry*. Also, we shall aim to attach young and dynamic members to the Board. Only through a strict and fair refereeing system of submitted manuscripts can the standard and quality of the Journal be maintained. From 1994, the Journal will begin to publish four volumes, an increase by three issues and hence about 30 papers per year. Special Issues will continue to be the mechanism by which specific topics and meetings will be covered by the Journal. In addition, it is hoped that in each issue a mini or full review will appear, again refereed and as informative as possible to a general audience.

There is no promise that the new Principal Editor will stay with the Journal for the next 20 years, but it is intended that *Biophysical Chemistry* will continue to be a high quality Journal able to provide a forum for any full-length paper describing both the phenomenological and molecular treatments of biological function of individual macromolecules, and of supramolecular structures which these macromolecules can form with each other and with small molecules.