

BIORHEOLOGY

EDITORIAL

The papers in this issue should have represented the opening pages of Volume 29 of *Biorheology*. With this intention they were submitted in January and February of this year. The idea was to produce an opening issue which would be a scientific tribute to A. L. Copley, who was stepping down after many years as Executive Editor and Editor-in-Chief of *Biorheology*. Al Copley founded the journal with G. W. Scott Blair and had become Executive Editor when Blair's failing eyesight made it impossible for him to continue. A transition of major and traumatic significance was thus meant to take place this year. To mark this event, Pedro Verdugo and I, representing the new team that now heads the journal, approached a number of our editors, past and present, to submit to us an original contribution for our first issue in appreciation of A. L. Copley.

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The administrative transition from Al Copley to myself as Executive Editor was not meant to be abrupt. We had a gradual transfer of material and functions in mind. Various administrative delays held back setting up my office in Rehovot and it became possible only in early December 1991 to proceed with our plan. I was still busy looking for suitable staff and mapping out details when at the end of January two events occurred, in close succession, which made any idea of a controlled and smooth takeover a travesty. First, on January 28th, A. L. Copley died after a relatively short and acute period of illness and immediately after, on January 29th, I was taken to hospital with a rather serious heart attack. Not only was there

no smooth transition, there was a sudden, irreplaceable vacuum created in New York and a total collapse of my fledgling attempts to set up an office in Rehovot. I was instructed by my physicians to be out of the picture for some ten weeks. I chafed at the bit, but within this time frame I was still hopeful that I would be able to keep some semblance of an orderly schedule for 1992. I was just getting down to things when in early April I developed other very serious and devastating health problems. For six months thereafter I was totally unable to function; it was only in late September that I could begin to work again with something like my normal efficiency.

During all these long weeks of illness I lay and worried about the papers that had been sent to me to honor Al Copley, papers which in the light of what had happened were now dedicated to his memory. These papers had practically all arrived during the immediate period following my heart attack and neither then nor afterwards could I in any way attend to them. In fact, they were not even separated, but were kept with my other mail. To none of this could I attend and there was no one to take my place here.

To save the situation, Pedro Verdugo in May most kindly consented to set up an office in Seattle and to act as Executive Editor until I would be able to function again fully. Gradually, I could pass to him most manuscripts that had been sent to me by our loyal Board of Editors after they had finished their review, but I could not do so with the papers dedicated to Copley. Only I could sort these out. With this issue, all outstanding material has now reached the publishers, unfortunately with

some longer or shorter delay, but during the days of my illness it was the impasse that the papers solicited that weighed most heavily on my mind.

I therefore take this opportunity to apologize to these authors and indeed to all others who were inconvenienced, whose manuscripts were held up and whose queries were often not answered because of the circumstances. I apologize also to the readers and the loyal subscribers to *Biorheology* that Volume 29 has come out in such a sporadic fashion and that this issue which should have been first will now be the last of the year.

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As you know, Pergamon Press is since early 1991 a subsidiary of Elsevier. The new management, Pedro Verdugo and I as Editors-in-Chief, and our Editorial Board have discussed major stylistic changes for the journal. More importantly, perhaps, Pedro Verdugo and I also want to broaden the approach the journal is now to take. Let me explain our ideas.

Mechanical effects produced within cells, by cells on other cells or by assemblies of cells upon larger biological structures are dictated by the clever use of the energy sources of the cell combined with the macromolecular structures (machines) that compose the system. When suitably instructed, forces are generated by the energy sources and directed to act on structures in the cell, mechanical effects are produced that are not only of the appropriate magnitude but also occur at the time and at the time rate to satisfy the function in question precisely. Processes occurring simultaneously, or sequentially, are matched to each other by the use of the appropriate macromolecular structures. The applied force and the induced response are carefully related to each other and to the functions, which it is desired they fulfill, in the proper way and at the proper rate. The biorheology of which we are talking here can thus well be called "molecular biorheology," *i.e.*, the study of biorheological effects on the molecular level matched so that the generated force and generated flow, transport, and

deformation of the molecules in question fulfill the programmed and intended mission of the cell precisely. Work on motility and macromolecular motion is at present most often done with no thought given to the rheological and mechanical aspects. This is a great pity. One of the aims of *Biorheology*, in our opinion, should be to provide a forum for this kind of investigation and thinking. We feel indeed that molecular biorheology should become one of the principal areas of our publishing efforts. Pedro Verdugo and I have elaborated on this more fully in our revision of the scope and aims of

Biorheology, which appeared first in Volume 29, No. 4.

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This issue is dedicated to Al Copley, whom we all miss most badly. The articles in this issue are original scientific contributions connected only by the wish of the authors to dedicate their contributions to the memory of our remarkable mutual friend. In addition, Siegfried White and I have written separate articles in appreciation of the man and his formative influence on the field of biorheology.

A. Silberberg
October 1992