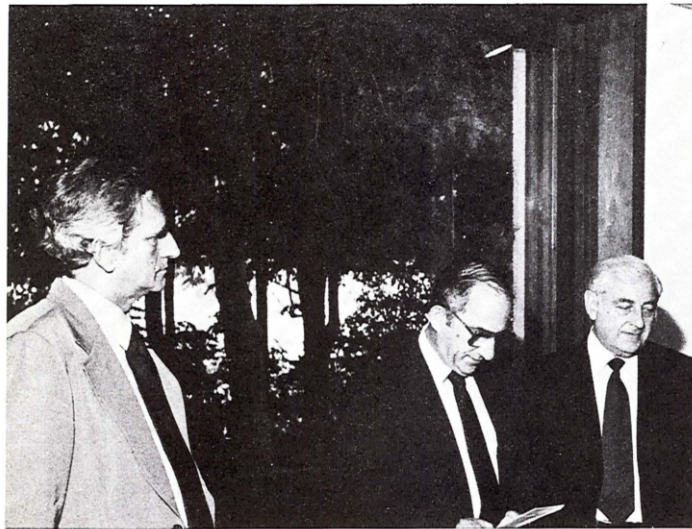


EDITORIAL

THE ESTABLISHMENT OF A PROFESSORSHIP OF BIORHEOLOGY, BESTOWED
ON ALEX SILBERBERG, AT THE WEIZMANN INSTITUTE OF SCIENCE

Last summer I participated in the Policy Seminar of the International Federation of Scientific Editors' Association (IFSEA), held from 30 August to 3 September 1982, at the Weizmann Institute of Science, Rehovot, Israel. During this visit I saw by chance the Institute's Report on 'Scientific Activities 1981', published July 1982 at Rehovot. I was astonished to note on page 379 in the entry 'Polymer Research' by the Department Head, A. Silberberg, under his name the title: "The Joseph and Marian Robbins Professor of Biorheology".



The picture shows Alex Silberberg on the right side, Mr. Joseph Robbins in the middle, and Professor Mitchell Sela, Director of The Weizmann Institute of Science on the left.

Our Readers will be as surprised as I was last September that for the first time a Professorship of Biorheology has been instituted. They will join me, I believe, in congratulations to Alex Silberberg, the Co-Editor-in-Chief of BIORHEOLOGY. It is typical for the modesty of the incumbent that he did not inform me and probably also not other colleagues that he has been honored in this way.

The establishment of a Professorship of Biorheology in one of the most prestigious scientific institutions will serve as a stimulus to other research institutions, universities and colleges throughout the world to establish Professorships of Biorheology in their institutions. There have been for many years laboratories of biorheology and of any of its fields, such as hemorrheology, and even departments in some institutions. However, there have been thus far no Professorships of Biorheology established at these institutions, although biorheology or some of its fields are being taught there and at several other institutions.

I believe some of our Readers may wish to show this Editorial to Members of the Administrative Councils and Heads of their institutions who, in turn, might wish to consider the establishment of Professorships or Chairs of Biorheology.

Although the Weizmann Institute of Science initiated the Joseph and Marian Robbins Chair of Biorheology already in November 1980, a statement by the Institute will be of interest to our Readers and is, therefore, reproduced as follows:

"How irregularities in mucus fluidity and accumulations can lead to breathing difficulties and loss of hearing, and how disruptions in blood flow in heart attack or stroke may result from blood vessel wall changes, are two of the questions being probed by Professor Alexander Silberberg, first incumbent of the Joseph and Marian Robbins Chair of Biorheology at the Weizmann Institute.

The holder of the newly established chair, endowed by the Robbins family of Chicago and their friends, is studying how biorheology, or flow properties of the body's fluids and tissues, assures man's health and how abnormal characteristics may be altered to restore proper functions. For example, a jelly-like mucus secretion must be available to interact with the rapidly-beating hair-like cellular protrusions, cilia, which coat the lungs, ears and other respiratory organs. However, both an over-thickening and thinning of mucus can lead, in the lung, as in other air-exposed interior body passages, to secretory accumulations and to

changes in the cellular composition of these layers and in air space ambience resulting in organ malfunction. Professor Silberberg, of the Institute's Polymer Research Department, is concerned with determining the factors which constitute and produce normal mucus and mucus accumulations, and abnormal characteristics in such diseases as Serous Otitis Media, very common among children, in which an accumulation of mucus in the middle ear induces a hearing loss, and Chronic Cystic Fibrosis, in which, for genetic reasons, the respiratory epithelia generate an abnormal secretion. The survival of Cystic Fibrosis patients depends mainly upon their ability to prevent and overcome lung infection despite this defect.

Another important area of the incumbent's research focuses on the interaction of blood with damaged blood vessel walls, tissues, and foreign surfaces. Such interaction often leads to the rapid transformation of blood from a fluid into a solid-like gel — a blood clot. Uncontrolled clotting causes heart attacks or strokes. Knowledge of the 'how' and 'why' of clotting can be applied to the designing of compatible materials for blood vessels, artificial heart linings and artificial kidneys, and has a bearing on the effect of blood contact on arteriosclerotic vessel walls.

Professor Silberberg is also investigating the factors which control tissue exchange, and how interference with this process can lead to edema, tissue death and organ failure."

Greetings to the Weizmann Institute of Science for the pioneering action in establishing the Chair of Biorheology!

Alfred L. Copley

New York, NY, USA

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