

Symposium on Intracellular pH, PCO₂ and PO₂

ERNST G. HUF, M.D., Ph.D., *Guest Editor*

INTRODUCTORY REMARKS

JOHN L. PATTERSON, JR., M.D., *Chairman*

It is a pleasure to welcome the three authorities who will carry the major load of presentations in our symposium today. They are Dr. Frans Jöbssis of Duke University School of Medicine, Dr. Eugene Robin of The University of Pittsburgh School of Medicine, and Dr. Norman Carter of The University of Texas Southwestern Medical School. We are also grateful for the presence of Dr. Lutz Kiesow of the Naval Medical Research Institute, Bethesda, Maryland. Dr. Kiesow will assist in the discussions to be held after each major presentation. Each of these men is an international authority in his field, and we are more than fortunate to have this group with us today.

The topics for this symposium were chosen almost as a matter of necessity. In recent years, some of the best basic and applied research in the physiology of the circulation and respiration has been concerned with the physiological and biochemical roles in the body economy of the tensions of oxygen and carbon dioxide, and of the hydrogen ion concentration or activity. In our own group, we find ourselves more and more frequently forced into consideration or speculation of the probable behavior of the "tissue" or intracellular tensions of these gases and of the pH in our attempts to explain experimental phenomena. We feel safe in predicting increasing emphasis on the intracellular values of these three major variables in the next few years, and we have felt the urgent need to take stock now of the best present information. Our speakers will define the variables under consideration and discuss methods for their measurement and their physiologic and biochemical roles in the cellular economy. They have been told that they are free to emphasize those aspects of the subject of greatest interest to them.

Again, I wish to welcome each of the speakers and present the first of them, Dr. Frans Jöbssis, whose topic will be "Oxygen Tension: Direct Observations on the Critical Level for the Brain."