III. Barophysiology

Introduction

By Alfred P. Fishman, M.D.

The original design for these symposia made provision for a lecture which would broaden the scope of the meeting by introducing a topic of general biological or chemical interest into a program otherwise devoted to a specialized subject. In contradistinction to the rest of the program, the choice would be based on the man rather than on the topic. In accord with these principles, the speaker for this evening is Wallace O. Fenn, Professor Emeritus of Physiology at the School of Medicine and Dentistry at the University of Rochester.

Dr. Fenn is a general physiologist in the traditional sense. This tradition stems from Claude Bernard, who conceived the subject matter of general physiology to be "the phenomena of life which are shared by animals and plants." This classical concept was expanded by L. J. Henderson, who saw these expressions of life as "harmoniously organized and integrated physical and chemical phenomena, susceptible to investigation by physical and chemical methods." Dr. Fenn's training, orientation, and research would satisfy the criteria of Bernard and Henderson for a general physiologist.

Following a period of predoctoral research in plant physiology, Dr. Fenn became a member of the Department of Physiology at Harvard. There he encountered the biologically oriented physical chemists, L. J. Henderson and Edwin Cohen, and joined them in pragmatic research on "The Influence of Electrolytes on Viscosity of Dough."

From this leavening experience, he went on to A. V. Hill's laboratory in England. There, his primary scientific concern was the quantitative comparison of the energy released by isolated muscle with the work performed. His experiments, which characteristically posed clear questions, were rewarded with precise answers and helped to dispel some prevalent misconceptions of the day about muscular contraction.

In 1924, Dr. Fenn became Chairman of the Department of Physiology at the University of Rochester. For the next eleven years, his major scientific preoccupation was the physiology of muscular contraction. During this period he described the "Fenn Effect," a phenomenon which is crucial to the understanding of heat production by contracting muscle.

In 1941, he changed direction: he was awarded $500 to study the effects of positive-pressure breathing on the respiration and circulation, with Herman Rahn and Arthur Otis as collaborators. From this modest beginning was born much of modern respiratory physiology.

Dr. Fenn is an unassuming man, an original thinker, a disciplined scientist, and an inspiring teacher. His talents and accomplishments have been recognized and honored, in many ways, by learned scientific and philosophic societies. Of the many topics which he could consider tonight, he has chosen to deal with "barophysiology."
III. Barophysiology: Introduction
ALFRED P. FISHMAN

_Circulation_. 1962;26:1133
doi: 10.1161/01.CIR.26.5.1133

_Circulation_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 1962 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/26/5/1133.citation

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in _Circulation_ can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to _Circulation_ is online at:
http://circ.ahajournals.org//subscriptions/