Foreword

This is the first number of a new Journal intended to serve the needs of one of the fields of physiology. That field is designated as 'applied' physiology and perhaps requires some delimitation. The application of the facts, principles, laws, methods and technics of physiology, the mother of the biological sciences, is not at all new, but is as old as the science itself. In connection with this Journal the term 'applied' will broadly connote human physiology, with particular emphasis on man in relation to his environment and the adaptations his physiologic mechanisms show in response to the many and varied stresses imposed by man's environments. The terms 'stress' and 'environment' will also be interpreted broadly to include work, exercise, industrial, military, climatic, nutritional and even social and economic factors, as well as those that seem, in the shadow of our present lack of knowledge at least, to arise from within the body itself. For example, physiological aspects of heredity, of aging and the aging process, and of metabolism will come within the scope of this Journal. At the present time the stresses imposed upon man's mechanisms for homeostasis by climate, altitude, temperature and work are receiving much intensive study by physiologists and the need of another medium for the publication of such studies is urgent. Research emphasis, however, may shift in the future and the scope of the Journal of Applied Physiology has purposely been set along broad lines to accommodate wide shifts in interest. The term 'physiology' will be interpreted rather strictly in delimiting the field of the Journal.

Over the past forty years the number of medical and biological journals has increased a hundred-fold and still continues to increase. It would seem to be incumbent upon those responsible for inaugurating a new journal to set forth the reasons which, in their opinion, justify calling upon the groups served to support the publication both by the contribution of articles, and by subscription and use.
The extension and diversification of physiological publication has caused the urge for the establishment of new specialized journals or the restriction in scope of existing ones. It becomes inexpedient for a journal to diversify its contents more and more in an attempt to serve an expanding subject completely. A far greater variety of subjects must be included than are of direct interest to individual workers or to specialized laboratories. This increases the cost of those articles that are desired to such an extent that an individual's subscription support of a journal may be discontinued and dependence placed upon libraries and other repositories. This is not altogether desirable and to a considerable extent may be offset by the formation of specialized organs of publication, provided they serve a field that has a considerable permanent interest and a large body of active workers.

Additional journals, hence, appear to be an inevitable consequence of the expansion and specialization of a field. New scientific knowledge gained from research is sterile without some degree of publication; with limited or restricted publication it fails to achieve its highest objectives. Indeed, unless it is published in media that are accessible to scientists throughout the world, it may become essentially lost and useless. Much of modern physiological research demands enormous expenditures for complex apparatus, instruments, equipment and laboratories, for highly trained technical and professional personnel, and for planning and administration. Few would question the justification of large expenditures of public and private funds for such support. The essential corollary, that of adequate facilities for publication, has not been implemented to the same extent. Yet it is as essential to the increase and diffusion of scientific knowledge as are the researches that originate that knowledge.

The AMERICAN JOURNAL OF PHYSIOLOGY, founded in 1898 and now in its one hundred and fifty-fourth volume, exemplifies the amazing development, extension and specialization of physiological research during that time. This journal currently publishes more than 350 papers a year covering almost all aspects of experimental physiology. This is only a part of the total yearly increment. The JOURNAL OF APPLIED PHYSIOLOGY has accordingly been initiated by the American Physiological Society in order to better serve the growing and more specialized needs of this field of research. It is intended to complement and not to compete with the older journal of the Society. The policies of each journal will be kept in close harmony with those of the other through the agency of the Board of Publication Trustees. The Editorial Board is charged with the responsibility of carrying out those policies and of maintaining high standards of quality. It is planned to add an advisory editorial board of outstanding physiologists outside of North America to encourage the contribution of research papers from abroad.

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