

ESSAYS ON APS CLASSIC PAPERS |

Introduction to the classic papers commemorating the APS Legacy Project

The American Physiological Society (APS) was founded in 1887 by a small group of visionary scientists and physicians. The Society has since grown to one of the most important and influential scientific organizations in the world. A major reason for this growth in size and influence is the publication of the APS journals. The first research journal published by the Society was the *American Journal of Physiology* (1898). This was followed by the *Journal of Applied Physiology* (1947) and the *Journal of Neurophysiology* (1938; acquired by the APS in 1962). The *American Journal of Physiology* was sectionalized in 1977 (now comprises seven journals), and the latest research journal, *Physiological Genomics*, was initiated in 1999.

Scientists now almost exclusively use online access to citations searches and to journal articles in their everyday life. The days of slogging through stacks of bound journals and wrestling with photocopiers are becoming a distant memory. It is likely that some of our younger colleagues have not experienced searching for articles in print in a library! A major challenge, however, is accessing articles published before the online collection starts. Even more challenging is identifying and finding articles published before 1966, the date that Medline starts. It is often humorously remarked that graduate students of today do not realize the manner in which science was done prior to 1966 and, more importantly, the significance of these early studies.

To increase awareness of and access to seminal papers in physiology, the APS Legacy Project was conceived and created. Over the past three years, the entire content of all the APS journals has been scanned into a searchable PDF format and deposited on the world wide web. Many of you have probably already seen the APS Legacy Content on the journals web site (<http://www.the-aps.org/publications/legacy/>). The completion of this project permits access to all of the APS research journals to those institutions and individuals that have purchased this collection. We anticipate that this will serve as an indispensable resource for researchers interested in the scientific history of their respective fields. More importantly, it will allow young physiologists and physicians to appreciate the importance of physiological research that was published before the advent of Medline. By searching the APS Legacy Content, the brilliance of these early scientists will become clear: it is quite amazing how much they accomplished with grand ideas and innovative experimental protocols, despite limited technology. So much of this science is still valid. An awareness of this rich history can prevent repetitive experimentation and, thus, hasten progress.

To celebrate and highlight the completion of the Legacy Project, the Publications Committee of the APS, chaired by Dale Benos, and the APS Publications Office, directed by Margaret Reich, decided to highlight seminal papers published in the APS research journals since their inception. As you can imagine, this task was somewhat daunting. A

blue-ribbon panel of experienced physiologists was assembled (see below). Letters were sent to all emeritus members of the Society asking them to identify, in their opinion, paradigm-establishing or paradigm-shifting articles. We also sent requests for nominations of classic papers to members of appropriate APS Sections, journal Editors, and Editorial Boards asking this same question. Out of this effort emerged an extensive list of classic papers published in APS research journals. Additional experts in specific areas of physiology were also surveyed. Then, the Task Force, chaired by Hershel Raff and staffed by Anna Trudgett, APS Editorial Manager, set to work to winnow the list down by area of research. Lastly, after a consensus was reached, we commissioned eminent scientists with first-hand or personal experience in the field to write essays about a given classic paper or group of papers. The author of the classic paper itself, where possible, was invited to provide some commentary about the ambiance of the work and times.

These essays appear online at the APS Journals web site (<http://www.the-aps.org/publications/classics/>) and are linked to the appropriate classic papers in the Legacy Project. These selected articles are freely available to everyone, while the full Legacy Content can be purchased for a small fee. If your institution has not purchased it, we strongly urge you to petition for access to the APS Legacy content through your institution. The cost is minimal: a one-time \$2,000 fee for unlimited access to the entire collection of APS publications beginning from their inception (1898). In addition, the essays will appear in print in the appropriate APS journals at the discretion of the Editor.

This project has truly been a labor of love. Obviously, some important articles may not have been selected, although some readers might feel they should have been included. This is inevitable in a selection process like this. Rather than being a definitive list, it is our hope that the publication of these classic articles and essays will stimulate and inspire physiologists of all ages to appreciate the beauty and the greatness of science published in APS research journals in the last century. Moreover, the American Physiological Society recognizes the need to make accessible all of the literature in its archives, not only as a testament to the dedicated scientists involved in physiological research, but also to provide a means to obtain a deeper understanding of the cultural heritage of modern day science. We hope you enjoy our choices.

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