Naissance of the Archives of Pathology & Laboratory Medicine

A Critical Analysis of the January 1926, Volume 1 Issue

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The 1920s were an exciting time for pathology: implementation of frozen sections during surgery, regularized practice of postmortem examinations, and advances in laboratory medicine. The growing interest in the field led the American Medical Association (AMA) Section on Pathology and Physiology to urge the AMA to publish a new publication. In 1925, the AMA Board of Trustees agreed to establish the Archives of Pathology & Laboratory Medicine. In the first Archives issue in January 1926, the editorial board articulated the impetus for a new pathology journal: “(1) to meet the present need in this country for increased facilities in publication of results of scientific work in the field of pathology in the broad sense, and (2) to serve as a medium for information, for physicians and others, of progress in pathology and in the practical use of all clinico-pathologic procedures that for want of a better term may be referred to collectively as ‘laboratory medicine’.”

PATHOLOGY JOURNALS IN THE 1920s

In the 1920s there were 4 major American journals devoted to various aspects of pathology and laboratory medicine (Table). It should be stated, however, that important articles within the field were still being published in journals of medicine, surgery, physiology, and various other disciplines.

The American Journal of Pathology is the oldest American journal in the field of pathology. It began in 1896 as the Journal of the Boston Society of Medical Sciences, until mid 1901 when it became the Journal of Medical Research, which lasted until late 1924. In 1925, it was renamed the American Journal of Pathology.

The Bulletin of the International Association of Medical Museums and Journal of Technical Methods was first published in 1907 by the International Association of Medical Museums (IAMM). In 1955, the IAMM was renamed the International Academy of Pathology (IAP) and in 1986 the US and Canadian Division was separately incorporated as the United States and Canadian Academy of Pathology (USCAP).

The Journal of Laboratory and Clinical Medicine was first published in 1915 by the Central Society for Clinical Research. After the formation of the American Society of Clinical Pathologists (ASCP) in 1922, this became the “adopted” journal of the ASCP until 1931 when they formed their own journal, namely, the American Journal of Clinical Pathology.

EDITORIAL BOARD BIOGRAPHIES

The 6 members of the editorial board were preeminent physician-scientists of international repute. It should be noted that 4 of the editorial board members were elected to the National Academy of Sciences: Ludvig Hektoen, MD (1918); William MacCallum, MD (1921); James Ewing, MD (1935); and Simeon Wolbach, MD (1938). Two were presidents of the IAMM (William MacCallum, MD [1908–1909] and James Ewing, MD [1921–1922]). Finally, Alfred Stengel, MD, was president of the American College of Physicians from 1925–1927.

Ludvig Hektoen, MD, Chicago (1863–1951)

As the first editor-in-chief of the Archives of Pathology (1926–1950), Ludvig Hektoen, MD, (Figure 1) was the longest-serving office holder (25 years) of any of the subsequent Archives editors-in-chief. His name carries on today in the Hektoen Institute of Medicine in Chicago. He received his medical degree from the College of Physicians and Surgeons of Chicago (forerunner of the University of Illinois at Chicago College of Medicine). At Cook County Hospital he was appointed as pathologist and quickly rose in academic status as professor at Rush University and at the University of Chicago. In 1926, at the time of the first edition of the Archives, he was professor and chair of the Department of Pathology at the University of Chicago and director of the John McCormick Institute for Infectious Diseases. Dr Hektoen was an advisor to the AMA and editor of other publications, including the Journal of Infectious Diseases, the Proceedings of the Institute of Medicine of Chicago, and the Transactions of the Chicago Pathological Society. He was known for his discoveries in immunopa-
thology: homologous erythrocyte hemagglutination during blood transfusions, the principles of the accelerated response following a booster shot (specific anamnestic reaction), and the use of adjuvants to augment the immune response.

James Stephen Ewing, MD, New York (1866–1943)

Of all of the esteemed editorial board members, James Stephen Ewing, MD, is likely the most recognized American oncologic pathologist during the first half of the 20th century.14–16 His portrait was on the cover of Time Magazine on January 12, 1931, as “Cancer Man Ewing” (Figure 2).

He received his medical degree at the College of Physicians and Surgeons of New York and he pursued postgraduate training in pathology at Roosevelt Hospital. He held various appointments at Columbia University and later at the newly organized Cornell Medical College where he became the first professor of pathology. In 1912, he was one of the key individuals in the transformation of Memorial Hospital (which would become Memorial Sloan Kettering Cancer Center) into a world-renowned oncology-focused facility. At the time of his position on the ARCHIVES editorial board, he was pathologist-in-chief and director of cancer research at Memorial Hospital. He was one of the founders of the American Association for Cancer Research and the American Society for the Control of Cancer (forerunner to the American Cancer Society) and the 9th president of the IAMM. His textbook Neoplastic Diseases: A Treatise on Tumors underwent 4 editions.

William Ophüls, MD, San Francisco (1871–1933)

Although born in the United States, William Ophüls, MD, (Figure 3) received his medical degree abroad and studied in Göttingen, Germany, under Professor Johannes Orth, a student of Rudolf Virchow.18,19 In the United States, he was professor of Pathology and Bacteriology at the University of Missouri and later joined the faculty of Cooper Medical College, which would be consolidated as the Leland Stanford Junior University School of Medicine (sic). At the time of his position on the ARCHIVES editorial board, he was professor of Pathology and dean of the School of Medicine at Stanford. He was known for contributions in renal pathology and in coccidioidomycosis, medical education, and public health.

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<th>Comparison of ARCHIVES With Other American Pathology Journals (Circa 1926)</th>
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Figure 1. Ludvig Hektoen, MD (1863–1951), 1921. Image courtesy of the History of Medicine, National Library of Medicine.

Figure 2. James Stephen Ewing, MD (1866–1943), January 12, 1931. Image courtesy of Time Magazine.
Simeon Burt Wolbach, MD, Boston (1880–1954)

Simeon Burt Wolbach, MD, (Figure 4) graduated from Harvard Medical School and pursued postgraduate training under Drs Frank B. Mallory and William T. Councilman at Boston City Hospital. He spent a few years in Albany, New York, as the director of the Bender Hygienic Laboratory College and in Montreal, Canada, at McGill University and as pathologist at the Montreal General Hospital. Following his return to Harvard, he held various positions in the Departments of Pathology and Bacteriology. At the time of his position on the ARCHIVES editorial board, he held the title of Baxley Professor of Pathology and Pathologist-in-Chief, The Johns Hopkins Hospital. He was known for contributions in pathology of infectious diseases, in particular malaria, and endocrine disorders, and for innovative teaching. He was a cofounder and the second president of the IAMM and later was elected to the National Academy of Sciences. His well-known A Textbook of Pathology underwent 7 editions.

William George MacCallum, MD, Baltimore (1874–1944)

William George MacCallum, MD, (Figure 5) was a member of the first medical student class to graduate from the Johns Hopkins Medical School in 1897. He pursued postgraduate training in pathology under the guidance of Dr William H. Welch. For 9 years, in New York City, he was professor of Pathology at the College of Physicians and Surgeons of Columbia University, returning to Johns Hopkins in 1917. At the time of his position on the ARCHIVES editorial board, he held the title of Baxley Professor of Pathology and Pathologist-in-Chief, The Johns Hopkins Hospital. He was known for contributions in pathology of infectious diseases, in particular malaria, and endocrine disorders, and for innovative teaching. He was a cofounder and the second president of the IAMM and later was elected to the National Academy of Sciences. His well-known A Textbook of Pathology underwent 7 editions.

Alfred Stengel, MD, Philadelphia (1868-1939)

Alfred Stengel, MD, (Figure 6) is depicted in Thomas Eakins’ well-known painting entitled “The Agnew Clinic” (Figure 7). He did his postgraduate training at the Philadelphia General Hospital and served as an assistant to Dr William Pepper Jr. For 15 years he was director of the William Pepper Laboratory of Clinical Medicine. At the time of his position on the ARCHIVES editorial board, he was professor and chair of medicine and manager of the University Hospital. He later became vice president for Medical Affairs, president of the Wistar Institute of Anatomy and Biology, and served for 2 terms as the president of the American College of Physicians. Dr Stengel’s well-known textbook by the same name, A Textbook of Pathology, also underwent 7 editions.

Details of the Articles in the January 1926, Volume 1 Issue

The Table of Contents for the first issue of ARCHIVES is depicted in Figure 8.
Intercellular Substance in Experimental Scorbutus by S. Burt Wolbach, MD, and Percy R. Howe, Boston

The first article in this issue deals with an interesting guinea pig model of scorbutus, otherwise known as scurvy. Like humans and higher primates, guinea pigs can be affected by nutritional disorders. The animals were fed an interesting diet deficient in an "antiscorbutic substance": the addition of orange juice provided "protection against scorbutic symptoms." The article describes the histopathologic changes in (1) incisor teeth formation, (2) sequence of bone growth, (3) sequence of soft tissue repair, and (4) sequence of bone repair. The authors concluded that "scorbutus is due to the absence of an agent common to all supporting tissues which is responsible for the setting or jelling of a liquid product." It should be noted that the discovery of the antiscorbutic factor as vitamin C (ascorbic acid) did not occur until 1932.27,28 This lavishly illustrated article contains 16 high-quality photomicrographs, some of which bear an uncanny resemblance to biomorphic structures in paintings by the surrealist Spanish painter Joan Miró (Figure 9).

Amyloidosis Produced by Injections of Proteins by Richard H. Jaffe, MD, Chicago

Although amyloidosis was noted at autopsy since the mid 17th century and better described by Carl von Rokitansky in the 19th century, its pathogenesis is poorly understood.29 This experimental murine model describes daily intramuscular injections of nutrose (sodium caseinate) "flooding the body with foreign proteins" to elicit amyloid formation by inducing chronic inflammation. The deposits of amyloid occurred in various organs: in the liver "crystal-like amyloid deposits" were depicted in a color photomicrograph (Figure 10).

Hypernephroma of Thyroid, with Clinical Picture of Exophthalmic Goiter by Anatole Kolodny, PhD, MD, Iowa City

This case report presents an example of multiple nodules of so-called hypernephroma arising in the setting of a goiter. The described histologic features noted "abundant droplets..."
of lipoids” and that “Lubarash’s glycogen reaction was positive.” The author suggested that these lesions more likely represented “metastases of a hypernephroma” (ie, renal cell carcinoma clear cell type) than a degenerative goitrous process.

Role of Endothelium in the Production of Polyclasts (Mononuclear Wandering Cells) in Inflammation by F. J. Lang, MD, Chicago

Following the discovery of phagocytic cells by Ilya Ilyich Mechnikov in 1882 these cells had been called clasmatocytes, polyclasts, reticular cells, and other terms: today we designate them as macrophages or histiocytes. Until the publication of Lang’s article, there were various proposed theories for the origin of the tissue-based “polyblasts” or “mononuclear wandering cells.”

This well-illustrated article described a rabbit model in which intravenous injections of India ink particulate matter were used to follow and characterize the various inflammatory cells. Lang refuted an endothelial origin and concluded that the polyblasts arose from the connective tissue stroma via emigration from peripheral blood cells.

So-Called Acrodynia or Erythredema (Swift’s Disease): A Pathologic Study of Two Necropsy Cases by Aldred Scott Warthin, PhD, MD, Ann Arbor

Swift disease has been known as erythroedema, acrodynia, pink disease, dermatopolyneuritis, and various other names. Today it is an uncommon and seldom encountered disease of infants and young children. Nonetheless, at the time of this report, there were 230 known cases, but few reports of the histopathologic findings. Dr Warthin’s article describing 2 autopsy cases showed central nervous system edema, meningeal irritation, and various cutaneous changes. In Dr Warthin’s opinion, these findings suggested “a food deficiency or toxic state.” Indeed, more than 2 decades later this would prove to be an example of mercury poisoning, as calomel (mercuric chloride) had been used for infantile teething and as a laxative.

Fat Replacement of the Glycogen in the Liver as a Cause of Death by E. R. LeCount, MD, and H. A. Singer, MD, Chicago

This brief 2-case series describes the autopsy findings of a “large fatty liver” as the sole cause of death, occurring in “small women whose consumption of whisky or similar liquors (brandy) was inordinate.”

The William Wood Gerhard Gold Medal of the Philadelphia Pathological Society by E. B. Krumbhaar, MD, PhD, Philadelphia (President of the Philadelphia Pathological Society and Director of Laboratories at the Philadelphia General Hospital)

This medal is named for William Wood Gerhard (1809–1872) who was the first president of the Philadelphia Pathological Society, which is currently known as the Pathology Society of Philadelphia (Figure 11). The front side bears a portrait of Dr Gerhard and the reverse side shows the classic lamp of knowledge entwined by a serpentine staff of Aesculapius.

The medal contains the rather odd inscription: “The Philadelphia Pathological Society Honors Zeal in Research.” On November 12, 1925, which was the first year of the award, the medal was given to Dr William H. Welch, one of the founding professors at the Johns Hopkins School of Medicine.
Medicine. This award was given until 1971 (John S. J. Brooks, MD, personal communication, December 16, 2015).

A Control Method in Staining Smears for Tubercle Bacilli by H. J. Corper, MD, Denver

This article was published in a section called Laboratory and Technical Notes Section. Dr H. J. Corper was the director of research at the National Jewish Hospital for Consumptives, Denver, Colorado. For the “clinical pathologist or practicing physician who is only occasionally called to stain specimens,” this brief article provides a method to create a reproducible control for the examination of “tubercule bacilli” (sic) in smears.

Relation of Atopic Hypersensitiveness (Hay Fever, Asthma) to Anaphylaxis: A Review of Recent Literature by Arthur F. Coca, MD, New York

Dr Arthur Coca was professor of Immunology at Cornell University Medical College. He was the founder of The Journal of Immunology and its editor from 1916 to 1948. This lengthy (22 pages) review article, published under General Review, presents a densely written up-to-date (circa 1925) review of the literature of atopic diseases such as hay fever and asthma. Of note, Dr Coca and his colleague, Dr Robert A. Cooke, introduced the term atopy into the medical lexicon in 1923.

OTHER MATERIALS

The Notes and News section contained 5 death notices, several faculty appointments, and a fellowship awardee, along with the notice of a protest of “the High Cost of German Publications” and news of the establishment of a Depository of Materials for research at McGill University.

The Abstracts from Current Literature section provides the original authors’ summaries or commentary of diverse articles that were published in 1925. While most articles were from journals published in English, there were numerous translations from German, French, and other foreign medical journals.

The subject categories included pathologic physiology; pathologic anatomy; pathology chemistry; microbiology and parasitology; immunology; tumors: case report, experimental studies, larger series; medicolegal pathology and technical.

Described within the Society Transactions section are meetings for the Chicago Pathological Society. The Chicago Pathological Society held its regular monthly meeting on October 12, 1925, on the topics of diplococcus in measles, compression myelitis secondary to Echinococcus disease of vertebrae and kidney, and further observations on the ring precipitation test for syphilis.

At their regular monthly meeting on November 9, 1925, the following was covered: some observations on the relation of chemical constitution to biologic specificity, Gaucher disease and lipoid histiocytosis, anomaly and aneurysm of the circle of Willis, and the splanchnoperipheral leukocyte balance.

The final section of the issue was Book Reviews. The first ARCHIVES issue also contained 3 book reviews: Die Individualität des Blutes in der Biologie, in der Klinik und in der gerichtlichen Medizin Von by Leone Lattes, Springer, 1925; The Pathology of the Mouth by Frederick B. Moorhead and
The Archives of Pathology & Laboratory Medicine originated as an authoritative instrument for the dissemination of knowledge with its first issue in January 1926. It was not a "humble beginning." The inaugural issue of the Archives of Pathology & Laboratory Medicine instituted several paradigms of the modern journal, including a mix of practical instruction and pioneering innovation, and a number of significant discoveries were described in its pages. The original editorial board members were legendary medical figures whose foresight helped shape the fields of pathology, oncology, infectious disease, immunology, and more as we know them today.

This first issue heralded a journal that, 83 years later, in 2009, would be selected as the most influential pathology journal of the past 100 years by the Division of Biomedical and Life Sciences of the Special Libraries Association. In 2011, 85 years after its first issue, the Kantar Media 2011 Custom Study determined that the Archives is the most highly read journal/periodical title among practicing pathologists in the United States by a wide margin. We can see that intimations of future successes were present at the very beginning. The aspirations and pedigree established by this first issue and first editorial board have flourished for a full 90 years.

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References
2. Wright JR. The politics underlying the provision of and changes in pathology and laboratory services in the United States during the roaring twenties [published online ahead of print May 3, 2016]. Arch Pathol Lab Med. doi:10.5858/arpa.2016-0113-HP.


