

John G. Bartlett: A Transformative, Visionary Leader of Johns Hopkins Infectious Diseases

Paul G. Auwaerter, Thomas C. Quinn, Cynthia L. Sears, and David L. Thomas

Division of Infectious Diseases, Johns Hopkins University School of Medicine, Baltimore, Maryland

INFECTIOUS DISEASES AT HOPKINS

There is a deep tradition of infectious diseases at Johns Hopkins. William Henry Welch's microbiologic work included discovery of *Bacillus welchii* (now *Clostridium perfringens*) as the cause of gas gangrene, as well as studies of pneumonia, diphtheria, and other infectious diseases [1]. He was the first chair of Pathology at Johns Hopkins and the first director of the School of Hygiene and Public Health. William Osler was also a leader in infectious diseases and dedicated major sections of the *Practice of Medicine* to the diagnosis and management of infection [2]. Among other infectious disease leaders at Johns Hopkins, T. H. Gilchrist described North American blastomycosis in 1894, G. H. Whipple reported on intestinal lipodystrophy in 1907 (later known to be from *Tropheryma whipplei*), and T. P. Sprunt and F. A. Evans published a study of infectious mononucleosis in 1920 [3–5].

Infectious diseases was first administratively distinguished at Johns Hopkins in 1956, when the then-Chairman of Medicine, Dr A. Magee Harvey, asked Ivan Bennett to head a new Division of Allergy and Infectious Diseases. Dr Bennett was a quintessential physician-scientist, having made substantial contributions to the understanding of how infectious agents, primarily gram-negative organisms, interact with host defense systems to produce fever and septic shock [6]. Dr Bennett stayed at Hopkins but became the Director of Pathology from 1958 to 1969. He recruited Dr Leighton E. Cluff (Director of Infectious Diseases, 1958–1966), known for his

work detailing endotoxin as well as the epidemiology and pathogenesis of *Staphylococcus aureus* [7]. At various times the division included infectious diseases “notables” such as Robert Petersdorf, Edward Hook, Robert Wagner, Philip Norman, Paul Hoeprich, John Perry, Robert Fekety, Joseph Johnson, Richard Reynolds, and James Allen. Following Leighton Cluff, continuing leadership was provided by Charles Carpenter (Director, 1966–1969), who directed the Cholera Research Program at Johns Hopkins and subsequently became a global leader in human immunodeficiency virus (HIV)/AIDS. He was followed by William B. Greenough (Director, 1970–1976), who pioneered studies of the physiology and life-saving treatment of cholera using oral rehydration.

By 1976, the leadership activities of the division were distributed among 3 professors with abiding research and clinical interests in infections, but interestingly 2 with primary appointments in other departments: Dr Patricia Charache (Pathology), Dr Dianne Griffin (Medicine), and Dr Patrick Murphy (Microbiology). After 4 years of running the division smoothly, the “troika” decided that they needed to resign in order to prompt the Osler Chair of Medicine, Dr Victor McKusick, to sign on a new chief of the Infectious Diseases division. In 1980, John G. Bartlett was recruited to lead the Division as the Stanhope Baynes Jones Professor of Medicine.

JOHN BARTLETT, A PLURIPOTENT INVESTIGATOR

John Bartlett graduated from Dartmouth College in 1959 with a bachelor of arts degree in zoology. In 1963, he graduated from Upstate Medical Center in Syracuse, New York, and pursued the first 2 years of residency in Internal Medicine at the Brigham with an initial interest in cardiology. From 1965 to 1967 he was a Captain in the Army and served in Vietnam in fever wards, and then returned to finish internal

Correspondence: David L. Thomas, MD, Division of Infectious Diseases, Johns Hopkins University School of Medicine, Ste 437 1830 Monument St, Baltimore, MD 21205 (dthomas@jhmi.edu).

Clinical Infectious Diseases 2014;59(S2):S61–2

© The Author 2014. Published by Oxford University Press on behalf of the Infectious Diseases Society of America. All rights reserved. For Permissions, please e-mail: journals.permissions@oup.com.
DOI: 10.1093/cid/ciu440

medicine at University of Alabama in 1968. He trained from 1968 to 1970 in infectious diseases at the University of California, Los Angeles (UCLA) at the Wadsworth VA with Sidney Finnegold, with whom he performed seminal studies of anaerobic lung infections, many with Sherwood Gorbach [8]. In 1970, John's keen interest in the arts prompted a 6-month "post-doc" in Paris, refining his painting techniques. He returned to the UCLA VA, where he remained until 1975 when he joined the faculty at the Tufts University School of Medicine to extend his studies of anaerobic infections, characterize antibiotic-associated colitis, and helped make the link to *Clostridium difficile*. By 1980, he was already a leader in anaerobic lung infections, pneumonia, and antibiotic-associated diarrhea.

After coming to Johns Hopkins in 1980 as the Stanhope Bayne Jones Professor of Medicine, John Bartlett continued to make major contributions to medicine. John rapidly developed a reputation of always "seeing the next big thing" [9]. By the mid-1980s, HIV was emerging. Whereas many hospital administrators and even academicians ran away from HIV, John, working with Frank Polk from the Johns Hopkins School of Public Health and Hygiene (now the Bloomberg School of Public Health), embraced the challenge by establishing an HIV outpatient clinic and an HIV inpatient unit that provided a durable and a productive foundation for research and training [10]. Likewise, John envisioned the threats of bioterrorism [11] and antimicrobial resistance [12]. John contributed scholarship and national leadership to meet each of these challenges.

INFECTIOUS DISEASES AT HOPKINS: THE BARTLETT ERA, 1980–2006

John built the Division of Infectious Diseases at Johns Hopkins. In 1980, there were just 3 faculty—professors who convinced Dr McKusick to hire him to build a division. The total research budget was less than \$285 000. When he stepped down in 2006, there were 44 tenure-track faculty members and an annual research budget of >\$40 million dollars. Well-established clinical research programs existed in HIV/AIDS, tuberculosis, hepatitis, sexually transmitted diseases, hospital epidemiology and infection control, antibiotic stewardship, enteric infection, and transplant/oncology infectious diseases. Most programs sprang up from fellows who trained under John and were inspired to remain in the Division to tackle the next "big thing" in infectious diseases. Through more than 425 original papers, 280 book chapters, 14 books, countless lectures, tireless leadership of HIV guidelines, and innumerable other activities, John made an enormous imprint on medicine. Furthermore, his command of the medical literature and his remarkable clinical acumen are legendary among scores of fellows, residents, and faculty with whom he has interacted in his career. It is nearly impossible to find someone trained in infectious diseases in

the past 30 years who has not been impacted by John Bartlett. His tireless devotion to scholarship, teaching, and patient care remains an inspiration to his faculty members at Johns Hopkins, his colleagues, and coworkers around the world.

On 11 April 2014, we held a symposium to honor John Bartlett. In recognition of his diverse contributions to infectious diseases, we invited renowned leaders representing his major areas of focus to present a state-of-the-art paper. More than 250 attended the symposium, and we now proudly publish those articles (and not the humor from the ensuing "roast") in this supplement, adorned with a picture painted by John on the cover and reflections on infectious diseases written by him as the conclusion. John Bartlett, thanks for your inspiring leadership. This Festschrift is for you.

Notes

Acknowledgments. The authors thank Myron Weisfeldt for sponsoring this supplement, and Jean Bartlett, Patricia Charache, Diane Griffin, and Yvonne Higgins for generous assistance in assembling historical information.

Supplement sponsorship. This article was published as part of a supplement titled "The John Bartlett Festschrift: Celebrating a Career in Medicine," sponsored solely by the Department of Medicine of the Johns Hopkins School of Medicine in recognition of John Bartlett's contributions to medicine.

Potential conflicts of interest. All authors: No reported conflicts.

All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

References

1. Welch WH, Nuttall GHF. A gas-producing bacillus (*Bacillus aerogenes capsulatus*, Nov. Spec.) capable of rapid development in the body after death. *Bull Johns Hopkins Hosp Baltimore* **1892**; 3:81–91.
2. Osler W. The principles and practice of medicine: designed for the use of practitioners and students of medicine. 1st ed. New York: D. Appleton and Company, **1892**.
3. Gilchrist TC. A case of blastomycotic dermatitis in man. *Bull Johns Hopkins Hosp* **1896**; 1:269.
4. Whipple GH. A hitherto undescribed disease characterized anatomically by deposits of fat and fatty acids in the intestinal and mesenteric lymphatic tissues. *Bull Johns Hopkins Hosp* **1907**; 18:382–91.
5. Sprunt TP, Evans FA. Mononuclear leukocytosis in reaction to acute infection (infectious mononucleosis). *Bull Johns Hopkins Hosp* **1920**; 31:410–7.
6. The annual awards of the Association of American Medical Colleges. The Abraham Flexner Award. Dr Ivan L. Bennett Jr. *J Med Educ* **1979**; 54:25–6.
7. Johnson JE III, Leighton E, Cluff (1923–2004). *Trans Am Clin Climatol Assoc* **2005**; 116:xlvi–l.
8. Gorbach SL, John G. Bartlett: Contributions to the discovery of *Clostridium difficile* antibiotic-associated diarrhea. *Clin Infect Dis* **2014**; 59(Suppl 2):S66–70.
9. Lorber B. John Bartlett: Appreciation & celebration. *Clin Infect Dis* **2014**; 59(Suppl 2):S63–5.
10. Fauci AS, Folkers GK, Marston HD. Ending the global HIV/AIDS pandemic: The critical role of an HIV vaccine. *Clin Infect Dis* **2014**; 59(Suppl 2):S80–4.
11. Henderson DA. John Bartlett and bioterrorism. *Clin Infect Dis* **2014**; 59(Suppl 2):S76–9.
12. Spellberg B, Gilbert DN. The future of antibiotics and resistance: Attribute to a career of leadership by John Bartlett. *Clin Infect Dis* **2014**; 59(Suppl 2):S71–5.