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EDITORIAL

The Legacy of CVI

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ABSTRACT *Clinical and Vaccine Immunology* (CVI) will merge with the American Society for Microbiology (ASM) open-access journal *mSphere* in January 2018. We commemorate this transition by exploring the history of CVI and that of its predecessor, *Clinical and Diagnostic Laboratory Immunology* (CDLI), and by acknowledging their contributors. Research on vaccines, clinical immunology, and clinical diagnostic immunology published through *mSphere* will be available without restrictions to an ever-larger audience, which will expedite progress in the field. ASM remains committed to supporting its members and the research community by facilitating the dissemination of scientific knowledge in these important areas.

KEYWORDS vaccines

Clinical and Vaccine Immunology (CVI) begins a new phase as it merges with the American Society of Microbiology (ASM) journal *mSphere* in January 2018. The time is appropriate to look at the history of the journal and its contribution to the scientific community. Most importantly, it is an opportunity to acknowledge those who have accompanied us and advanced CVI's mission: authors, editors, editorial board members, reviewers, ASM staff, ASM members, and the enduringly supportive research community, to whom we are most sincerely grateful.

Clinical and Diagnostic Laboratory Immunology

The journey started in January of 1994, when *Clinical and Diagnostic Laboratory Immunology* (CDLI) was launched (Fig. 1). During this time, the number of clinical immunology laboratories expanded due to the increased demand for immunologically based diagnostic tests for infectious diseases and clinical laboratory assessment of immune cell competency. Practices for standardization, quality control, and quality assurance matured simultaneously, along with the expectation of high-quality clinical laboratory standards. As the area of diagnostic laboratory immunology expanded, the Publications Board of ASM recognized the need for a journal exclusively dedicated to clinical laboratory immunology. With Dr. Steven D. Douglas as founding editor in chief (1994 to 2003), CDLI was established to facilitate dissemination of the growing body of research in the field (1). Indeed, the following decade witnessed major scientific advances in cellular immunology, molecular genetics, and immunodiagnostics. Diagnostic immunology evolved from the identification of antibodies resulting from infection to a variety of new assays using polyclonal and monoclonal antibodies to detect microbial antigens in body fluids and more-sophisticated methods for detecting antigen expression in tissue (2). Remarkable progress was also made in cellular immunology, particularly in the areas of immune deficiency, autoimmunity, inflammatory diseases, and immunopathogenesis. *In vitro* alternatives to skin testing for tuberculosis were developed, and flow cytometry and other methods for assessing immune function were increasingly utilized. These breakthroughs led to laboratory automation in diagnostic immunology (3). A series of commentaries by Isenberg, Rose, Fahey, Tomar, and

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The views expressed in this Editorial do not necessarily reflect the views of the journal or of ASM.

FIG 1 Timeline of ASM clinical immunology and vaccine publications.

Douglas, published in the June 1999 issue of CDLI, summarize some of these milestones (1–5). Over this period, CDLI became a highly cited source within the field of medical laboratory immunology.

Clinical and Vaccine Immunology: Expanded Scope and a New Name

In parallel with improvements in disease diagnostics, the ongoing HIV/AIDS epidemic and new threats of bioterrorism and emerging infectious disease agents emphasized the need for disease prevention. The development and evaluation of new vaccines gained prominence in the fields of immunology and microbiology and with the public at large. Aiming to better support ASM members and the vaccine and immunology communities in general, CDLI's editor in chief, Dr. Susan F. Plaeger (2003 to 2013) spearheaded an expansion of the journal's scope. The concept of broadening the areas of interest to include a wider range of immunology, as well as vaccinology, received support from ASM's Immunology Division members, ASM's Academy of Microbiology members, and the previous editor in chief, Dr. Steven D. Douglas. In 2005, the ASM Publications Board approved the new scope and name, *Clinical and Vaccine Immunology*, with its first issue appearing in January of 2006 (Fig. 1). By this time, the journal had also gone from bimonthly to monthly publication. These changes resulted in a steady increase in the journal's reputation and its nomination by Thomson Reuters' ScienceWatch as a Rising Star in the field of immunology for several consecutive years (6). Around 2010, ASM Journals transitioned to an online eJournalPress (eJP) system, leading to substantial improvements in the submission, review, and publication processes. At the time, CVI was also published exclusively online. Despite the logistical challenges of this growing phase, CVI editors, reviewers, and authors moved almost seamlessly into the new electronic era.

A Springtime for CVI

The publishing landscape has changed dramatically over the past several years. New journals emerged, presenting authors with more options for publishing their work (7). While some of these new venues pursued less rigorous standards, the quality and scientific merit of manuscripts remained CVI's top priority for publication (7). On a positive side, this intense competition propelled change and innovation.

New initiatives reinvigorated and increased CVI's visibility under editor in chief Marcela F. Pasetti (2013 to 2017). Three new sections, Spotlights, CVInsights, and Meeting Highlights, were added to showcase our best publications and to communicate expert opinions on timely, relevant, and controversial topics, as well as recent advances and research trends discussed at theme-specific meetings (7). CVI was also given a fresh look: a new cover design featuring scientific art from papers published in

TABLE 1 CVI editors

Name[a]	Term
James D. Folds	1994–2003
David E. Normansell	1994–1997
Noel R. Rose	1994–1997
Daniel P. Stites	1994–2001
Theresa L. Whiteside	1994–2001
Steven C. Specter	1996–2006
Stanley A. Schwartz[b]	1997–2001
Susan F. Plaeger	2001–2003
Jeffrey L. Rossio	2001–2003
George C. Tsokos[b]	2001–2005
Harry E. Prince	2003–2013
Belinda Yen-Lieberman	2003–2009
Kathleen E. Sullivan	2004–2007
Thomas S. Alexander[b]	2005–2015
Stanley A. Plotkin	2005–2015
Richard L. Hodinka	2006–2016
W. Ray Waters	2007–2014
Virginia M. Litwin	2009–2014
Marcela F. Pasetti	2011–2013
Christopher J. Papasian[b]	2012–2017
Drusilla L. Burns	2013–2017
Herman F. Staats	2013–2017
Patricia P. Wilkins	2013–2017
David W. Pascual	2014–2017
Helene F. Rosenberg	2014–2017
Roshini S. Abraham	2015–2017
Kathryn M. Edwards	2015–2017

[a]Editors who became editor in chief are in boldface.
[b]Minireview editor.

each issue. The Minireview section dramatically expanded through the leadership of Minireview editor Christopher Papasian, featuring several high-profile contributions.

Personalized medicine, trained immunity, rational vaccine design, novel adjuvants, maternal immunization, and immunotherapy were at the forefront of scientific advances during this period. Innovation in laboratory methods included multiplex technology, microarrays, single-cell analysis, immunoproteomics, mass spectrometry for analysis of antibodies, and point-of-care diagnostics, among others. There has been a renewed interest in controlled human infection challenge models to evaluate vaccine efficacy. The quest for elusive immune correlates of protection continued, making use of newer technology and statistical modeling approaches. The fascinating interplay between the microbiome, immune development and competency, and mother-child health gained greater attention. The relevance of sex as a biological variable and rigor of experimental approaches were emphasized. Important reports on these and other trending topics were published in CVI (8–14). In this rapidly expanding scientific environment, CVI remained committed to disseminating discoveries and scientific knowledge with high scholarly and editorial standards, in line with those of other ASM journals and following the tradition and excellence of the society itself. Mindful of the faster pace of our times and the demands on scientists today, CVI further simplified and expedited the entire publication process. A challenge CVI shared with other specialty journals has been the decline in submissions (15). This may reflect, in part, the proliferation of new journals and heightened competition, reliance on traditional (although flawed) metrics of impact (16), and an increasingly difficult research funding environment. Unconventional ways of communicating research gained popularity with the support of digital and information technology, such as podcasts, publication in video journals (17), and posting of manuscripts in repositories as "preprints" ahead of peer review (18). Another major trend with strong growth supported by authors, academic institutions, and major research sponsors has been unrestricted open-access publication.

TABLE 2 The CVI Reviewer Hall of Fame: the most frequent CVI reviewers from 2010 to 2017

Name	Name
Carl E. Frasch	Stephen J. Barenkamp
Dennis W. Metzger	Nagendra R. Hegde
Patricia P. Wilkins	Gerald C. Miller
Luigi Buonaguro	W. Ray Waters
David Kaplan	Bryce M. Buddle
Marcela F. Pasetti	Liise-anne Pirofski
Crystal L. Loving	Steven C. Derrick
Helene F. Rosenberg	Kathryn M. Edwards
Randy A. Albrecht	Charles A. Scanga
Scott B. Halstead	Dimitrios Vassilopoulos
James McNair	James M. Burns
Jagadeesh Bayry	Konstantin P. Lyashchenko
Helene M. M. Paxton	David W. Pascual
Jorge Carlos Blanco	Antonio Cassone
Kris Huygen	Sandra Romero-Steiner
Herman F. Staats	William Franklin Carson
Moon H. Nahm	Bruce A. Green
Randy E. Sacco	Thomas R. Kozel
Hailong Guo	Steven A. Lobel
Wayne Hogrefe	Tod J. Merkel
Robin Huebner	Marjorie Robert-Guroff
Christopher J. Papasian	Kenneth L. Roland

CVI and *mSphere*

The research enterprise has become multi- and interdisciplinary and global. Rapid means of communication and easy access to information are essential to disseminating knowledge and key to facilitating progress. Biomedical research is a major force shaping and improving modern life. A new phase begins for CVI as it merges with the ASM journal *mSphere* (Fig. 1) after this last December 2017 issue. *mSphere* embodies the future of scholarly publishing by offering authors the opportunity for rapid publication of high-quality scientific reports across the field of microbiology in an open-access format (19). The research community will benefit from manuscripts being freely available to readers everywhere. Authors who wish to be more engaged in the publication process may find the mSphereDirect option to be attractive. This new track encourages authors to submit their articles to two external reviewers, respond to their critiques, and submit the reviews, the author's responses, and the revised manuscript to *mSphere*, whose editorial board will make a final decision within 5 days (20). Both the traditional and mSphereDirect tracks are supported by a robust editorial and peer review mechanism and ASM's highest publication standards. One of the primary goals of *mSphere* (a vision shared by other ASM journals) is to improve the authors' experience, making it as painless as possible, and to empower the authors to "be in control" (15, 19). *mSphere* also has a strong presence in social media that appeals to younger scientists. Manuscripts that would have previously been published in CVI will have a new home in *mSphere*. Under the exceptional leadership of founding editor in chief Michael Imperiale, *mSphere* is an excellent platform for publishing cutting-edge vaccine and clinical immunology research. Reaching an ever-larger readership, discoveries in these

TABLE 3 Production editors

Name	Term(s)
John N. Bell	1994–1996
Arthur Gelmis	1996–2002
Anastacia Thomasian	2002–2004, 2006–2009
Yvonne Finnegan	2004–2005
Charles Brown	2005–2006
Diane Smith	2009–2013
Jessica Kanotz	2013–2017

TABLE 4 Assistant production editors

Name[a]	Term(s)
Diane Smith	1994–1996
Robert D. Loper	1998–1999
Kristin H. Jacobson	2001–2002
Yvonne Finnegan	2002–2004
Michael E. Lerman	2005–2009
Stefanie Kowalski	2009–2011, 2014–2017
Jessica Kanotz	2011–2013
Zehava C. Robbins	2013–2014

[a]Assistant production editors who became production editors are in boldface.

areas can have greater impact than ever before. The majority of current CVI editors have joined the enthusiastic *mSphere* editorial team and are looking forward to continuing to assist ASM members and the broader research community through this new venue.

In Appreciation

Finally, we express our heartfelt appreciation to the authors who entrusted us with their work, the editors who skillfully handled manuscripts and helped authors (Table 1), Editorial Board members, and reviewers who contributed their time, effort, and expertise to ensure high standards of quality in our publications; those who most frequently reviewed papers since 2010 made it into CVI's Hall of Fame (Table 2). We are further indebted to ASM's production editors (Table 3), assistant production editors (Table 4), and editorial assistants, who handled the editorial and publication process quietly and efficiently from behind the scenes. Many thanks to Henry D. Isenberg, former editor in chief of the *Journal of Clinical Microbiology* (1979 to 1989), who had a leading role in the establishment of CDLI. Thank you also to ASM Publications Board chairs Barbara H. Iglewski (1990 to 1999) and Samuel Kaplan (1999 to 2008), to Journals Board chair Tom Shenk (2008 to 2017), a cheerful supporter of CVI, to Linda M. Illig (director of ASM Journals, 1991–2007), and to Barbara M. Goldman (director of ASM Journals, 2008–2018), as well as to Melissa Junior (assistant director of ASM Journals, 2011-present), all of whom helped us through the many transitions of CDLI to CVI to *mSphere* over the last 23 years. Lastly, we are grateful to Christopher J. Papasian, Jessica Kanotz, and ASM Journals Board chair Patrick D. Schloss (2017–2027) for critically reviewing the manuscript.

It has been a privilege to be part of the ASM family and of this journal. See you all in *mSphere*.

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