

Biosafety in Microbiological and Biomedical Laboratories

5th Edition



U.S. Department of Health and Human Services
Public Health Service
Centers for Disease Control and Prevention
National Institutes of Health

HHS Publication No. (CDC) 21-1112
Revised December 2009

Foreword

Biosafety in Microbiological and Biomedical Laboratories (BMBL) quickly became the cornerstone of biosafety practice and policy in the United States upon first publication in 1984. Historically, the information in this publication has been advisory in nature even though legislation and regulation, in some circumstances, have overtaken it and made compliance with the guidance provided mandatory. We wish to emphasize that the 5th edition of the BMBL remains an advisory document recommending best practices for the safe conduct of work in biomedical and clinical laboratories from a biosafety perspective, and is not intended as a regulatory document though we recognize that it will be used that way by some.

This edition of the BMBL includes additional sections, expanded sections on the principles and practices of biosafety and risk assessment; and revised agent summary statements and appendices. We worked to harmonize the recommendations included in this edition with guidance issued and regulations promulgated by other federal agencies. Wherever possible, we clarified both the language and intent of the information provided. The events of September 11, 2001, and the anthrax attacks in October of that year re-shaped and changed, forever, the way we manage and conduct work in biological and clinical laboratories and drew into focus the need for inclusion of additional information in the BMBL. To better serve the needs of our community in this new era, this edition includes information on the following topics:

- Occupational medicine and immunization
- Decontamination and sterilization
- Laboratory biosecurity and risk assessment
- Biosafety level 3 (Ag) laboratories
- Agent summary statements for some agricultural pathogens
- Biological toxins

At last count, over two hundred of our scientific and professional colleagues have assisted in the preparation of the 5th edition through participation in technical working groups, serving as reviewers and guest editors, and as subject matter experts. We wish to thank them all for their dedication and hard work for without them the 5th edition of the BMBL would not be possible. We also recognize the hard work and contributions made by all who participated in preparation of the previous editions of the BMBL; we have built on their solid work and commitment. It is impossible to publish this revision without recognizing the visionary leadership of the previous BMBL editors, Drs. John Richardson and W. Emmett Barkley, and Drs. Jonathan Richmond and Robert W. McKinney, without whom the BMBL would not be the widely and well-regarded resource it is today. The Executive Steering Committee did a stellar job in shepherding this massive revision effort

and not without many bumps and bruises along the way. It is through their absolute commitment to quality, technical accuracy, and dedication to the professional practice of biosafety that the 5th edition is born. We are truly grateful to Ms. Kerstin Traum, Council Rock Consulting for her expertise, keen eye for detail and seemingly tireless efforts in performing the duties of technical writer-editor. We also gratefully acknowledge Ms. Cheryl Warfield of Proven Practices, LLC for her copy-editing and formatting skills that significantly enhanced this edition's readability and ease of use.

Finally, without the superb project management abilities and leadership of Dr. Joseph McDade and the technical/scientific editing expertise of Dr. Karl Johnson, especially in virology, the 5th edition of the BMBL would not be possible.

We hope you find this 5th edition of *Biosafety in Microbiological and Biomedical Laboratories* complete, timely and most of all, easy to use. Thank you for your patience and understanding during the long and comprehensive revision process. We believe you will find it was well worth the wait.

Deborah E. Wilson, DrPH, CBSP
Director
Division of Occupational
Health and Safety
National Institutes of Health
Bethesda, Maryland

L. Casey Chosewood, M.D.
Director
Office of Health and Safety
Centers for Disease Control
and Prevention
Atlanta, Georgia

September 2009

Editors

L. Casey Chosewood, MD
Director, Office of Health and Safety
Centers for Disease Control and Prevention
Atlanta, GA 30333

Deborah E. Wilson, DrPH, CBSP
Director, Division of Occupational Health and Safety
Office of the Director
National Institutes of Health
Bethesda, MD 20892

Steering Committee

Shanna Nesby-O'Dell, DVM, MPH
Chief, External Activities Program and
WHO Collaborating Center for Biosafety and Training
Office of Health and Safety
Centers for Disease Control and Prevention

Robbin S. Weyant, PhD
Chief, Laboratory Safety Branch
Office of Health and Safety
Centers for Disease Control and Prevention

Martin L. Sanders, PhD, CBSP, RBP
Deputy Director
Office of Health and Safety
Centers for Disease Control and Prevention

Deborah E. Wilson, DrPH, CBSP
Director, Division of Occupational Health and Safety
Office of the Director
National Institutes of Health

Guest Editors

Matthew J. Arduino, MS, DrPH
Chief, Environmental and Applied Microbiology Section
Division of Healthcare Quality Promotion
Centers for Disease Control and Prevention

W. Emmett Barkley, PhD
President
Proven Practices, LLC

Mark Q. Benedict
Division of Parasitic Diseases
Centers for Disease Control and Prevention

Louisa Chapman, MD, MSPH
Assistant to the Director for Immunization Policy
National Immunization Program
Centers for Disease Control and Prevention

Dennis M. Dixon, PhD
Chief, Bacteriology and Mycology Branch
Division of Microbiology and Infectious Diseases
National Institutes of Health

Mark L. Eberhard, PhD
Director, Division of Parasitic Diseases
Centers for Disease Control and Prevention

Martin S. Favero, PhD
Director, Scientific and Clinical Affairs
Advanced Sterilization Products
Johnson and Johnson, Inc.

Susan Gorsky
Regulations Officer, Office of Hazardous Materials Standards
Pipeline and Hazardous Materials Safety Administration
United States Department of Transportation

Mary E. Groesch, PhD
Senior Advisor for Science Policy
Office of Science Policy, Office of the Director
National Institutes of Health

Ted Hackstadt, PhD
Laboratory of Intracellular Parasites
National Institute of Allergy and Infectious Diseases
Rocky Mountain Laboratory

Robert A. Heckert, DVM, PhD
National Program Leader, Animal Health
USDA, Agriculture Research Service
Beltsville, MD

Mark L. Hemphill, MS
Chief of Policy
Select Agent Program
Centers for Disease Control and Prevention

Barbara L. Herwaldt, MD, MPH
Medical Officer
Parasitic Diseases Branch
Division of Parasitic Diseases
Centers for Disease Control and Prevention

Julia K. Hilliard, PhD
Viral Immunology Center,
Department of Biology
Georgia State University

William C. Howard, MS
Industrial Hygiene/Safety Manager
Office of Health and Safety
Centers for Disease Control and Prevention

Herbert Jacobi
Deputy Director
Division of Occupational Health and Safety
National Institutes of Health

Rachel E. Levinson, MA
Director
Government and Industry Liaison Office
The Biodesign Institute
Arizona State University

Brian W. J. Mahy, MA, PhD, ScD, DSc
Senior Scientific Advisor
National Center for Infectious Diseases
Centers for Disease Control and Prevention

Charles B. Millard, PhD
Lieutenant Colonel, U.S. Army
Director, Division of Biochemistry
Walter Reed Army Institute of Research

Shanna Nesby-O'Dell, DVM, MPH
Chief, External Activities Program and
WHO Collaborating Center for Biosafety and Training
Office of Health and Safety
Centers for Disease Control and Prevention

Amy P. Patterson, MD
Director
Office of Biotechnology Activities/Office of Science Policy
Office of the Director
National Institutes of Health

Jonathan Y. Richmond, PhD
Biosafety Consultant
Jonathan Richmond and Associates
Southport, North Carolina

Martin Sanders, PhD, CBSP, RBP
Deputy Director
Office of Health and Safety
Centers for Disease Control and Prevention

James Schmitt, MD, MS
Medical Director
Occupational Medical Service
Division of Occupational Health and Safety
National Institutes of Health

Frank Simione, MS
American Type Culture Collection
Manassas, VA

David G. Stuart, PhD
Microbiologist
The Baker Company

Lee Ann Thomas, DVM
Director
Select Agent, Organisms and Vectors, and Animals
Animal and Plant Health Inspection Service
U.S. Department of Agriculture

Larry G. Thompson
Veterinary Diagnostic Laboratory
Tifton, GA

Robbin S. Weyant, PhD
Chief, Laboratory Safety Branch
Office of Health and Safety
Centers for Disease Control and Prevention

Contributors

BMBL is by its nature a continuously revised manual, and each revision refines and extends the contributions to previous editions. Since 1984, when the first edition of BMBL was published, many scientists and biosafety specialists have contributed to this important reference work. The 5th edition is no exception, as specialists in multiple disciplines generously provided their considerable expertise to this revision. The Editors and Steering Committee gratefully acknowledge the contributions of all of these many contributors over the life of the BMBL, especially contributors to the current edition, who are listed below.

Contributors to BMBL 5th Edition

David Abraham	Jeffrey I. Cohen
L. Garry Adams	Murray Cohen
Michael Adler	L. Eugene Cole II
Lee Alderman	Chester Cooper
Christopher E. Ansell	David Cox
Amy Barringer	Nancy Cox
Ronald A. Barry	Rebecca Cox
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Carolyn Black	Charles L. Divan
Walter Bond	Walter Dowdle
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May Chu	Mark Gibson

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Keither Mansfield
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Bill Switzer
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James F. Taylor
Louise D. Teel
Robert B. Tesh
Larry Thompson
Alfonso Torres

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Theodore J. Traum
David Trees
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Robert G. Ulrich
Cristina Vargas
Don Vesley
Paul E. Vinson
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Robert W. Wannemacher
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Richard Whitley
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Scott D. Wright
Jack Wunder
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Uri Yokel
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