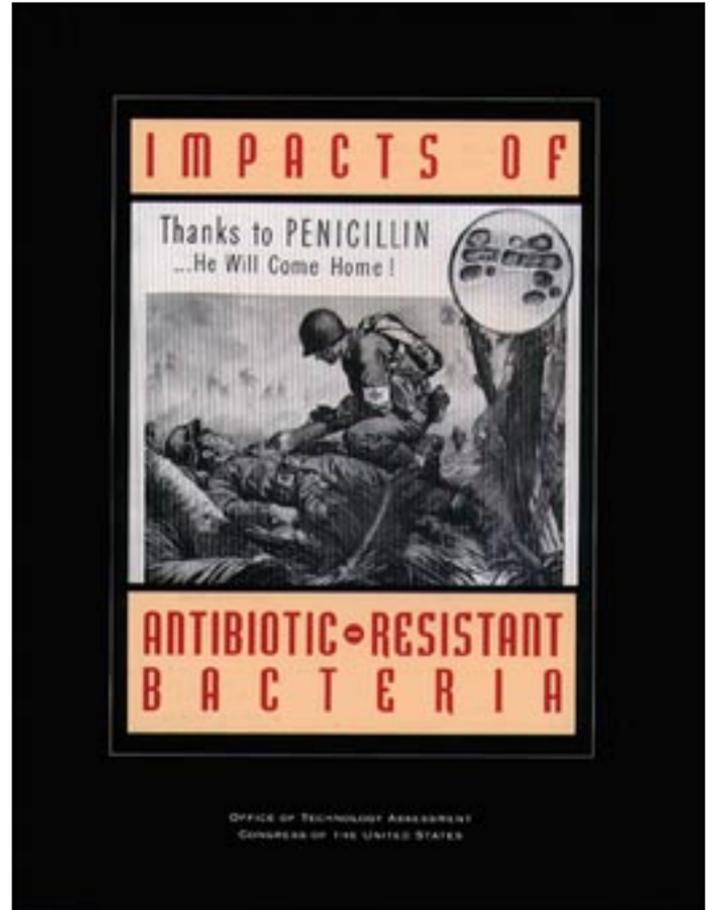


Impacts of Antibiotic-Resistant Bacteria

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Foreword

Penicillin, the first antibiotic, and the more than 100 other antibiotics now available to physicians are the primary weapons in mankind's battle against bacterial diseases. They revolutionized medicine, providing cures for formerly life-threatening diseases and preventing many previously inevitable deaths from infected wounds. They still do, but within a short time of each antibiotic's introduction into medicine, some bacteria became resistant to it, and the antibiotic lost its effectiveness against some diseases. Currently, few bacteria are resistant to all antibiotics, but many more are resistant to all but one or all but a few antibiotics, and the expectation is that resistant bacteria will continue to emerge and spread. The fear is that many bacteria will become resistant to all antibiotics, plunging humanity back into the conditions that existed in the pre-antibiotic age.

OTA's report discusses what is known about the emergence and spread of antibiotic-resistant bacteria and describes research and development aimed at controlling those organisms. It concludes that efforts are necessary both to preserve the effectiveness of currently available antibiotics and to develop new antibiotics. It discusses issues that arise in these activities, and it presents options for taking action.

This report was requested by the House Committee on Energy and Commerce in the 103d Congress (now the House Committee on Commerce). The Senate Committee on Labor and Human Resources in the same Congress endorsed the request for the study.

OTA was assisted in this study by an advisory panel of scientists and physicians from academia, industry, and state government chaired by Gail Cassell, Ph.D., of the University of Alabama at Birmingham. OTA gratefully acknowledges the contribution of each advisory panel member as well as that of many other experts who supplied information for the report and participated in reviews of the report as it was prepared. As with all OTA reports, the final responsibility for the content of the assessment rests with OTA.



ROGER C. HERDMAN
Director

Advisory Panel

Gail Cassell, Ph.D.

Professor and Chairman
Department of Microbiology
University of Alabama at
Birmingham/University
Station
Birmingham, AL 35294

Anne Bolmstrom

President
AB Biodisk
Pyramidvagon 7
S-17136 Solna
Sweden

Robert J. Bywater, Ph.D.

Director, Anti-Infective
Assessment
SmithKline Beecham Animal
Health
Walton Oaks
Dorking Road
Tadworth
Surrey KT20 7NT
UK

Barry Eisenstein, M.D.

Vice President, Lilly Research
Labs
Lilly Corporate Center, 0434
Indianapolis, IN 46285

**Prabhavathi B. Fernandes,
Ph.D.**

Vice President, Drug
Discovery
Biomolecular Screening
Bristol-Myers Squibb
PO Box 4000
Princeton, NJ 08543-4000

Winston Frederick, M.D.

Infectious Disease Research
Howard University Hospital
2041 Georgia Ave., NW,
Room 5C-43
Washington, DC 20060

Joshua Lederberg, Ph.D.

Professor
The Rockefeller University
New York, NY 10021-6399

Stephen Lerner, M.D.

Professor of Medicine
Wayne State University School
of Medicine
Harper Hospital/Division of
Infectious Diseases
3990 John R
Detroit, MI 48201

Stuart Levy, M.D.

Professor of Medicine and of
Molecular Biology and
Microbiology
Tufts University Medical
School
136 Harrison Ave.
Boston, MA 02111-1800

**Robert C. Moellering, Jr.,
M.D.**

Physician-In-Chief and
Chairman
New England Deaconess
Hospital
Department of Medicine/Room
6A
110 Francis Street
Boston, MA 02215-5553

Barbara Murray, M.D.

Professor of Medicine and of
Microbiology and Molecular
Genetics
Infectious Diseases
University of Texas Medical
School at Houston
6431 Fannin
Houston, TX 77030

Tom O'Brien, M.D.
Medical Director
Microbiology Laboratory
Brigham and Women's
Hospital
75 Francis Street
Boston, MA 02115

Lone Simonsen, Ph.D.
926 Waverly Way, Apt. A
Atlanta, GA 30307

Harry Taber, Ph.D.
Acting Director, Division of
Infectious Diseases
NY State Department of
Health
Wadsworth Center
David Axelrod Institute
PO Box 22002
Albany, NY 12201-2002

Alexander Tomasz, Ph.D.
Professor and Head/Laboratory
of Microbiology
The Rockefeller University
1230 York Ave., Box 152
New York, NY 10021-6399

Richard Wenzel, M.D., M.Sc.
Associate Chairman
Department of Internal
Medicine
The University of Iowa
Iowa City, IA 52242

Craig Townsend, Ph.D.
Chairman, Department of
Chemistry
The Johns Hopkins University
Charles and 34th Streets
Baltimore, MD 21218

Michael Zasloff, M.D., Ph.D.
President, Magainin Research
Institute
5110 Campus Drive
Plymouth Meeting, PA 19462

Project Staff

Clyde J. Behney
Assistant Director, OTA

Sean Tunis
Health Program Director

ADMINISTRATIVE STAFF

Charlotte Brown
Word Processing Specialist

Monica Finch
Word Processing Specialist

Louise Staley
Office Administrator

Carolyn Swann
PC Specialist

PRIMARY STAFF

Michael Gough
Project Director

Elise Berliner
Congressional Fellow

Dwayne L. Smith
Research Assistant

Jacqueline T. Keller
Research Analyst

CONTRIBUTING STAFF

Beth Hadley
Senior Analyst

CONTRACTORS

Michael J. Bennett
Washington, DC

Mitchell Burken
Philadelphia V.A. Hospital

Julian Davies
The University of British
Columbia

Susan Feinman
Potomac, Maryland

David Frankel
The Lancet

Sandra Handwerger
Rockefeller University

Kathie E. Hanna
Churchton, Maryland

Judith Hellerstein
Northwestern University

James H. Jorgensen
University of Texas

Karen Kaunitz
Jacksonville Baptist Medical
Center

Calvin Kunin
Ohio State University

David H. Persing
Mayo Clinic Rochester

David Relman
Stanford University

Barbara Rosenkrantz
Harvard University

Lee Sabath
University of Minnesota