Preface

The quality and efficiency of health care and, ultimately, improved health of the population depend substantially on the timely and appropriate transfer of medical technologies from the research setting into medical practice. This spreading of technologies must be fast enough so that significant potential benefits are not denied to the population and yet sufficiently paced to assure that enough is known about the safety and appropriate conditions of use of the emerging technologies.

The flow of technologies from research and development (R&D), through evaluation, to their adoption and diffusion in health care settings is thus a crucial aspect of the lifecycle of technology. Congress and many other parties are concerned with how to blend accelerated transfer with informed transfer.

As background to an effort to develop improved policies toward the transfer of medical technologies, the House Committee on Energy and Commerce requested OTA to prepare an examination of current technology transfer and assessment activities of the National Institutes of Health (NIH). This technical memorandum is the result of that examination. It presents general information on biomedical R&D and its relationship to technology transfer, and on the processes of transferring medical technology and of assessing that technology. It discusses the current technology transfer activities of NIH and contains detailed looks at two specific institutes.

The National Cancer Institute has been the focus of substantial congressional concern, particularly over its research directions and its activities in bringing technologies to medical practice. OTA conferred with a large number of academic and other experts regarding these issues.

The National Heart, Lung, and Blood Institute (NHLBI) is also covered in depth. NHLBI has been the single most active institute in terms of an organized approach to technology transfer and the level of such activities.

The main finding of this study is that despite some problems in timely transfer of technologies the most critical problems are: 1) insufficient attention to the development of the basic science base necessary for development of effective technologies; and 2) insufficient attention to the careful, scientific evaluation of the potential benefits, risks, and costs of medical technologies.

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Kerr L. White
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OTA Technology Transfer at NIH Project Staff

H. David Banta, Assistant Director, OTA
Health and Life Sciences Division

Clyde J. Behney, Health Program Manager and Project Coordinator

Anne Kesselman Burns, Analyst
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Michael Gough, Senior Analyst
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John Bergling  Kathie S. Boss  Debra M. Datcher  Joe Henson

*OTA contract personnel
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Lynne Alexander
Office of Technology Assessment

Harold Amos
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David Baltimore
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James Bowen
M. D. Anderson Hospital and Tumor Institute

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UCLA School of Public Health

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Roswell Park Memorial Institute

Louis Carrese
National Cancer Institute

Bruce Chabner
National Cancer Institute

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Oxford University

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Fred Hutchinson Cancer Research Center

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American Medical Association

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Stanford University Medical Center

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National Cancer Institute

Maureen Henderson
University of Washington

Harry Holmes
M. D. Anderson Hospital and Tumor Institute

Anne Stuart Houser
National Institutes of Health

Douglas Hussey
National Institutes of Health

Itzhak Jacoby
National Institutes of Health

Rose Kushner
Kensington, Md.

Joshua Lederberg
Rockefeller University

Mark Lepper
Rush-Presbyterian-St. Luke’s Medical Center, Chicago

Charles Lowe
National Institutes of Health

David McCallum
Consultant in Health Policy

Jay Moskowitz
National Heart, Lung, and Blood Institute

Norton Nelson
New York University

Guy Newell
M. D. Anderson Hospital and Tumor Institute

Richard Peto
Oxford University

Donald Pitcairn
National Cancer Institute

Henry Pitot
McArdle Laboratory for Cancer Research

Nathaniel Polster
M. D. Anderson Hospital and Tumor Institute

David Rail
National Institute of Environmental Health Sciences

Benno Schmidt
J. H. Whitney & Co.

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Clement Associates, Inc.

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Mt. Sinai School of Medicine

Charles Smart
American College of Surgeons

Howard Temin
McArdle Laboratory for Cancer Research

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National Cancer Institute

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