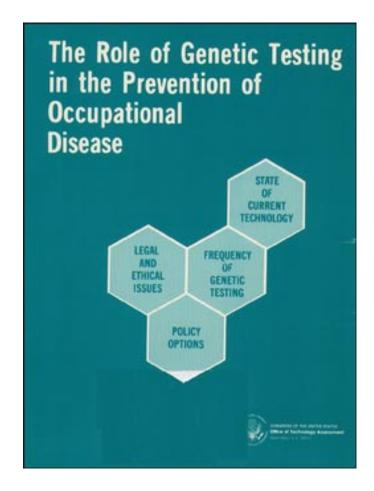
The Role of Genetic Testing in the Prevention of Occupational Diseases

April 1983

NTIS order #PB83-233734



Library of Congress Catalog Card Number **83-600526**

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Foreword

This report examines a technology, genetic testing, that may be useful in reducing occupational disease, but that also raises concerns about potential misuse. Genetic testing encompasses two major techniques, one (screening) that may be able to identify individual workers who are genetically at higher risk to disease; and another (monitoring) that may serve as an early warning system that exposure to a hazardous agent in the workplace has occurred. Information from these techniques might be used in various preventive measures, but some people fear it could result in workers being unfairly excluded from jobs.

OTA undertook the study at the request of the House Committee on Science and Technology. The study examines the technology and its social implications. It evaluates the evidence supporting its claimed benefits, the extent of testing, and how the results have been used. Social issues, particularly of a legal and ethical nature, are identified and discussed. Finally, congressional options for both promotion and control are presented.

In preparing this report, OTA consulted with members of the project advisory panel, with contractors and special consultants, and with numerous other experts in industry, academia, labor, medicine, law, economics, and ethics. Drafts of the final report were reviewed by the advisory panel chaired by Arthur Bloom and by approximately 32 other individuals and groups representing a wide range of disciplines and perspectives. We are grateful for their many contributions. As with all OTA reports, however, the content is the responsibility of the Office and does not constitute an endorsement by the advisory panel or the Technology Assessment Board.

JOHN H. GIBBONS

John H. Sibbous

Director

Advisory Panel on Occupational Genetic Testing

Arthur D. Bloom, *Panel Chair* professor of Pediatrics, College of Physicians and Surgeons, Columbia University

Eula Bingham

Environmental Health Department University of Cincinnati

J Grant Brewen

Molecular and Applied Genetics Laboratory Allied Chemical Corp.

Patricia Buffler

School of Public Health University of Texas

Ira Cisin

Social Research Group George Washington University

Burford W. Culpepper Medical Division

E. I. du Pent de Nemours & Co.

James D. English

United Steel Workers of America

Neil Holtzman

Johns Hopkins University

Paul Kotin

Denver, Colo.

Thomas O. McGarity School of Law

University of Texas at Austin

Rafael Moure

Oil, Chemical and Atomic Workers Union

Robert F. Murray Jr.

Division of Medical Genetics

College of Medicine

Howard University

Elena Nightingale

Institute of Medicine

National Academy of Sciences

Gilbert Omenn

Dean, School of Public Health University of Washington

William N. Rom

Rocky Mountain Center for Occupational

and Environmental Health

University of Utah

Stuart Schweitzer

Director, Program in Health Planning and

Policy Analysis

UCLA School of Public Health

Robert Veatch

The Kennedy Institute of Ethics

Georgetown University

OTA Project Staff—Genetic Testing Assessment

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

Gretchen Kolsrud, Biobgical Applications Program Manager

Geoffrey M. Karny, Project Director

Nanette Newell, Senior Analyst *
Ann Rose, Senior Analyst
Louise Williams, Senior Analyst
Nina Graybill, Editor

Ted Wagner, Administrative Assistant **
Fatimah Taylor, Administrative Assistant***
Lynne Alexander, Secretary
Marese Miles, Secretary†

Special Contributors

Hellen Gelband, Analyst Michael Gough, Senior Analyst

Principal Contractors

David Brusick, Litton Bionetics, Inc.
Edward Calabrese, University of Massachusetts, Amherst
Betty Dabney, Boulder, Colorado
Marc Lappe, University of California, Berkeley
Mark A. Rothstein, West Virginia University College of Law
Cynthia A. Thomas, National Opinion Research Center
Judith L. Wagner, Technology Research Associates

OTA Publishing Staff

John C. Holmes, Publishing Officer

John Bergling Kathie S. Boss Debra M, Datcher Joe Henson Doreen Foster Donna Young

^{*}Congressional Science Fellow until September 1982.

^{**}Until August 1982

^{***}From August 1982.

⁺From October 1982