

## Board of Directors

### **Edward M. Rudnic, Ph.D. Chairman, President and Chief Executive Officer**

The founder of MiddleBrook, Dr. Rudnic has more than 20 years of industry experience in the development and commercialization of a wide range of pharmaceutical products. Prior to founding MiddleBrook, Dr. Rudnic directed U.S. research and development activities for Shire Pharmaceuticals. His work with Shire began in 1997, when Shire acquired Pharmavene, Inc., where Dr. Rudnic was senior vice president for development and technical operations. From 1985 to 1990, he held positions of increasing responsibility as a director of formulation development and head of pharmaceutical process development at Schering-Plough Corporation. Prior to his work with Schering-Plough, Dr. Rudnic was a research investigator at E.R. Squibb & Sons, where he developed oral controlled-release dosage forms and novel drug delivery concepts. Dr. Rudnic earned a B.S. in pharmacy, an M.S. in pharmaceuticals and a Ph.D. in pharmaceutical sciences from the University of Rhode Island. Dr. Rudnic is a registered pharmacist and holds adjunct professorships at the University of Rhode Island and the University of Maryland. He serves on the board of directors for the Technology Council of Maryland (TCM), an organization enhancing the growth of high-tech and biotech activities in the state.

### **James H. Cavanaugh, Ph.D. Director**

*James H. Cavanaugh, Ph.D.*, has been a director since our inception. Dr. Cavanaugh has been the president of HealthCare Ventures LLC since 1988. Dr. Cavanaugh served as president of SmithKline and French Laboratories U.S., Inc. from March 1985 to February 1989 and as president of SmithKline Clinical Laboratories from 1981 to 1985. Prior thereto, Dr. Cavanaugh was the president of Allergan International, a specialty eye care company. Prior to his industry experience, Dr. Cavanaugh was Deputy Assistant to the President for Domestic Affairs and Deputy Chief of the White House Staff. Prior thereto, he served as deputy assistant secretary for health and scientific affairs in the U.S. Department of Health, Education and Welfare and as special assistant to the surgeon general of the U.S. Public Health Service. Dr. Cavanaugh serves as a member of the board of directors of MedImmune, Inc., Shire Pharmaceuticals Group PLC, Diversa Corp. and Vicuron Pharmaceuticals (formerly Versicor, Inc.). Dr. Cavanaugh also currently serves on the board of directors of the National Venture Capital Association and as trustee emeritus of the California College of Medicine. Dr. Cavanaugh holds a Ph.D. and an M.S. from the University of Iowa and a B.S. from Fairleigh Dickinson University. Dr. Cavanaugh was elected to serve on our board of directors pursuant to a stockholders' agreement between us and holders of our preferred stock.

### **R. Gordon Douglas, M.D. Director**

*R. Gordon Douglas, M.D.* has been a director since our inception. Dr. Douglas currently serves as consultant to the Vaccine Research Center at the National Institute of Health. Dr. Douglas was president, Merck Vaccines, responsible for the research, development, manufacturing and marketing of Merck Vaccines' vaccine products, from 1989 until 1999. From 1982 to 1990, he was a professor of medicine and chairman, department of medicine, Cornell University Medical College and physician-in-chief, the New York Hospital. He also served as head of the infectious disease unit at the University of Rochester School of Medicine. Dr. Douglas serves on the board of directors of Vical Incorporated. Dr. Douglas is a graduate of Princeton University and Cornell University Medical College. Dr. Douglas was elected to serve on our board of directors pursuant to a stockholders' agreement between us and holders of our preferred stock.

### **Richard W. Dugan Director**

*Richard W. Dugan* joined our board of directors in September 2003. From 1976 to 2002, Mr. Dugan served as a partner for Ernst & Young LLP, where he served in various managing and senior partner positions including mid-atlantic area senior partner from 2001 to 2002, mid-atlantic area managing partner from 1989 to 2001 and Pittsburgh office managing partner from 1981 to 1989. Mr. Dugan retired in 2002. Mr. Dugan received a B.S.B.A. from Pennsylvania State University.

**Wayne T. Hockmeyer, Ph.D. Director**

*Wayne T. Hockmeyer, Ph.D.*, has been a director since our inception. Dr. Hockmeyer founded MedImmune, Inc. in April 1988 and served as president and chief executive officer from 1988 until October 2000. Dr. Hockmeyer was elected to serve on the board of directors of MedImmune in May 1988 and became chairman of the board of directors in May 1993. He currently continues to serve as the chairman of the board of directors of MedImmune and serves as president of MedImmune Ventures, Inc. From 1986 to 1988, Dr. Hockmeyer was vice president of research and development of Praxis Biologics. From 1980 to 1986, he was chairman of the Department of Immunology at the Walter Reed Army Institute of Research. From 1966 to 1986, he served as a commissioned officer in the United States Army. He is a member of the board of directors of Diversa Corporation, GenVec, Inc., InterMune Pharmaceuticals, Inc., Idenix Pharmaceuticals, Inc. and TolerRx Inc. Dr. Hockmeyer earned his bachelor's degree from Purdue University and his Ph.D. from the University of Florida in 1972. In 2002, Dr. Hockmeyer was awarded a doctor of science honoris causa from Purdue University.

**Harold R. Werner Director**

*Harold R. Werner* has been a director since our inception. Mr. Werner has 28 years of experience in planning, development and financing of health care technology. He was a founder of HealthCare Ventures LLC in 1985. Since that time he has served on the boards of over thirty public and private companies in the health care field and has specialized in the formation of new high-science companies. Prior to the formation of HealthCare Ventures, Mr. Werner was director of new ventures for Johnson & Johnson Development Corporation, making outside investments and licenses for Johnson & Johnson in biotechnology, pharmaceuticals, vision care, diagnostics and other high technology areas of health care. Before joining Johnson & Johnson in 1980, Mr. Werner was senior vice president of Robert S. First, Inc. and was responsible for managing its European and, later, U.S. health care management consulting business. Mr. Werner currently serves on the board of directors of GenVec, Inc. and TolerRx Inc. Mr. Werner received his B.S. and M.S. degrees from Princeton University and an M.B.A. from the Harvard Graduate School of Business Administration. Mr. Werner was elected to serve on our board of directors pursuant to a stockholders' agreement between us and holders of our preferred stock.

**Martin A. Vogelbaum Director**

*Martin A. Vogelbaum* was appointed a director in April 2007. Mr. Vogelbaum is a partner with Rho Ventures. Prior to joining Rho, he spent five years as a general partner of Apple Tree Partners, a life sciences venture capital firm. Previously, he was a general partner of Oxford Bioscience Partners, which he joined in 1993. Mr. Vogelbaum currently serves on the Board of Directors of several privately-held companies, including as Chairman of Gloucester Pharmaceuticals, and previously served as a member of the Board of Directors of Nuvelo, Inc., a publicly traded biopharmaceutical company. Mr. Vogelbaum received an A.B. in biology and history from Columbia University.