



**ALFRED E. MANN**

*Chairman of the Board, Quallion LLC*

*Chairman of the Board and CEO, of MannKind Corporation*

Alfred E. Mann founded Quallion LLC, in 1998 and currently serves as Chairman of the Board. Quallion develops, manufactures and markets advanced batteries for medical, aerospace and military applications. Mr. Mann also serves as Chairman of the Board and CEO of MannKind Corporation, a diversified biopharmaceutical company focused on the development of novel therapeutics and drug delivery technologies for treatment of diabetes, cancer, autoimmune and inflammatory diseases. MannKind's lead product mimics the insulin kinetics of a normal pancreas, creating a new therapy paradigm for diabetes. In 1993 Mr. Mann also founded and serves as Chairman of Advanced Bionics Corporation ("Bionics"). Bionics is a developer, manufacturer and distributor of cochlear implants for the restoration of hearing to the deaf.

Mr. Mann also founded and is non-executive Chairman of (i) Second Sight, which is developing a visual prosthesis to restore sight to the blind; (ii) Implantable Acoustics, which is developing implantable hearing aids; (iii) NeuroSystec, which is exploring drug therapies to treat tinnitus and other audiological problems; (iv) Bioness, which is pursuing prosthetics to address functional neural deficits by electrostimulation; (v) Infusion Systems, which is developing implantable drug delivery systems; (vi) Dermaport, which is developing novel percutaneous seals for dialysis and other applications; (vii) Stellar Microelectronics, which produces micro-circuit assemblies.

Additionally Mr. Mann founded and served as the Chairman of the Board and Chief Executive Officer of MiniMed Inc. from its founding in 1993 until August 2001 when it was acquired by Medtronic, Inc. MiniMed and its Medical Research Group, Inc. affiliate develop, manufacture and distribute microinfusion systems and continuous glucose monitoring systems that have revolutionized the treatment of Type 1 diabetes. Mr. Mann also founded and was Chairman of the Board and CEO of Pacesetter Systems, Inc., which developed, manufactured and distributed cardiac pacemakers, from 1972 until 1985 when it was acquired by Siemens, AG. From 1985 to September 1992, Mr. Mann continued to serve as Chairman and CEO of the successor company, Siemens-Pacesetter, Inc. Pacesetter is now the Cardiac Rhythm Management unit of St. Jude Medical. Prior to 1972, he was President of Spectrolab, an electro-optical and aerospace systems company, and Heliotek, a semiconductor and electro-optical components manufacturer. Mr. Mann founded these companies in 1956 and 1960, respectively, sold them to Textron Inc. in 1960 and continued to lead them until 1972, when he left for Pacesetter. They are now part of the Boeing Company.

Mr. Mann is currently Chairman of the Board of Trustees of the Alfred Mann Foundation and of the Alfred Mann Institutes at the University of Southern California, Purdue University and The Technion Institute (Israel), medical research foundations founded and endowed principally by Mr. Mann, with others in process. He also serves as a Trustee for the University of Southern California, as a member of the Board of Overseers of the Keck USC School of Medicine, and as the Chairman of the Southern California Biomedical Council, a nonprofit association dedicated to the fostering of the bio-medical industry in the Los Angeles Metropolitan area. Mr. Mann holds B.A. and M.S. degrees in physics from the University of California, Los Angeles and honorary doctorate degrees from the University of Southern California, The Johns Hopkins University, Western University and the Technion Institute (Israel). Mr. Mann is a member of the National Academy of Engineering and has received dozens of honors including the following:

- Group Achievement Award (NASA; 1981)
- Exceptional Public Service Award (NASA 1984)
- Pioneer in Cardiac Pacing (Cardiostim, 1988)
- Master Entrepreneur of the Year (Los Angeles, 1996)
- Arthur Anderson Award for Fostering Innovation (Southern California, 1996)
- Citation Award; Engineer of the Year (UCLA, 1997)
- APEX Award for Outstanding Product Design of the Year (for MiniMed Insulin Pump) (The Management Roundtable, 1997)
- Father of the Year (Juvenile Diabetes Foundation, 1998)
- Lifetime Achievement Award (Independent Living Center of So. California, 1998)
- Eleanor Roosevelt Humanitarian Award (League for the Hard of Hearing, 1998)
- Pioneer in Cardiac Pacing (50th Anniversary of Cardiostim, 1998)
- Man of the Year (San Fernando Valley Economic Alliance, 1998)
- Appreciation Award from The Children of PADRE (PADRE Foundation, 1998)
- School of Engineering Award (USC, 1999)
- Spirit of Edison Award for Community Service (Thomas Edison State College, 1999)
- Man of the Year (WISE Senior Services, 1999)
- Vision of the Future Award (RP International, 1999)
- Humanitarian of the Year (House Ear Institute, 1999)
- Named "One of the 10 Most Influential People on the Tech Coast (Los Angeles Times, 1999)
- Reynolds Society Achievement Award (Harvard University, 1999)
- Golden Platter Honoree (American Academy of Achievement, 2000)
- Fellow of the American Institute of Medical and Biological Engineering (2000)
- Heart of a Child Award (Cardiac Arrhythmia Research and Education Foundation, 2000)
- Elie Wiesel Humanism in Healing Award (Western University) 2002
- Business Person of the Year Award (Los Angeles Business Journal, 2003)  
Invited speaker (Western University Graduation, 2003)
- Keynote address to INS Congress (Madrid, 2003)

- Spirit of Los Angeles Award (United Way, 2003)
- Albert Schweitzer Leadership Award (Hugh O’Brian’s Youth Organization, 2003)
- Ernest Borgnine Spirit Award (American Veterans Association, 2003)
- Business Leader and Humanitarian of the Year Award (Jewish Vocational Service, 2004)
- Albert Einstein Award for Outstanding Achievement in the Life Sciences (Life Sciences, 2004)
- Keynote speaker at Los Angeles Venture Association (2004)
- Keynote speaker at Medtech Insight Conference (Irvine, 2004)
- Keynote speaker at SRI Conference (San Francisco, 2004)
- Panelist, White House Forum on Disabilities (2004)
- Case Western Reserve University, Deidoma Lecture Series (Engineering for Success, 2004)
- Phoenix 2004 Innovator Award (Phoenix Medical Device Conference, 2004)
- Diabetes Innovator Award (Diabetes Technology Conference, Philadelphia, 2004)
- Honored as “American Friend of Rabin Medical Center” (New York, 2004)
- Robert A. Schindler, M.D. Endowed Lecturer, (University of California San Francisco, 2004)
- Honoree at Eye Birth Defects dinner (Los Angeles, 2005)
- Invited speaker, Metabolic Drug Discoveries (San Francisco, 2005)
- Leader of Today Honoree, UCLA Health Services Alumni Association (UCLA, 2005)
- Lifetime Achievement Award in Medical Devices Industry (Frost & Sullivan, 2005)
- Von Liebig lecturer (University of California San Diego, 2005)
- Neel Distinguished Research Lecturer (AAO, Los Angeles, 2005)
- Speaker, “Artificial Pancreas: Closing the Loop” (NIH, Bethesda, MD, 2005)
- Keynote speaker, Caltech MIT Enterprise Forum (2005)
- Keynote address, Mountain West Biomedical Engineering Conference (University of Utah, 2005)
- Keynote address, CIBC Conference (New York, 2005)
- Keynote address, National Academy of Engineering (October 2005)
- Spirit of Life Award, Larry King Cardiac Foundation (November, 2006)
- New Freedom Award, 9th Intl. Congress on Community Services (December, 2006)
- Invited speaker, International Conference on Aging (Florida, 2006)
- Keynote, American Institute for Medical and Biological Engineering (Washington D.C. 2006)
- Keynote, National Institutes of Health (Washington D.C. 2006)
- Lifetime Achievement Award (L.A. Venture Association, 2007)
- Surface Science Award (Surfaces in Biomaterials Foundation, 2007)
- Distinguished Achievement Award (Biomedical Engineering Society 2007)
- Keynote, Global Harmonization Task Force (Washington, D.C. 2007)
- Keynote, Wilson Sonsini Medical Device Conference (CA, 2008)
- Distinguished Business Leader Award, Los Angeles Chamber of Commerce, January, 2008)
- Distinguished Humanitarian Award, B’nai B’rith International (April, 2008)

- Research Professor (University of Southern California, 2002)
  - Adjunct Professor, Dept. of Bioengineering (Univ. of California Los Angeles, 2005)
  - Honorary Doctor of Humane Letters degree (University of Southern California, 2001)
  - Honorary Doctor of Humane Letters degree (The Johns Hopkins University, 2001)
  - Honorary Doctor of Humane Letters degree (Western University, 2002)
  - Honorary Doctor Degree (Technion Institute, Israel, 2005)
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- Member, National Academy of Engineering (2000)
  - Member, Board of Directors of United Cerebral Palsy Research and Educational Foundation (2005)
  - Member, Board of Directors of Nevada Cancer Institute (2005)
  - Member, Board of Directors, Eclipse Aviation
  - Member, Board of Directors, Los Angeles Philharmonic