



Board of Directors

Arnold A. Allemang

Mr. Allemang has served as a Director of XG Sciences since March 2010 and Chairman of the Board since January 2016. Mr. Allemang was employed by The Dow Chemical Company, headquartered in Midland, Michigan for 43 years. Mr. Allemang joined Dow in 1965 in Freeport, Texas. After five years in the Solvents Development Lab, he transferred to Stade, Germany. In 1972, he returned to the United States for various technical and managerial assignments. Mr. Allemang was named unit manager for Freeport's Chlorinated Ethanes in 1981, and two years later assumed the same role for Light Hydrocarbons and Acetylene. He transferred to Terneuzen, The Netherlands, in 1984 to become production manager for Light Hydrocarbons I, and in 1986 became responsible for process control and engineering functions. In 1988, he returned to Freeport to manage the site's hydrocarbons production and moved to Midland in 1989 as Director of Technology Centers. Mr. Allemang was named Manufacturing General Manager for Dow Benelux in 1992, and in early 1993 was named regional vice president, Manufacturing and Administration, Dow Benelux. He was named vice president, Manufacturing Operations Dow Europe in late 1993. In August 1995, Mr. Allemang was named vice president, Operations, which included global manufacturing and engineering activities. He then became executive vice president of The Dow Chemical Company in 2000 and was named senior advisor in 2004. In March 2008, he retired as a Dow employee. Mr. Allemang was elected to the Dow Board of Directors in July 1996 and served until May 2015. Mr. Allemang received a bachelor's degree in chemistry from Sam Houston State University in Huntsville, Texas.

Mr. Robert Blinstrub

Mr. Blinstrub was appointed to serve as a Director of the Company, in March 2019. Mr. Blinstrub is considered to be an independent director and has been appointed to serve on the Board's Nominating and Corporate Governance Committee and the Compensation Committee. Mr. Blinstrub was a founder and President and CEO of AGM Automotive (AGM), a global designer, innovator and producer of engineered solutions for light vehicles, including lighting, overhead consoles, electronics and textiles headquartered in Troy, Michigan with 9 locations globally including the United States, Costa Rica, Mexico, Austria, and China, from 2001 to 2017. AGM leveraged a global footprint underpinned by world-class engineering, production, assembly and supply chain management functions. As an original founder of AGM, Mr. Blinstrub oversaw its development into a global automotive supplier with OEM customers representing the largest American, European, and Asian OEM's. AGM historically doubled its revenue base every 18 months (profitably). During the latter part of his tenure, AGM acquired and successfully integrated two competitors in the North American and European markets. AGM accumulated countless Supplier awards from its customers for World Class Quality, Product Design, Engineering, Innovations, and Service. Prior to AGM, Bob led multiple startups and operational turnarounds in his career. Bob studied Finance and Marketing at the Broad College of Business at Michigan State University.

Steven C. Jones

Mr. Jones has served as a Director of XG Sciences since March 2014. Mr. Jones is the Chairman of Aspen Capital Group, LLC, a private equity firm headquartered in Naples, FL, which manages private equity funds. Mr. Jones also serves as the President of Aspen Capital Advisors, LLC, which is Aspen Capital Group's investment management subsidiary. Aspen believes its highest value is to be a "hands on" partner with the management teams of portfolio investments to help them achieve their growth objectives by bringing capital, strategic partners, customers, additional management and other business advice. Mr. Jones has substantial expertise in developing and financing emerging growth companies. In addition to his involvement with XG Sciences, Mr. Jones serves on the Boards of NeoGenomics, Inc. (NASDAQ: NEO) ("NEO"), ERP Maestro, Inc., a company focused on cyber security detection and prevention, and T3 Communications, Inc., a business communications company. Mr. Jones has also served as Executive Vice President of Finance and Chief Compliance Officer of NEO since November 2009 and February 2013, respectively, and previously served as Chief Financial Officer from October 2003 until November 2009. In December 2014, he was appointed to serve as a Director of XG Sciences by the Aspen Advanced Opportunity Fund, LP in connection with their investment in XGS. Prior to his career in structured private equity, among other positions, Mr. Jones was a Vice President in the Telecommunications, Media and Technology Investment Banking Group of Merrill Lynch & Co in New York and was the chief executive officer or chief financial officer of various public and private companies. Mr. Jones has a BS degree in Computer Engineering from the University of Michigan and an MBA from the Wharton School of the University of Pennsylvania.

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Dave Pendell

David Pendell is a principal of the Aspen Advanced Opportunity Fund. From June 2009, Mr. Pendell has served as General Partner and Officer of AdvancedStage Capital LLC, which he owns and operates. Since January 2011 Mr. Pendell has served as General Partner and Officer of ASC Lease Income LLC. From May of 2013 until February 2016, Mr. Pendell served as a Board Observer of the Company until he was appointed to the board of directors in February 2016. In addition, Mr. Pendell has served and continues to serve on the board of directors of ERP Maestro (since June of 2013) and the board of directors of Strategic Health Services Inc. (since April of 2015) and has worked with Aspen Advanced Opportunity Fund and Veterans Capital Fund. Mr. Pendell was responsible for the successful launch and subsequent profitable sale of five start-up entities in which he was the lead entrepreneur and numerous other investments where he served as a lead investor/mentor/coach. Predominantly, Mr. Pendell led the growth of Pendell Printing, Inc. from a small print firm of less than \$1MM in sales in 1971 to over \$85MM in 1998 when the sale of the business was completed. Past management roles include Chairman of the Board/President of Pendell Printing Inc.; co-founder of Envision Inc., a graphic solutions enterprise; President and CEO of Baustert Engineering, Inc., a software business; co-founder of Ecoland, a timber/real estate development company; founder of The Earth Generation, an environmental education publisher; and co- Founder of Fuel Oil News, a publication for the home heating industry. Mr. Pendell also actively participates in the Michigan Angel Fund and Tamiami Angel Fund I and II. He received his BS in Psychology from Central Michigan University in 1969.

Philip L. Rose, Ph.D.

Dr. Rose joined the Company in January 2014 and currently serves as our Chief Executive Officer, President, Secretary, Treasurer and is a Director of the Company. Dr. Rose has extensive international business management experience in the electronic and specialty materials markets. Prior to joining XG Sciences, he spent 4 years as President of SAFC Hitech, a \$100 million division of Sigma-Aldrich that makes precursors and performance materials for the LED, energy and display, and semiconductor markets. He also served concurrently for a period of time as CEO of Soulbrain-Sigma Aldrich based in South Korea and as an independent Director for Pixtronix, a company based in the Boston area. Before joining Sigma Aldrich, Dr. Rose spent almost 20 years with Rohm and Haas in various leadership positions in the semiconductor and flat panel display industries that include general management, mergers and acquisitions, business development and marketing. Dr. Rose has 7 years of experience living in Japan and South Korea and has travelled extensively in Asia over the past 15 years. Dr. Rose earned his Ph.D. in Physical Chemistry from Duke University and holds a B.S. in Chemistry from the University of Southern California and a certificate in Business Management from The Wharton School at the University of Pennsylvania.

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Peifang Zhang, Ph.D. (aka Molly P. Zhang)

From 2011 until retiring in October 2016, Dr. Zhang served as a Vice President of Orica Ltd., USA in a number of departments, including General Management, Global Manufacturing and Asset Management. Prior to joining Orica, Dr. Zhang spent 22 years with Dow, most recently as Managing Director of the SCG-Dow Group and Country General Manager of Dow Thailand. Prior to her roles with Dow in Thailand, Dr. Zhang served as Global Business Vice President of Dow Technology Licensing and Catalyst, and as Manufacturing Leader of Dow Asia Pacific. She also served as Manufacturing Director, Global Technology Director and as a board member of the SCG-Dow Group. Dr. Zhang currently serves as a member of the Supervisory Board for GEA Group, a publicly traded, global engineering, process technology solutions and specialty equipment company based in Dusseldorf, Germany, serving the food, chemical, and energy industries. She also serves on the board of directors of Cooper Standard Automotive, Inc., a publicly traded, global, tier 1 automotive components supplier based in Detroit, MI. Dr. Zhang has a Ph.D. in Chemical Engineering from the Technical University of Clausthal, Germany and a Diploma in Chemistry (MS degree), Technical University of Clausthal, Germany. Dr. Zhang is fluent in English, Chinese and German and conversant in Thai.