

**Michael G. Hanna, Jr., Founder & Chairman Emeritus, Vaccinogen, Inc.**

Dr. Michael G. Hanna, Jr. received his PhD in experimental pathology and immunology from the University of Tennessee in 1964. He was on staff of the Oak Ridge National Laboratory, biology division from 1964-75. During this period he pioneered the early concepts of tumour immunology. He also served as a consultant with NASA for the lunar receiving laboratory during Apollo 11 and 12, for which his expertise in immunology was used in the testing of the lunar core powder for immunogenic or pathogenic materials. Dr. Hanna served during 1975-83 as Director of the National Cancer Institute, Frederick Cancer Research Center (MD, USA). In this position he created a center of research excellence for the NCI and established the Biological Response Modifier Program which led in the development of resources for immunotherapy of cancer.

He was Chief Operating Officer during 1984-94 of Organon Teknika/Biotechnology Research Institute and Senior Vice President of Organon Teknika Corporation, a subsidiary of Akzo Nobel, The Netherlands. He developed and obtained approvals for TICE BCG for the treatment of carcinoma in situ (CIS) bladder cancer, which remains the standard of care for prophylaxis of recurrence of superficial bladder cancer and therapy of CIS. Subsequently, Dr. Hanna founded PerImmune Inc., for which he served as President and Chief Executive Officer before it merged with Intracel Corp. in 1998. He continued to work for Intracel Resources as Chief Scientific Officer and Chairman.

In 2007, Dr. Hanna founded Vaccinogen Inc., where he served as Chairman and CEO. Currently, Dr. Hanna is Chairman Emeritus. The company is a pioneer in the field of cancer vaccines and is developing OncoVAX, an autologous vaccine designed to elicit a specific immune response against cancer cells. The Phase III vaccine is being investigated for treatment mainly of colon cancer, but also for melanoma and renal cell carcinoma. In addition to cancer therapy research and development, Dr. Hanna has been involved in Homeland Security. He served as Chairman of the Department of Commerce Biotechnology Advisory Committee (1984-9) and also participated in the Department of Defence Technical Working Group for Biotechnology (1988-9). PerImmune completed a Department of Defence contract to manufacture the current effective therapeutic for Botulinum toxin, an equine heptavalent anti-toxin.

Dr Hanna's research resulted in over 225 publications in international peer-reviewed journals and book chapters, and he holds 10 patents related to immunotherapy. Dr Hanna has been the recipient of numerous honours and awards and has served on many editorial boards; he currently serves on two editorial boards.