

SAMUEL BOGOCH, M.D., Ph.D
Founder and Co-Chairman

Canadian research scientist Dr. Samuel Bogoch received his M.D. from the University of Toronto and his Ph.D. in biochemistry from Harvard University. He was a member of the Harvard Medical School faculty for ten years and the Boston University School of Medicine faculty for thirty years. He is currently a senior scholar at Boston University School of Medicine in the Department of Emergency Health Management.

Dr. Samuel Bogoch founded the Neurochemical Research Laboratory at Harvard Medical School and in 1961 founded the Foundation for Research on the Nervous System, an independent not-for-profit laboratory in Boston where he and his wife Dr. Elenore Bogoch work together.

At the Foundation, the Drs. Bogoch developed methods for the isolation and quantification of brain glycoproteins and studied their function in memory and learning (S. Bogoch, *The Biochemistry of Memory*, Oxford University Press, 1968). They organized and chaired the first international conferences on the Future of the Brain Sciences and also initiated National Science Foundation programs in the brain sciences for gifted high school students.

The Drs. Bogoch have been fierce innovators whose work has been ahead of their time.

The Drs. Bogoch were among the first researchers to champion the importance of antibodies in cancer. The Drs. Bogochs' work in brain chemistry and brain cancer in the late 1960's and early 1970's led to discoveries regarding the general biochemistry of cancer and antibodies. Antibodies have now become the focus of much cancer treatment.

The Drs. Bogoch isolated an antibody present in all cancers called the Anti-Malignin®Antibody which is produced by the body against the antigen Malignin, and is present in higher levels in patients who fight their cancer better and survive longer, and in lower levels, in patients whose cancer is advanced or terminal. In 1972, the FDA granted their company Oncolab, Inc. permission to market the Bogoch cancer test called the AMAS test. The Anti-Malignin®Antibody kills cancer cells in the laboratory at extremely low concentrations—measured in picograms per cell. Oncolab still serves the cancer community with the AMAS test.

The Drs. Bogoch were the first researchers to identify regions of conservation in the influenza and the genomes of other virulent organisms in the early years of 2000. This discovery came from finding homologues in other infectious organisms of an epitope in cancer and all viruses that cause cancer. By quantitative analysis of the primary protein sequences of influenza virus and other organisms recorded through the last century, the Drs. Bogoch have found a new class of peptides, which relate to the phenomenon of rapid replication itself and named them

Replikins. The Replikin sequences are the building blocks of the company's surveillance and Replivax synthetic vaccine technology.

The Drs. Bogoch, now in their 90s, continue to innovate against the grain of the pharmaceutical company dominance. They devote their time to the design of genomic disease surveillance technology and purely synthetic sub-unit DNA and RNA peptide vaccines. The genomic surveillance technology picks up signals in the virus genome up to two years in advance of outbreaks. The Replivax™ vaccines, because of their synthetic composition, speed and versatility of design, ability to adapt to mutations, speed of production and minimal cost have the potential to revolutionize global pandemic preparedness and response.

The Drs. Bogoch are authors of over 117 papers and four books. [[Link to Publications](#)].

ELENORE S. BOGOCH, M.D., D.M.D
Founder and Co-Chairman

Dr. Elenore Bogoch received her DMD from Harvard University and MD from Boston University School of Medicine.

Dr. Elenore Bogoch with her husband Dr. Samuel Bogoch founded the Foundation for Research on the Nervous System, an independent not-for-profit laboratory in 1961.

At the Foundation, the Drs. Bogoch developed methods for the isolation and quantification of brain glycoproteins and studied their function in memory and learning (S. Bogoch, *The Biochemistry of Memory*, Oxford University Press, 1968). They organized and chaired the first international conferences on the Future of the Brain Sciences and also initiated National Science Foundation programs in the brain sciences for gifted high school students.

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ANNE BOGOCH BORSANYI

CEO

Ms. Borsanyi has been the CEO of Replikins since its inception in 2006. Ms. Borsanyi has served as the company's representative at UNICEF/WHO vaccine industry meetings, as a member of Canada's Vaccine Industry Committee, and the VIC's Emerging Company Committee. She received her AB from Dartmouth College and J.D. from Boston University. She has a background in intellectual property law.

SCIENTIFIC ADVISORY BOARD

DR. MARK JACKWOOD, Ph.D

Dr Jackwood is the J. R. Glisson Professor of Avian Medicine and Head of the Department of Population Health at the University of Georgia College of Veterinary Medicine. He is a molecular virologist known for his work in avian diseases. Dr. Jackwood's primary research focus is the field of respiratory viruses, particularly avian coronaviruses, infectious bronchitis virus, and avian influenza.

Dr. Jackwood's research has earned him numerous honors and awards, including the Creative Research Medal from UGA's Research Foundation; the Pfizer Animal Health Award for Research Excellence, the highest research honor awarded by the college and one that he has received twice; the Upjohn Achievement Award for Outstanding Contributions to the Field of Avian Medicine Research, awarded by the American Association of Avian Pathologists; and the Bruce W. Calnek Applied Poultry Research Achievement Award.

During his time at UGA since 1989, Dr. Jackwood has served both the college and the university in various capacities. Currently, he serves as chair of the Veterinary Medical Agricultural

Research Committee, a member of the Applied Life Sciences Faculty Research Grants Review Committee, as member of the CDC/UGA Infectious Disease Review Panel, a member of the Faculty of Infectious Disease Executive Council, a member of the University Council, a member of the University Council Committee on Facilities, and a member of the College of Veterinary Medicine Ethics Committee. Since 2001, Jackwood has served as secretary/treasurer of Southern Conference on Avian Diseases. In 2011, he co-organized the first International Avian Respiratory Disease Conference, held in Athens and attended by 179 scientists. He also is an active member of the American Association of Avian Pathologists and serves on the organization's advisory board for avian diseases. He is a member of multiple professional organizations, and has served as a member, reviewer or editor of more than 25 professional publications worldwide. He earned his B.S. and M.S. degrees at the University of Delaware and his Ph.D. degree in the department of poultry science at Ohio State University.

KEVIN THOMAS, MBA, Ph.D.

Dr. Thomas is Assistant Professor at Boston University School of Medicine, Program Director for Boston University Master of Science in Bioimaging and the Master of Science in Healthcare Emergency Management programs at Boston University. He is the Principal Investigator for the Boston University School of Medicine's [Laboratory for Human Neurobiology](#). Dr. Thomas, as the founding Research Program Director for Department of Homeland Security Critical Infrastructure Protection Program, has developed systems analysis and modeling and simulation tools to analyze methods of critical infrastructure protection and cyber security. This included research and project oversight for over 50 activities conducted at 14 universities. Dr. Thomas's career has been interdisciplinary with special focus on the intersection of social science with neuroscience. He has provided research program oversight, systems analyses, and modeling and simulation of exercises for developing research, policy and acquisition strategies for the Department of Defense, Department of Homeland Security, and various private corporations.

PREBEN WILLEBERG, DVM, PhD, Dr. Vet. Sc.

Dr. Willeberg is Adjunct Professor, Disease Control and Surveillance, University of Copenhagen, Faculty of Life Sciences. Dr. Willeberg was Senior Veterinary Global Health Specialist at the Center for Animal Disease Modeling and Surveillance at the School of Veterinary Medicine, University of California Davis, from 2007. He retired as the Chief Veterinary Officer for Denmark in 2007. Until 1999 he was a Professor of Veterinary Epidemiology at the Royal Veterinary and Agricultural University in Copenhagen. He is an expert in veterinary epidemiology, computer modeling, surveillance systems. He was Secretary General of the Scientific Commission for Animal Diseases of the World Organization for Animal Health (OIE) and a member of the International Management Committee of the International Society for Veterinary Epidemiology and Economics (ISVEE). He was the Chief Veterinary Officer at Danish Veterinary and Food Administration, Professor of Veterinary Epidemiology at Royal Veterinary and Agricultural University, Chief Veterinary Officer Danish Veterinary and Food Administration (Government Agency; Government Administration industry) from October 1999 — September 2007 where he was in charge of the national animal disease surveillance and control efforts. He was Professor of Veterinary Epidemiology Royal Veterinary and Agricultural University (Veterinary industry) 1985 —

1999. He received his DVM in Veterinary Medicine (1960 — 1967) from Den Kgl. Veterinær- og Landbohøjskole. He was the recipient of International Francqui-Chair Visiting Professor Award and Great Medal, University of Gent, Gent, Belgium (1992 – 1993); awarded the honors degree of “Doctor of Veterinary Medicine honoris causa” by the Faculty of Veterinary Medicine, Helsinki, Finland (1995); was awarded the title of Adjunct Professor at the National Veterinary Institute, Technical University of Denmark (2008); and was awarded the title Adjunct Professor at the Faculty of Life Sciences, University of Copenhagen (2009). -2013.