International Vaccine Experts Join AVM Board, Support COVID-19 Treatment

SEATTLE, June 10, 2020 /PRNewswire/ -- AVM Biotechnology announced today that Dr. Manon Cox and Dr. Gary Grohmann, both international experts on respiratory viruses and vaccine development, have joined AVM Biotechnology's Board of Directors. The decision to support AVM Biotechnology's AVM0703 by these two respected vaccine experts speaks to the potential for AVM0703 to be a global solution to the SARS-CoV2 (COVID-19) global pandemic.

Dr. Manon M.J. Cox, PhD, MBA
Co-founder of NextWaveBio, Dr. Cox led the development of Flublok®, the only FDA approved recombinant influenza vaccine, while serving as President and Chief Executive Officer of Protein Sciences Corporation since April 2010 and Director since 2008. She joined Protein Sciences in 1998 as Director of Business Development and became Chief Operating Officer in 2003. Dr. Cox was previously with Gist-brocades, a Dutch company that specialized in fermentation, where she held various management positions from 1988 through 1998. Prior to that she worked as a Molecular Biologist on the development of a PCR screening test for cervical cancer at the University of Amsterdam. Dr. Cox serves on the Board of Trustees of St. Joseph University, the Board of the Netherland-America Foundation and its Education and Nominating Committee, the Board of the International Society of Vaccines, and various Scientific Advisory Boards including Epivax Oncology. She has received many honors and awards recognizing her stature as a leader in innovation and influenza, including receiving a Doctorate in Humane Letters honoris causa from St. Joseph University, the Woman of Innovation award from the Connecticut Technology Council, and was elected fellow in the International Society of Vaccines in 2015. Dr. Cox holds a Doctorate from the University of Wageningen, received her MBA with distinction from the University of Nyenrode and the University of Rochester, NY and holds a Doctorandus degree in Molecular Biology, Genetics and Biochemistry from the University of Nijmegen, The Netherlands.

On joining the AVM Board, Dr. Cox said, "*I am delighted to support AVM in its mission to develop affordable cures for unmet clinical needs. Our immune system is central to our health and powering up to fight foreign invaders may be the only way to deal with pandemic threats and aggressive cancers.*"

Dr. Gary Grohmann B. Sc. (Hons), PhD, FASM
Gary Grohmann is former Director of Immunobiology and WHO ERL at the TGA, Office of Laboratories and Scientific services from 1997-2015. He currently works as an independent consultant, primarily with the WHO on influenza related projects in the Global Influenza Programme and the Essential Medicines Programme. Dr. Grohmann has served on several WHO steering committees including the committee for the review of the IVTM database on influenza viruses and reassortant influenza viruses, and the WHO VCM committee that recommends virus strains for influenza vaccines (until 2015). He has also been a member of the Technical Advisory Group (2007-2015) of the Global Action Plan for Influenza. His primary interests are in vaccines, vaccine regulation, medical and

veterinary virology, and infectious diseases resulting from contaminated food and water as well as other environmental sources. Dr. Grohmann is currently a Director of Environmental Pathogens P/L as well as Director/Board Member of the Immunisation Coalition and has held a number of part-time academic positions in his career at The University of Sydney, The University of Technology, Sydney, and The University of NSW.

Dr. Grohmann stated, *"A vaccine to a human Coronavirus has never been made; and producing a vaccine to a newly emerging zoonotic virus such as COVID-19 (SARS-CoV-2), SARS-CoV-1, MERS-CoV, Nipah virus or Hendra virus is especially difficult as most of the novel platforms involved are largely untested in humans for safety and efficacy, and most approaches, whether they involve nucleic acid vaccines, viral -vectored vaccines, protein-based vaccines, live virus vaccines or inactivated virus vaccines, have no history of consistent reliable production or regulatory oversight. Moreover, most such attempts will likely fail at the clinical trial level as both arms of the immune response need to be activated for a vaccine to be truly effective. Furthermore, over time, it is expected that the virus will mutate, possibly rendering putative vaccines ineffective. It is also unknown how long any induced immunity will last and regular revaccination might be needed, assuming a licensed vaccine is made available. Finally, there are many other unknowns, including knowledge of the correlates of protection, the dose required, the concentration of antigen needed, safety and efficacy data, long term safety data, the need for an adjuvant and the shelf life of the vaccine. Normally, the endeavour to make a vaccine takes years of careful research followed by pre-clinical trials in animals and then trials in humans. It also requires vast investment and there is no guarantee of success.*

"Drugs such as AVM0703 that mobilise endogenous supercharged natural killer cells, cytotoxic T cells and dendritic cells provide a potential solution for the treatment of seriously ill COVID-19 patients, are available, have safety data, and are registered for the treatment of other diseases. It is in this area that large scale studies should be undertaken as they can be used to immediately treat patients together with other interventions. Such drugs are also potentially useful in other infectious disease settings where vaccines and antiviral drugs are ineffective or unavailable."

About AVM Biotechnology and AVM0703

Founded in 2008, AVM Biotechnology has been conducting lymphoma/leukemia research and, in April 2020, announced FDA approval to begin a Phase I/II trial for their lead candidate, AVM0703, for terminal, no-option lymphoma patients. AVM0703, a repurposed formulation with an active ingredient that is already FDA-approved for other purposes, used at supra-pharmacologic doses has a novel mechanism of action (MOA) to mobilize supercharged immune cells that are 10X more efficient than normal immune cells. These supercharged immune cells include a novel Natural Killer T (NKT) cell, novel cytotoxic T lymphocytes and a CD11b very high dendritic cell, which invade and destroy tumors more effectively than untreated immune cells and more effectively also than PD-1 or PD-L1 inhibitor treatment in mice (checkpoint inhibitors).

Why AVM0703 as a Treatment for COVID-19

NKT cells and cytotoxic T lymphocytes are by nature programmed to kill viruses and bacteria as well as cancer. The mechanism of action that makes AVM0703 work against aggressive cancers may also prove

effective against COVID-19-causing SARS-CoV2. AVM0703 can be manufactured in a 7-hour Good Manufacturing Process (GMP), can have a long shelf life of 9 to 24 months, can have rapid onset of action, complete response is known within 2-7 days, and side effects are temporary and manageable. A single oral or intravenous administration with design for hot, humid conditions make AVM0703 a natural choice for a global pandemic. Based on these findings and the global search for a cure for COVID-19, AVM Biotechnology has made researching AVM0703's efficacy in this patient population a concurrent priority alongside cancer-specific research. To further that research, AVM Biotechnology has filed with the FDA for approval to proceed with clinical trials against this virus as well as Influenza virus which also causes deadly Acute Respiratory Distress Syndrome (ARDS).

AVM0703 is a strong candidate to usher in a new chapter of global viral containment and eradication.

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