

## **WORLD EXPERTS IN VIROLOGY ALERT THAT CLIMATE CHANGE AND GLOBALIZATION ARE AN ADDED PROBLEM IN VIRAL DISEASE TRANSMISSION**

*Dr. William Hall Receives The GVN Robert C. Gallo Award for Scientific Excellence and Leadership*

**Baltimore, MD, USA, July 2, 2019:** The [Global Virus Network \(GVN\)](#), representing 48 Centers of Excellence and 7 Affiliates in 29 countries comprising foremost experts in every class of virus causing disease in humans and animals, held its [11<sup>th</sup> meeting](#) last month in partnership with the Spanish Society of Virology in Barcelona, Spain. There are more than 200 known species of viruses that cause human diseases. Each year, three to four new species are discovered and more than half of these human viruses can also affect animals, such as mammals and birds. According to the Food and Agriculture Organization of the United Nations, 70% of the infectious diseases that affect humans are derived from animals, known as zoonoses, and includes viruses such as, rabies, avian influenza, the Middle East coronavirus (MERS-CoV) and the human immunodeficiency virus (HIV). The president of the local organizing committee, **Joaquim Segalés, DVM, PhD**, a researcher at the *Centre de Recerca en Sanitat Animal (CRESA)* at the *Institut de Recerca i Tecnologia Agroalimentàries (IRTA)* and professor at the *Universitat Autònoma de Barcelona*, Spain, indicated that a total of 311 delegates from 22 different countries from around the world attended the joint meeting. During the conference, virologists from varying fields emphasized the need to take collective awareness of the link between animal and human health and ecosystems, and to work cohesively to safeguard the health of the planet.

### **Globalization and climate change, the passports of new diseases**

Many emerging infectious diseases come from animals and can be transmitted to people directly or through vectors, such as mosquitoes or ticks. The planet's population growth, urbanization, the globalization of travel and commerce and climate change enhances contact with new environments, climates and new vectors of diseases. "Now, more than ever, we must be reactive to give quick responses to epidemic outbreaks," said **Marion Koopmans, DVM, PhD**, head of the department of virosciences of *Erasmus MC in Rotterdam*, who is director of its GVN Center of Excellence, and a worldwide reference in zoonotic viral diseases and emerging viruses.

The recent [Ebola outbreak in West Africa](#) emphasizes the need for a more forward-looking research agenda. "We aim to be better prepared to detect emerging infectious diseases as soon as possible and to curb their impact," said Koopmans. The virologist adds that "we need to understand what causes the emergence of viral diseases. Humans and animals live in ecosystems and, therefore, we also interact with vectors. We must be able to identify any change or imbalance that tells us when the risk of epidemic outbreaks is higher."

Another challenge is to predict which pathogens are candidates for future emerging outbreaks. "If we identify the pathogen most likely to trigger an epidemic outbreak, we can better develop prevention and control measures. However, there are unpredictable diseases so the greatest challenge is the need for generic, preparedness research for viruses," said Koopmans.

### **Global health requires more communication between medical professionals, veterinarians and ecosystem scientists**

For several years, scientists have been talking about the concept of a single health or "One Health," the sum of the efforts of public health experts, animal health, plant health and ecosystems. "More dialogue and epidemiological information is needed between medical professionals, veterinarians, virologists and biologists to detect and prevent zoonotic diseases and food safety problems," said **Albert Bosch**, professor of the

department of genetics, microbiology and statistics of the University of Barcelona (UB) and president of the Spanish Virology Society (SEV).

To protect public health, it is necessary to develop global coordination strategies among all the agents involved. During a round table discussion on “One health: fact or fiction?,” the issue of the anti-vaccine movement arose, and participants agreed that as scientists, there is a responsibility to educate the masses when the public is threatened by harmful misinformation. “Developing more vaccines and preventing disease is not the heroic thing,” said **Ab Osterhaus, DVM, PhD**, director of the University of Veterinary Medicine Hannover in Hannover, Germany and director of its GVN Center of Excellence. “Since we know vaccines prevent unspeakable pain and suffering, as scientists, we have a responsibility to organize against these misguided efforts and educate the masses.”

In global terms, the GVN is a non-profit coalition formed by virologists from 48 Centers of Excellence with 7 Affiliates in 29 different countries around the world. Its objectives are to investigate and identify viruses, improve the diagnosis of pandemics, study how to control them and develop medications and vaccines to prevent diseases and death caused by viruses. **Christian Bréchet, MD, PhD**, the president of the GVN, and the co-founder and international scientific advisor, **Robert Gallo, MD**, emphasize that it is the only global institution formed by expert scientists in all classes of human virology, and includes animal viruses. “Teamwork from GVN is essential to be prepared and respond to emerging and unidentified viruses that can threaten public health,” said Bréchet. “We consistently seek solutions to problems caused by viruses in coordination with national and international institutions,” said Gallo, who is also the Homer & Martha Gudelsky Distinguished Professor in Medicine and co-founder and director of the Institute of Human Virology at the University of Maryland School of Medicine, a GVN Center of Excellence. The conference emphasized the needs of eradication and control of emerging and re-emerging viruses in the context of climate change. GVN is launching regional GVN’s, such as [Africa GVN](#), as the network is positioned to organize regional and local expert groups to cover the needs of each region of the planet and to promote training and research programs in virology for young people.

### **William Hall, MD, PhD, Honored for Scientific Achievements and Contributions to the GVN**

During the meeting, the GVN honored **William Hall, MD, PhD**, professor emeritus at the Centre for Research in Infectious Diseases at University College, Dublin, a GVN Center of Excellence, with The GVN Robert C. Gallo Award for Scientific Excellence and Leadership for his pioneering contributions in human retrovirus research, his dedication to establishing laboratories and meaningful collaborations overseas, as well as his contributions to advancing the mission of the GVN.

“Dr. Hall is not only a pioneer with his studies of the Human T cell Leukemia Virus-2, or HTLV-2, but for his work extending well beyond the lab to include viral research and public health initiatives in several other countries,” said Bréchet. “Dr. Hall has long-standing collaborations from Ireland with fellow GVN Centers of Excellence, including those in Japan and India, which have cultivated GVN Affiliates including the Africa Center of Excellence for Infectious Diseases of Humans and Animals (ACEIDHA) at the School of Veterinary Medicine of the University of Zambia and the Vietnamese National Institute of Hygiene and Epidemiology.”

“I am pleased to receive this honor, and look forward to growing the GVN and advancing its mission, particularly in the training of the next generation of virologists,” said Hall. Gallo continued, “Dr. Hall is a terrific researcher, who has translated his success into helping other countries set up sustainable, effective infrastructure to address their own virus threats. As a co-founder of the GVN, his dedication and passion to the continued success of the organization is critical to advancing its mission.”

### ***About the Global Virus Network (GVN)***

The Global Virus Network (GVN) is essential and critical in the preparedness, defense and first research response to emerging, existing and unidentified viruses that pose a clear and present threat to public health, working in close coordination with established national and international institutions. It is a coalition comprised of eminent human and animal virologists from 48 Centers of Excellence and seven Affiliates in 29 countries worldwide, working collaboratively to train the next generation, advance knowledge about how to identify and diagnose pandemic viruses, mitigate and control how such viruses spread and make us sick, as well as develop drugs, vaccines and treatments to combat them. No single institution in the world has expertise in all viral areas other than the GVN, which brings together the finest medical virologists to leverage their individual expertise and coalesce global teams of specialists on the scientific challenges, issues and problems posed by pandemic viruses. The GVN is a non-profit 501(c)(3) organization. For more information, please visit [www.gvn.org](http://www.gvn.org). Follow us on Twitter @GlobalVirusNews

#### **Media Contact:**

Nora Samaranayake, GVN

410-706-8614

[nsamaranayake@gvn.org](mailto:nsamaranayake@gvn.org)