Avian influenza virus (AIV) is a zoonotic that can infect chickens and humans as a global public health threat. In the field, in general, AIV strains are harmless to human health. Nevertheless, several AIV strains, such as H5 and H7 subtypes, have been found to possess the ability to cross-link the host (genetic shift or genetic re-assortment) and are able to infect humans in case of direct contact with infected chickens or through contaminated environments. The incidence of AIV outbreaks is unpredictable and it only takes a week to infect chickens in many countries around the world. Chickens can be infected with hidden AIV, meaning that chickens is capable of transmitting AIV infection without showing clinical symptoms of sick or normal looking chickens (healthy). Java is noted as the region in Indonesia with the highest number of AIV cases in chickens and presumably a consistent main site as a source of AIV outbreaks in chickens. AIV subtype H5N1 has been successfully isolated from house flies (Musca domestica). AIV H5N1 subtype persists and lives in the digestive tract of the house fly up to 24 hours post-infection. In fact, it was reported that there has been a mixed infection of AIV type A highly pathogenic subtype H5 and H7 in chickens in Indonesia. Currently, AIV infection in chickens in Indonesia is non-pathogenic. The non-pathogenic AIV is, in general, co-infected with other microorganisms, especially Escherichia coli, Newcastle disease virus, infectious bronchitis virus and infectious bursal disease virus, and mycotic infections. AIV bio-surveillance in chickens is an essential part in order to identify new strains of AIV that are likely to cause epidemics and even AIV pandemics in both chickens and humans. More importantly, in addition to the anti-flies chemicals and vaccinations, are the creation of novel medicine in nature that allows it to act as a treatment (triggering T cell activity) and at the same time could prevent AIV (resulting in AIV receptors: sialic acid) and can also act as anti-bacterial G+ and G- and anti-toxin.

Biography
Raden Wasito is a Professor of Veterinary Pathology at Department of Pathology, Faculty of Veterinary Medicine, Gadjah Mada University, Indonesia. He is currently a Staff Member at Faculty of Veterinary Medicine, Gadjah Mada University. He has received his DVM degree from Gadjah Mada University in 1978 and pursued his Advanced Degrees in Pathology at Department of Pathology, Michigan State University, USA and obtained MS in 1984 and PhD in 1987.

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