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Bioneer develops an Ebola virus detection kit

Bioneer, in collaboration with the Nigerian government, recently developed their *AccuPower*® EBOV Real-time RT-PCR Kit. Beginning in April 2014, Bioneer has worked with the Nigerian National Biotechnology Development Agency (NABDA) to develop the means to rapidly detect the Zaire Subtype of Ebola associated with the recent outbreaks in Africa. The kit is currently used by NABDA, and Bioneer plans to make it available for use throughout Africa.

The Bioneer research team, including Han-Oh Park, Ph.D., founder and CEO, is currently participating in an Ebola virus-related workshop held by NABDA in Abuja, Nigeria. Nigeria's CDC and more than a hundred healthcare professionals attended the symposium "Molecular Diagnosis of Hemorrhagic and Zoonotic Viral Diseases and Treatment Options of National Public Health Importance," where viral diseases in West Africa and options for their diagnosis and treatment were discussed. In the symposium, the Bioneer team presented its newly developed MDx kit for EBOV detection and *ExiStation*™, the company's real-time PCR-based molecular diagnostic system. During their workshop, the Bioneer team trained attendees on the use of their Ebola detection system, while demonstrating successful detection of the virus in patient samples. In doing so, they demonstrated the suitability of the *AccuPower*® EBOV Real-time RT-PCR Kit for early diagnosis of viral infection and quantitative analysis of viral load during treatment.

According to the World Health Organization (WHO) there are 5 subtypes in Ebola viruses. One of these, EBOV (Zaire Subtype), causes hemorrhagic fever in humans. An outbreak expanding from West Africa, including Guinea, Sierra Leone and Nigeria, has recently caused the WHO to proclaim a state of emergency due to high fatality rates and the absence, at the time, of the means to effectively diagnose or treat this disease.

Bioneer has a history of being a nimble developer of new virus diagnostic kits. When swine flu became pandemic in 2009, the company developed a diagnostic kit within approximately two weeks from the announcement of the sequence of the H1N1 virus, and provided several million tests to South Korea and other countries. This enabled public health agencies to make prompt and accurate diagnoses required for correct treatment. The company's vertical integration allows Bioneer to produce entire MDX diagnostics systems from raw materials to reagents and instrumentation – allowing for an extremely rapid response to emerging diseases.

The *ExiStation*™ Universal MDx system is an integrated modular system for nucleic acid extraction and analysis. It consists of three automated nucleic acid extraction systems, and a real-time PCR machine (the *Exicycler*™ 96) which can test 48 clinical samples simultaneously. Its automated sample pipetting system includes multiple features for preventing contamination - minimizing the potential for infection of the technician performing the tests. There are currently 62 KFDA approved and 53 CE-IVD approved molecular diagnostic kits developed for the *ExiStation*™ system.

Bioneer Corporation is a public company traded at KOSDAQ (064550:KS) in South Korea. Founded in 1992, it is the first biotechnology company in South Korea. With its intensive R&D, it has developed molecular diagnostic products, drug discovery systems, and RNAi therapeutic products.