Scientists genetically disarm the Ebola virus

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A research team that includes University of Tokyo scientists has succeeded in genetically disarming the deadly Ebola virus for the first time, they said in the Tuesday issue of a U.S. science journal.

The findings mean researchers effectively confined the virus to a set of specialized cells, making it safe to study under conditions far less stringent than those currently imposed, a move scientists believe will help advance studies on Ebola drugs and could pave the way for vaccine production.

"We wanted to make a biologically contained Ebola virus," Yoshihiro Kawaoka, a University of Tokyo professor, was quoted as saying in the weekly journal proceedings of the National Academy of Sciences.

"This is a great system. . . . This system can be used for drug screening and for vaccine production."

The Ebola virus — an emerging public health concern in Africa and a potential biological weapon — causes hemorrhagic fever in humans and nonhuman primates, resulting in mortality rates of up to 90 percent. It ranks among the most feared exotic pathogens.

Currently, research on the virus is confined to the very highest level of biosafety. Because such laboratories are rare, small and very expensive, basic research that forms the basis for any potential drugs or vaccines to thwart the virus has been limited to about half a dozen labs worldwide.

"The system devised by Kawaoka and his colleagues could provide a way to greatly expand studies of the
pathogen and speed the development of countermeasures," the journal said.

Hideki Ebihara and Takeshi Noga, research associates at the university's Institute of Medical Science, are also members of the research team.