

Collaboration between KyooBe Tech and the German Center for Infection Research

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The technology company KyooBe Tech GmbH and the German Center for Infection Research (DZIF) have signed a memorandum of understanding to collaborate on future research and development projects. The aim of the collaboration is to evaluate an innovative technology for inactivating pathogens using the specific effect of low-energy accelerated electrons (Low Energy Electron Irradiation—LEEI) and to make it available to DZIF scientists.

Inactivating pathogens such as viruses and bacteria, rendering them harmless to humans, is essential for the production of vaccines in particular. This is exactly what KyooBe's high-tech "eFIT Lab" device does: by targeting pathogens in liquid solution with low-energy accelerated electrons (LEEI), the device destroys their genetic material—DNA or RNA—and thus renders them harmless. Although the outer proteins of the pathogens remain intact, their ability to reproduce is eliminated, rendering them inactive. This innovative inactivation method differs from other more traditional methods such as heat or formaldehyde inactivation.

Developing and manufacturing vaccines based on "rendered harmless" pathogens is therefore a concrete example of the application of LEEI technology. The pathogens against which vaccines are to be developed may also include pathogens that have been identified and prioritized by the World Health Organization (WHO) or the Coalition for Epidemic Preparedness Innovations (CEPI) as pathogens posing a particularly high risk to public health due to their antibiotic resistance.

Dr. Klaus Schwamborn, Head of Vaccine Development at the DZIF Product Development Unit: "We are very pleased to collaborate with KyooBe and the opportunity to evaluate this innovative technology. It is important for the DZIF to have access to novel and cutting-edge technologies in order to develop the best vaccine candidates for a given indication." "LEEI offers a fast and chemical-free alternative to conventional inactivation technologies, enabling safe, gentle inactivation of pathogens. By collaborating with the DZIF, we can further develop this innovative platform and jointly open up new fields of application in infection research," adds Dr. Andrea Traube, CEO of KyooBe Tech GmbH.

A collaboration between the DZIF and KyooBe Tech could, for example, involve the DZIF producing infectious pathogens for research purposes, which are then attenuated using the "eFIT Lab." Within the DZIF network, the pathogens rendered harmless using LEEI can then be examined and tested for protection in animal experiments. The DZIF can also compare attenuated vaccine candidates with other vaccine candidates based on alternative platforms. The data and results within the studies will be analyzed by the DZIF and its affiliated organizations.

The new "eFIT Lab" device is to be tested in various DZIF projects. In this way, KyooBe Tech can validate the LEEI method and the DZIF benefits from the new technology for its research projects—a win-win situation.

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Further information

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