

## Phase I Clinical Study to Develop a Norovirus Vaccine Commenced in Belgium

Denka Company Limited (headquarters: Chuo-ku, Tokyo; president: Manabu Yamamoto; hereinafter, “Denka”) announces that Icon Genetics GmbH (headquarters: Halle, Sachsen-Anhalt, Germany; CEO: Kazuyuki Hiruta, hereinafter, "Icon Genetics"), a group company of Denka, began a Phase I study for clinical development of a norovirus vaccine in Belgium.

The clinical trial aims to assess the safety and immunogenicity of the norovirus vaccine that Icon Genetics is developing through administration to healthy adults. Icon Genetics filed a notification of its clinical trial plan in Europe this February. With the approval of the Belgian health authorities, they will conduct the clinical trial at the vaccination center of Ghent University Hospital in Belgium.

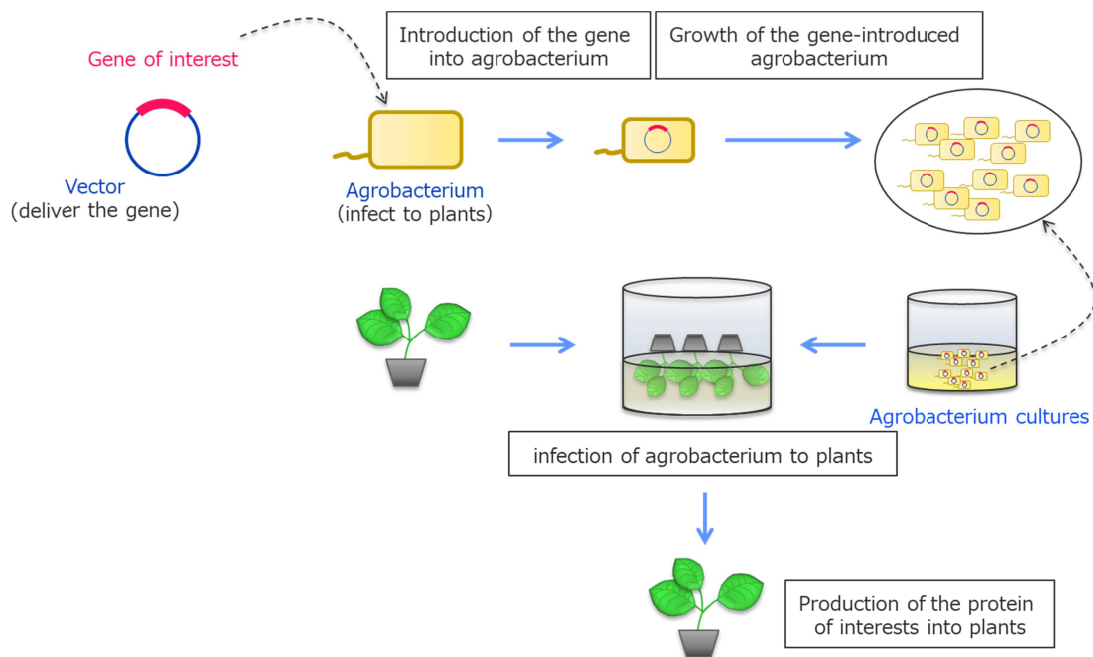
Currently, the Denka Group is promoting R&D regarding raw materials and other items used for the norovirus vaccine and test reagents using its magnICON®\* technology platform under the leadership of Icon Genetics. The Group obtained an approximately 50,000 m<sup>2</sup> land at the Weinberg Campus Technology Park near Icon Genetics in Halle this March for the construction of a core R&D and manufacturing hub to respond to the advancement of the R&D.

Positioning the healthcare business as one of the three important fields in its Denka Value-Up management plan, the Denka Group distributes products to fight infection, including influenza vaccines and quick antigen diagnostic kits for the COVID-19 and other viruses. The Group will proactively support Icon Genetics’s R&D and promote the development of a vaccine for the norovirus for which effective prophylaxes or therapies have not yet been established to contribute to the improvement of people’s QOL.

### **About magnICON®**

magnICON® is a transient gene expression system using plants to produce target proteins efficiently. A gene encoding target protein is inserted into a plant viral vector(\*) that is intended to deliver the gene to host plant’s protein production mechanisms, and then the vector is introduced into *Agrobacterium tumefaciens* (bacteria that infect plants). After cultivating the vector-carrying bacteria and preparing a solution containing the bacteria, a host plant is immersed in the bacteria-containing solution and is allowed to be infected with the bacteria. Then, the infected plant is incubated to produce the desired protein. magnICON® improves remarkably the efficiency of producing target proteins using host plant mechanisms by incorporating the heterologous genes encoding the proteins in a plant viral vector.

\* Vector: A container/vehicle that can deliver a gene of the desired protein to be expressed in a host cell



**References:**

- ” Accelerating Research & Development of a Norovirus Vaccine Purchasing Land for R&D Site in Germany and Applying for Phase I Clinical Trial in Europe”, March 12, 2020  
[https://www.denka.co.jp/eng/storage/news/pdf/270/20200312\\_denka\\_icon\\_norovirus\\_rd\\_en.pdf](https://www.denka.co.jp/eng/storage/news/pdf/270/20200312_denka_icon_norovirus_rd_en.pdf)

**About Denka:**

Denka is a chemical manufacturer headquartered in Chuo-ku, Tokyo. The company specializes in developing business activities on a global scale across a wide range of fields, from inorganic and organic chemicals, to electronic materials and pharmaceuticals. Founded in 1915, Denka has steadily continued to develop and manufacture products that contribute to the development of society by fully utilizing its unique concepts and technological capabilities. Upholding its corporate slogan, “Possibility of chemistry,” the company and its president, Manabu Yamamoto, are committed to contributing to the sound development of society while sincerely tackling the challenges that society is now confronting.

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