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Merck receives US patents for CRISPR-Cas9 technology

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Technology provides more tools to fight difficult-to-treat diseases



Merck, a leading science and technology company has announced that two of its CRISPR-Cas9-assisted genome-editing patents have been allowed in the United States. These allowances provide Merck with the opportunity to support U.S. scientists and researchers in their work to advance and protect gene therapy development programs. The company is in active discussions to license its foundational technology for therapeutic and other uses and is seeking collaboration partners for research and product development.

Udit Batra, member of the Merck Executive Board and CEO, Life Science said, “This is important news for researchers, as CRISPR-based DNA cleavage and integration are fundamental for many genome-editing applications and can be used to develop personalized therapies. As a leading innovator of CRISPR technology, we will license this technology to ensure that the full potential of this powerful tool is realized, responsibly and ethically, throughout the scientific community. We look forward to continuing our work with academic and industrial partners to bring the best of our collective innovations to fight the toughest diseases and improve human health.”

These latest allowances cover Merck’s CRISPR-Cas9 cleavage and integration technology, which allows researchers to replace a disease-associated mutation with a beneficial or functional sequence, or delete such a mutation, commonly referred to as “knock in” and “knock out,” critical methods for the creation of disease models and development of gene therapy.

These grants mark the 25th and 26th CRISPR patents worldwide belonging to Merck and the third and fourth in the U.S. The company has CRISPR patents granted in Australia, Canada, China, Europe, Israel, Singapore and South Korea with related patent filings in Brazil, India and Japan.

CRISPR technology is a core competency for Merck, which has 16 years’ experience with genome editing, spanning discovery to manufacturing. The company develops technologies in a range of genome-editing applications, including gene knockout, gene integration and CRISPR libraries for genetic screens. Merck received its first U.S. patent in February 2019 for its proxy-CRISPR technology, which makes genome editing more efficient, flexible and specific.

Merck considers that now is the time for the key CRISPR intellectual property stakeholders to come together to simplify technology access for companies conducting CRISPR-based research via patent pooling agreements. Merck and The Broad Institute announced their collaboration agreement for CRISPR patent licensing in July 2019.

The company recognizes that genome editing has resulted in major advancements in biological research and medicine. At the same time, the growing potential of genome-editing technologies has led to scientific, legal and societal concerns. Merck supports research with genome editing under careful consideration of ethical and legal standards.