

CRISPR-based genomic scissors have unveiled new possibilities in medicine and biotechnology. Similar to a word processing program that finds, deletes and replaces words or letters, these CRISPR RNA-protein complexes search for certain DNA sequences in a cell, cut them and allow the cell to paste in new DNA information. Merck, together with Dr. Gordon's group, will use its CRISPR genome scissors in this collaboration to modify the sequence of DNA in microbes cultured from human gut microbiome samples. The results will help the researchers obtain essential, new information about

the microbes' functions and nutritional needs.

As a company that has been highly involved in genome editing innovation, Merck recognizes that genome editing has resulted in major positive advancements in biological research and medicine.

At the same time, the growing potential of gene-editing technologies has opened scientific, legal and societal concerns.

As both a user and supplier of gene-editing technology, Merck supports research with genome editing under careful consideration of ethical and legal standards.

Merck has established a Bioethics Advisory Panel to provide guidance for research in which its businesses are involved, and has defined a clear operational position taking into account scientific and societal issues while not blocking any promising therapeutic approaches for use in research and application.