

## Creative Diagnostics Announces Advanced Microbial Genome Editing Services to Accelerate Bio-research

Creative Diagnostics launches Microbial Genome Editing services to support bioresearch.

NEW YORK, NY, UNITED STATES, June 23, 2025 /EINPresswire.com/ -- As an expert in providing solutions to assist virology and microbiology research, <u>Creative Diagnostics</u> has introduced its efficient and precise <u>Microbial Genome Editing</u> services to support researchers in the modification of specific target genes within an organism's genome.

Microbial cell factories are a promising mode of production for fuels, chemicals, and pharmaceuticals because microbial methods are often clean and renewable. However, genome engineering is a slow, inefficient, and arduous process that limits microbial producers. The emerging Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) system has greatly improved the efficiency of genome editing and simplified multilocus genome editing steps. It has also enabled the rapid disruption of metabolic networks. The CRISPR system is an adaptive immune system that allows prokaryotes to defend themselves against the invasion of foreign DNA/RNA from viruses or other organisms. The CRISPR/Cas system is widely used in basic research and biotechnology applications, including genome editing, molecular diagnosis, metabolic engineering, and gene function mining in microorganisms, plants, and mammals.

In the field of microbial biotechnology, the CRISPR/Cas system has been applied to many model and non-model microorganisms, including Escherichia coli, Saccharomyces cerevisiae, Bacillus, Clostridium, Corynebacterium, Lactobacillus, Mycobacterium, Pseudomonas, and Streptomyces. Nevertheless, some microorganisms of interest remain for which the CRISPR system has not yet been applied, and some of the existing CRISPR/Cas system's weaknesses have yet to be overcome.

As a leading provider of DNA sequencing, synthesis, and editing services, Creative Diagnostics offers efficient, precise, and tailored microbial genome editing services to enable the modification of specific target genes in biological genomes. Creative Diagnostics' team of scientists can ensure efficient gene modification down to the base pair level without leaving any selectable markers behind. With these genome editing tools, researchers can edit any gene with superior accuracy and mutate multiple loci simultaneously. Additionally, these gene editing services are suitable for various microorganisms, such as Escherichia Coli, Salmonella, Streptomyces, Clostridium, Bacillus subtilis, and Saccharomyces cerevisiae.

Creative Diagnostics' comprehensive microbial genome editing service encompasses the entire process, from sgRNA vector construction to genome editing, clone selection, and rigorous validation. For example, its team of experts leverage optimized guide RNA design algorithms to maximize editing efficiency and minimize off-target effects. They also modified many CRISPR systems to facilitate multiplex editing, enabling diverse gene and genome modifications, including knock-downs, knock-ins, large deletions, and chromosomal rearrangements. Creative Diagnostics prioritizes quality control, providing sequence chromatograms, quality assurance certificates, and RT-PCR and Western blot validation for complete reliability.

The seamless and precise nature of Creative Diagnostics' services, combined with their capacity for multigene editing and easy selection processes, makes the company as a trusted partner for advancing biotechnology. From pharmaceutical production to agricultural innovation and environmental remediation, Creative Diagnostics is dedicated to providing quality tools for scientific discoveries and sustainable solutions.

For more information on these genome editing services and other innovative antibacterial solutions, please visit <a href="https://antiviral.creative-diagnostics.com/microbial-genome-editing.html">https://antiviral.creative-diagnostics.com/microbial-genome-editing.html</a>.

## **About Creative Diagnostics**

Headquartered in New York, Creative Diagnostics is a consulting and experimental service provider specializing in virology and microbiology. The company provides comprehensive solutions to conquer obstacles in virology and microbiology research, from high-security infrastructure provision, biosafety regulation elucidation, to expert viral system assistance.

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