CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) is a powerful tool for gene editing that allows scientists to make precise alterations to DNA.Challenges and Considerations Ethical Concerns: The potential to edit human embryos raises significant ethical questions about genetic modification and designer babies.Provide a donor DNA template for homology-directed repair (HDR), enabling precise edits like gene corrections or the introduction of new genes.Applications of CRISPR in Gene Therapy Genetic Disorders: CRISPR holds potential for treating genetic disorders like sickle cell anemia, cystic fibrosis, and muscular dystrophy by correcting mutations at the DNA level.Infectious Diseases: CRISPR can be used to target and edit the genomes of viruses (like HIV) in infected cells, potentially leading to new antiviral therapies.Agricultural Biotechnology: Beyond human health, CRISPR is used in agriculture to create crops with desirable traits, such as disease resistance or enhanced nutritional profiles.Regulatory Hurdles: The use of CRISPR in clinical settings faces regulatory .challenges and requires extensive safety evaluations

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