

Happy anniversary CRISPR: Transformative gene editing technology is 10 years old. What's next?

2022 marks 10 years since the initial publications characterizing Cas9 as a programmable RNA-guided endonuclease. These findings have led to the emergence of powerful CRISPR-based platforms enabling gene disruption, insertion, correction, and deletion. Accordingly, for the past decade, genome editing has moved through multiple inflection points as CRISPR transitioned from basic science to near-ubiquitous research tool, and into a potentially transformative therapeutic modality.

The astonishing rise of CRISPR has been accompanied by the establishment of a stable of biotech companies aiming to leverage the technology for therapeutic applications. We have started to see that therapeutic promise materializes with clinical proof of concept emerging in indications, including sickle-cell disease (SCD), a form of hereditary amyloidosis, and cancer.

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Even as the first wave of programs moves forward through clinical studies, the technology side continues to advance at a rapid clip, with advances in activity, specificity, and the incorporation of novel functions positioned to further expand the "CRISPR toolbox" and the reach of therapeutic genome editing. Although various open questions remain regarding safety and activity, the outlook for the field is excellent. CRISPR technology is on track to become a pillar of cell and gene therapies in the coming decades.

[This is an excerpt. Read the original post here.](#)