



## Corner Therapeutics Announces First Publication on Proprietary Catalytic Adjuvant Platform

**WATERTOWN, MA, November 8, 2023** – [Corner Therapeutics](#), a biotechnology company exploiting a new scientific paradigm to boost the immune response to disease, today announced the first publication detailing their proprietary Catalytic Adjuvant platform that drives strong T cell immune responses to mRNA vaccines. The publication in the journal *mBio* is titled “[mRNAs encoding self-DNA reactive cGAS enhance the immunogenicity of lipid nanoparticle vaccines](#)”.

Lipid nanoparticles (LNPs) have been used to stimulate immunity to mRNA-encoded antigenic proteins from viruses and cancers. However, immune durability is limiting with current LNP vaccines, as the strategies used do not activate T cells robustly, which are key for immune memory. The lack of immune memory from current LNP-mRNA vaccination approaches is linked to a decades-old observation in medical science — antigens are not sufficient to stimulate durable immunity. Durable immunity is only activated when antigens are combined with molecules that mimic an infection. These infection mimics, known as adjuvants, are commonly found in other vaccines, but not current formulations of LNP-mRNA vaccines. This publication describes Corner’s discovery of a new class of immunostimulatory enzymes known as catalytic adjuvants, encoded by mRNAs in LNPs. The mRNA encoded catalytic adjuvant is a variant of the innate immune receptor cGAS, which activates the highly immunostimulatory STING pathway in dendritic cells (DCs), which control durable T cell immunity to cancer and infection. Corner’s catalytic adjuvants induce numerous DC activities that are needed for durable immunity, including the upregulation of chemokine receptors, T cell costimulatory molecules, major histocompatibility complex proteins, cytokines, and type I interferons. This discovery reveals that mRNA-encoded proteins can provide more than antigenic signals to the immune system. Proteins with adjuvant activities can also be encoded on mRNAs, leading to robust immune cell activation.

When co-administered with LNP vaccines encoding antigens, akin to those used clinically, catalytic adjuvants stimulated durable antigen-specific T cell responses that circulated through the lymphatics, blood, and lung. In contrast, antigen-LNPs alone stimulated weak and transient T cell responses. The enhanced T cell immunogenicity of Corner Therapeutics’ Catalytic Adjuvant platform was also observed for antibody production. The unique attributes of catalytic adjuvant vaccines may be particularly effective in vaccines designed to treat or prevent cancers and infectious diseases.

“This publication is an exciting milestone for Corner Therapeutics, offering the first overview of our catalytic adjuvants as tools to stimulate unprecedented vaccine immunogenicity,” said Jonathan Kagan, Ph.D., Scientific Co-founder and Advisor at Corner Therapeutics and lead author of the publication. “The 2023 Nobel Prize in Physiology or Medicine was awarded to the researchers whose discoveries enabled the development of mRNA vaccines against COVID-19. This publication highlights Corner’s ambition to further advance this groundbreaking work, providing the first example of a simple and effective adjuvant for mRNA-LNP vaccines. We look forward to making continued breakthroughs in personalized and off-the-shelf vaccines through the development of our Catalytic Adjuvant platform.”

“These data present a tremendous opportunity to partner with biopharma companies that share Corner’s commitment to bringing durable immunity to patients living with infectious diseases and cancer,” said Steven Altschuler, M.D., CEO of Corner Therapeutics. “As we continue to develop our Catalytic Adjuvant platform, we look forward to exploring its broad potential to generate lifelong immunity for patients young and old.”

**About Corner Therapeutics, Inc.**

Corner Therapeutics is a privately held biotech company developing a new class of multi-purpose dendritic cell-targeting immunotherapies that induce robust memory T cell responses. Corner Therapeutics is exploiting a new scientific paradigm to boost the intelligence of the natural immune response through dendritic cell hyperactivation. Our unique approach engages dendritic cell inflammasomes to induce exceptional memory T cell responses critical for lifelong immunity. Our platform is antigen-agnostic and aims to address an exceptionally wide range of difficult-to-treat cancers and infectious diseases. Corner's therapy will usher in a new era of rapid, patient-friendly and low-cost treatments able to induce complete and durable protective immunity. Our foundational science originated from the Kagan and Karp labs at the Harvard Medical School and is being advanced by pioneers of immunotherapy. For more information, please visit <https://cornertx.com>.

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