

Fc Optimization Platform

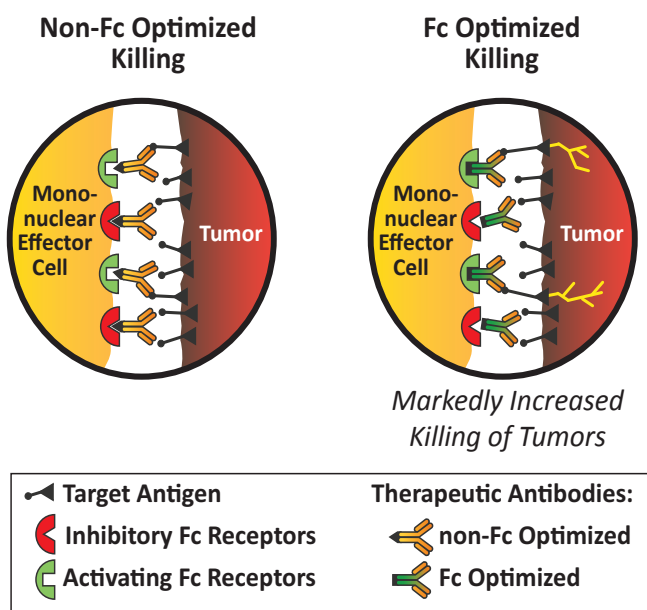
MacroGenics has applied its antibody engineering expertise to develop a powerful platform for optimizing monoclonal antibodies. By introducing certain mutations into the Fc domain of an antibody, MacroGenics is able to modulate antibody interaction with effector cells, which activate the body's immune system.

The Fc domain mediates the antibody's function by binding to different activating receptors and inhibitory receptors on immune effector cells. The activating receptors lead the cells to internalize or build a response against the target, thus enhancing the immune system's ability to eliminate a target cell. The inhibitory receptors assist in dampening the immune reaction as to avoid over-activation of the effector cells populations. By engineering Fc regions to bind with optimal levels of affinity to both the activating and inhibitory receptors, MacroGenics has been able to provide more effective immune modulation and improve effector functions, such as cytotoxic potency.

The company has established a proprietary platform to engineer, screen, identify and test Fc domains with customizable activity. In particular, the company has exclusive access to transgenic mice that express human Fc receptors. These mice can be used for *in vivo* testing of antibodies that incorporate Fc domain variants, including those antibodies intended for cancer therapy.

MacroGenics has two oncology product candidates incorporating its Fc variants (MGAH22 and MGA271), both of which are actively enrolling patients in Phase 1 studies. The company has substantial preclinical evidence that these Fc variants have substantially improved the antibodies' therapeutic effects.

Fc Optimization Enhances Antibody-mediated Effector Function



Program Status

- Two Fc-optimized mAb programs for oncology are in Phase 1 clinical development
- Incorporating optimized Fc domains into the company's proprietary bi-functional antibody-based scaffold (DART™, or Dual-Affinity Re-Targeting platform)
- MacroGenics is building a significant patent estate around its Fc Optimization platform



MacroGenics' proprietary Fc Optimization Platform presents a novel opportunity to develop next-generation drugs to treat cancer, autoimmune disorders and infectious diseases.

MacroGenics is seeking strategic partners to participate in the development of antibody therapeutics.

Company Overview

MacroGenics' mission is to discover, develop and deliver to patients novel biologics for the treatment of autoimmune disorders, cancer and infectious diseases. The company's expertise in antibody drug discovery and development has enabled it to build a proprietary pipeline of innovative product candidates for multiple indications.

Company Highlights

- Robust pipeline in autoimmunity, oncology and infectious diseases
- Leading next-generation antibody platforms
- Major partnerships with Boehringer Ingelheim, Pfizer and Servier (>\$2.5B total)
- Fully-integrated biologics capabilities across entire product development process
- Strong financial position with backing of blue-chip investors
- Experienced management team and highly collaborative corporate culture

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