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**BIOTECH  
STARTUPS  
EDITION**



COMPANY  
OF THE YEAR

# KINETA



*The annual listing of 10 Startups that are at the  
forefront of providing Biotech solutions and  
transforming businesses*

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# KINETA

## Developing Next-Gen Immunotherapy to Address the Mechanisms of Cancer Resistance

**O**ver the past few years, immunotherapy has become an integral part of cancer therapeutics, given its ability to harness the human immune system to fight cancer cells. Though it has long been ineffective, recent developments in oncology have elevated immunotherapy to one of the strongest weapons against the disease. According to GLOBOCAN 2020, the global cancer burden has reached an alarming state with 19.3 million new cases—many of whom are ideal candidates for this type of medicine. What led to the rapid adoption of immunotherapy is its vastly improved outcomes compared to conventional cancer therapeutic methods, including chemotherapy and radiation. Importantly, patients who undergo this treatment tend to survive longer compared to chemotherapy while enduring far fewer harsh side effects.

While newer immunotherapies have been a game-changer in cancer therapeutics, there is a catch—they are only effective in 20-30% of patients with cancer. As most immuno-oncology drugs target patients' adaptive immunity, primarily T-cells, their response rates remain relatively low in all tumor types. This leaves a huge portion of the population to live with the risk of cancer. This is precisely where Kineta makes a world of difference with its immuno-oncology products that focus on novel innate immune pathways. "We believe that having a strong innate immune response will lead to a strong T-cell response; and together they can build a powerful shield against tumor cells," says Dr. Shawn Iadonato, the CEO of Kineta.

Founded in 2008, this Seattle-based clinical-stage biotechnology company is on a mission to develop next-gen immunotherapies that transform patients' lives. The company leverages its longstanding experience in immunology and in-depth expertise in innate immunity to develop first-in-class immunotherapies that address the challenges pertaining to current cancer therapies. By developing immuno-oncology drugs that use the body's innate immune system to fight cancer, they aim to improve the overall and long-term survival of cancer patients.



Shawn Iadonato, PhD,  
CEO

### A Unique Outlook to Cancer Therapeutics

"We aim to improve outcomes by addressing the mechanisms of cancer resistance. By leveraging our proprietary PiiONEER™ discovery platform, Kineta is developing novel antibody drugs that reprogram innate immune responses to fight cancer," says Craig Philips, the President of the company. Once the team at Kineta identifies a particular target in the immune system, they develop a library of fully human antibodies. The company then conducts an iterative process using proprietary innate immune assays to optimize the structure of the antibody for binding characteristics, improved efficacy, and patient-friendly features like safety, tolerability, and ease of dosing.

Kineta's pipeline of innovative immuno-oncology drugs uses fully human monoclonal antibodies to address three major mechanisms of cancer resistance—immuno suppression, lack of tumor antigen, and exhausted T-cell. KVA12.1 is Kineta's novel anti-VISTA antibody for the treatment of solid tumors. The drug is designed to bind the V-domain Ig Suppressor of T-cell Activation (VISTA), a novel immune checkpoint protein responsible for the suppression of tumor cell

inflammation within the tumor microenvironment (TME). By turning immuno suppressive cells into inflammatory or immuno reactive, the antibody increases the effect of T-cell migration and tumor infiltration and thereby drives anti-tumor responses. KVA12.1 can significantly decelerate the growth of cancer cells even in difficult to treat tumors by increasing monocyte differentiation and activation, improving HLA-dependent T cell activation, and reducing MDSC-mediated T-cell suppression. What makes this fully human engineered IgG1 monoclonal antibody more reliable is its ability to work with other cancer therapeutics, inducing chemotherapy and checkpoint inhibitors. “KVA12.1 is in preclinical development and will enter Phase 1 clinical studies in Q32022,” adds Dr. Iadonato.

KVA12.1 is being developed for many types of cancer including NSCLC (lung), colorectal, renal cell carcinoma, head and neck, and ovarian. These initial target indications represent ~450,000 patients in the US annually.

Kineta’s portfolio also includes an exciting anti-CD27 agonist antibody program capable of addressing the critical problem associated with exhausted T-cells. Specifically designed to target the CD27 protein, the drug induces T-cell proliferation, natural killer cells activation, and secretion of cytokines, which provides the ability to potentiate new anti-tumor responses. The company is also developing a drug directed at CD24 protein. CD24 sends a “don’t eat me” signal that prevents the immune system from detecting and killing cancer cells. Kineta’s anti-CD24 monoclonal antibody blocks the CD24 signals and restores immune recognition of cancer cells, which in turn drives a strong immune response. “In essence, we explore the uncharted territories within the immuno-oncology space by targeting novel innate immune pathways to solve the problems of cancer resistance. We strive to advance innovations in cancer therapeutics that address treatment gaps and provide hope to the many patients with unmet needs,” adds Dr. Iadonato.

### **Value Delivered Beyond Cancer Therapeutics**

In addition to its pipeline of novel cancer immunotherapies, Kineta is developing a novel non-

opioid for treating chronic neuropathic pain. The company has partnered with Genentech, a member of the Roche Group, to develop KCP506. KCP506 is a long-acting  $\alpha 9\alpha 10$  nicotinic acetylcholine receptor (nAChR) antagonist for the treatment of chronic neuropathic pain. This first-in-class drug targets the innate immune system and nerve fibers in the peripheral nervous system to not only block pain signaling but to also prevent inflammation around injured nerves. The combination of analgesic, anti-neuroinflammatory, and neuroprotective effects provides KCP506 with the potential to be a disease-modifying therapy that may slow or halt the progression of chronic pain.

Under the exclusive research collaboration and option agreement with Genentech, Kineta has received ~21 million dollars in upfront and milestone payments and is eligible to receive up to \$359 million as the drug progresses through clinical and commercial milestones. KCP506 has successfully completed preclinical studies, where it demonstrated non-addictive and non-tolerizing characteristics and therefore may serve as a safer alternative to opioids or gabapentinoids. It is currently in Phase 1 clinical studies to evaluate the safety, tolerability, and pharmacokinetics of the drug.



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### **Heading towards a Unique Mission**

Behind the massive success of Kineta lies a world-class team of scientists, and industry veterans that share the same vision—creating a paradigm shift of next-generation cancer therapeutics. They adhere to a collaborative culture, an integrated cross-functional approach and are always open to creative ideas to address unmet needs in the market. The company prides itself on serving as the frontrunner in introducing and developing innovative therapies for critical diseases.

Such ardent focus on innovation helps Kineta gain a competitive edge and explore new avenues of success. Today, the company is looking forward to establishing its footprints in the public markets and extending its global reach to regions in Asia, Europe, and North America. “We are always committed to expanding our immuno-oncology portfolio by leveraging our PiiONEER™ discovery platform. By 2024, we will have four new products in clinical development, including therapies for solid tumors and blood cancer,” concludes Philips. 