Sebastian BioPharma

Making Tumors Visible So Immunotherapy Can Work

Mission

To unlock immunotherapy for the majority of cancer patients currently excluded from treatment, including those unresponsive to PD-1 antibodies, by developing first-in-class RNA-targeted therapeutics that reprogram tumor antigen presentation.
This breakthrough has the potential to expand access to immune checkpoint therapies for **3/4 of patients** with antigen-deficient tumors.

Vision

To establish a new standard in cancer immunotherapy by unlocking the immune system's full potential, making cancer visible, vulnerable, and treatable for the vast majority of patients. We envision a future where immune therapies are no longer limited by tumor invisibility but empowered by science that makes most tumors recognizable and responsive.

The Problem & The Solution

Neoantigen deficiency is a frequent event across tumors and a remaining therapeutic challenge

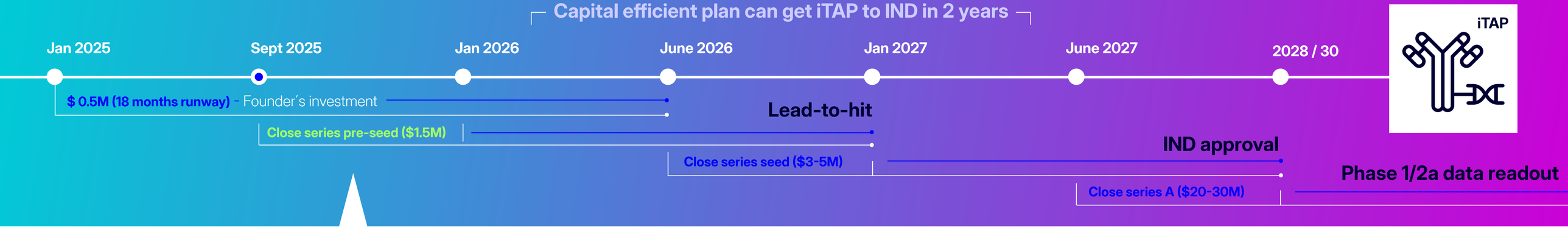
In 2025, over 2 million new cancer cases are projected in the United States, yet 60-80 % of solid tumors lack detectable neoantigens.
Microsatellite-stable (MSS) colorectal cancer alone leaves approximately 130,900 patients per year (85 % of total patients) without an effective PD-1 option because their tumors are neoantigen-negative.
The FDA recognizes neoantigen deficiency as a resistance biomarker, but no approved therapy addresses this root cause.
This represents a critical unmet clinical need in Immuno-Oncology, underscoring the urgent demand for therapies that induce neoantigens and restore immunotherapy sensitivity.

iTAP: Neoantigen induction in disseminated tumor cells to restore immunotherapy sensitivity

iTAP is an antibody-oligonucleotide conjugate that delivers TAP-targeting siRNA specifically to tumor cells. This silencing of TAP reprograms antigen presentation, inducing shared neoantigens that enhance tumor visibility and immune recognition, strong synergy with PD-1 inhibitors, and no systemic toxicity.

Our **antibody-oligonucleotide conjugate platform** uses clinically validated monoclonal antibodies for tumor-selective delivery of RNA payloads. Its modular design allows co-delivery of multiple oligonucleotides to distinct intracellular targets with nanomolar potency and minimal off-target effects, offering a high-impact solution for advancing Immuno-Oncology therapies.

Capital efficient plan can get iTAP to IND in 2 years



Where we stand today

Building our network of collaborators and early-stage investors:
- Graduated from SCBio Drive Accelerator (June 2025)
- Partner with BioStrategy Advisors (Sept 2025)
- SBIR, NIH (Submitted by Sept 2025)
- R03, NIH (Submitted by Oct, 2025)
- Finalist Ignite Golden Ticket, Lab Central (Nov 2025).
- Advancing iTAP through lead candidate selection and optimization 4 potential leads currently under evaluation.

Market Opportunity

Sebastian BioPharma targets one of oncology's largest untapped markets—the 70–80% of solid tumor patients who fail PD-1 therapy due to neoantigen deficiency. Representing 3.1M new cases annually and a $59B total market, the company's initial focus is microsatellite-stable colorectal cancer ($6.4B SAM; $960M SOM). As the $54B PD-1 market faces a 2028 patent cliff threatening up to 90% revenue loss, iTAP restores tumor visibility and PD-1 responsiveness—extending PD-1 market life, unlocking new patient segments, and capturing value across the $120B+ Immuno-oncology landscape.

Clinical Development Plan

Sebastian BioPharma will initiate a biomarker-driven trial to validate iTAP in TAP-positive, neoantigen-deficient tumors resistant to PD-1 therapy. The lead indication, MSS colorectal cancer (SBP-001), addresses a major unmet need and strong PD-1 synergy opportunity. Endometrial (SBP-002) and gastric (SBP-003) cohorts will follow based on biology and prevalence. An adaptive design will enable rapid efficacy assessment and strategic expansion, positioning iTAP as a first-in-class enabler of immune checkpoint response in resistant solid tumors.

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