TEZCAT LABORATORIES

Executive Summary

Contact: Craig Ramirez, PhD
E-mail: craig@tezcat.co
Phone: 201.259.8509
Address: 10261 Twin Lake Loop
Dripping Springs, TX 78620
Website: www.tezcat.co

Overview

TEZCAT Laboratories is an early-stage Austin, Texas biopharmaceutical company developing innovative therapies for RAS-mutant cancer patients. The TEZCAT core technology is a protein-based therapeutic delivery platform that penetrates, accumulates in, and is internalized specifically by RAS tumors using a novel escape-resistant targeting mechanism.

Target Market

There are a limited number of effective FDA-approved treatments for mutant KRAS or NRAS patients with pancreatic (PDAC), colorectal (CRC), liver, or non-small cell lung cancer (NSCLC). TEZCAT is targeting TZT-102 for patients with KRAS/NRAS mutated locally advanced or metastatic PDAC, CRC, or NSCLC, as indicated by an FDA approved test such as the Praxis Extended RAS Panel and/or Guardant360 CDx. By 2030, our target market will consist of over 205,000 patients annually in the US and nearly 1.4M patients worldwide. TEZCAT's approach fills a void in a patient population with high unmet clinical need, resulting in large market potential – **over $19B per year**.

Product

RAS cancers inherently upregulate a metabolic process called macropinocytosis, that is necessary for survival in low nutrient conditions. **TEZCAT's protein platform acts like a Trojan Horse**, gaining access to cancer cells through macropinocytosis and delivering therapeutic payloads. TZT-102 combines the TZT protein platform conjugated to Seattle Genetics' vc-MMAE payload. TZT-102 is a protein-drug conjugate that is preferentially internalized by macropinocytosis-positive, mutant RAS cancer cells (*see Figure next page*). Based on the mechanism of action of the TZT protein platform, we can expand into multiple indications beyond mutant RAS cancers. The TZT protein platform also has the potential to deliver an array of therapeutic payloads, including other small molecules, protein degraders (PROTACs), siRNA, immune modulators, radiopharmaceuticals, and imaging agents. MRI and PET imaging agents utilizing the TZT protein platform have already been tested and have the potential to be developed into companion diagnostics in the future.

Founding Team

Craig Ramirez, PhD – *CEO*
Andrew Hauser, PhD – *COO, upon financing*
Alex Efron, MBA – *Business Advisor*

Advisors

Ralph Garippa, PhD – *Memorial Sloan Kettering*
Anirban Maitra, MBBS – *MD Anderson*
Matthew Vander Heiden, MD, PhD - *MIT*

Capital Received & Sources

Founders	$15,000
NIH/NCI STTR	$400,000
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J&J QuickFire Challenge	$75,000
Cumulative To-Date	**$890,000**

Capital Seeking

$5.8M Seed Round

Use of Funds

Funds will be used to develop strategic collaborations for platform expansion and develop TZT-102 to point where we can begin IND-enabling studies. Specifically, funds will:

- Expand *in vivo* testing
- Perform non-GLP toxicology studies
- Cell Line Development
- CMC Process Development
- Pre-IND Meeting

Estimated Timing: 15 months

Competition

The recent approval of Amgen's KRASG12C inhibitor, Lumakras, establishes the market for RAS inhibitors and breaks the glass ceiling of RAS being undruggable. There are numerous products in development to directly target RAS, which include 12 KRASG12C (most advanced molecules), 3 KRASG12D, 1KRASG12V, and 7 pan KRAS programs but non that utilize the process of macropinocytosis. Amgen is the current leader with Lumakras, receiving Priority Review, Fast-track, Breakthrough therapy, Orphan drug designation, and Accelerated Approval for mutant KRASG12C NSCLC patients. However, these KRAS-targeting inhibitors most likely have the caveats of relapse/resistance and off-target toxicity. Early readouts of preclinical and clinical studies suggest that KRASG12C inhibitor treated patients are acquiring resistance to their treatments through **development of additional mutations and multiple bypass mechanisms that reactivate the RAS pathway**. This type of resistance is promising for our therapeutic, TZT-102, as it relies on the RAS pathway activation for the delivery of our compound, and thus avoids these issues. The resistance mechanisms seen in preclinical/clinical studies has led to the effort to find efficacious combinatorial strategies, including SHP2, SOS1, MEK/ERK, and PI3K pathway inhibitors. Although there is rationale behind vertical pathway inhibition to overcome adaptive feedback resistance to KRAS inhibitors, they face many challenges including: alternative feedback resistance mechanisms, toxicity issues, and lack of biomarkers to identify which patients would have the best response to new combination therapies. TZT-102 has the ability to address these resistance mechanisms, limit off-target toxicities, and have a defined patient population.

Value Proposition

We believe if TZT-102 can meet our threshold of safety/efficacy, as outlined in our Target Product Profile, it would make a significant impact on standard of care in the 2nd and 3rd line of therapy. Due to the high unmet need and lack of effective treatment options, **TZT-102 could capture 65% of market share**. Uptake is expected to be rapid, similar to molecules such as AstraZeneca's Tagrisso, which was able to achieve >60% adoption rate in first-line EGFR-mutant patients in the US, even with competitors. TEZCAT Laboratories plans to create enterprise value by hitting value creating developmental milestones and by licensing its products to large pharmaceutical companies. The founding team's deep expertise in the scientific approach, supported by world-class consultants and advisors and leading CROs and CDMOs, will support the successful development of the TEZCAT protein platform and its lead asset, TZT-102.

Business Model

TEZCAT's business model is to identify novel oncology therapies, develop these assets through preclinical and clinical trials, achieve regulatory approval in the US and additional markets, and subsequently market these products at robust levels of reimbursement. Throughout the development lifecycle, we will aggressively explore opportunities to partner with biopharmaceutical companies on joint-development programs, out-license or in-license drug assets or platform technologies, and/or engage in marketing and distribution partnerships. Our primary strategy at this time is to advance our lead asset, TZT-102, through IND application into first-in-human clinical trials, for an oncology indication of current high unmet need. While we will explore licensing and partnerships for this lead program/indication(s), it is our current intention to maintain ownership and rights of this lead program through early clinical development. TEZCAT plans to enter into licensing arrangements or joint-development programs for the Company's non-lead assets. These partnerships will provide not only non-dilutive financial resources to advance our lead program, but they will also enable us to develop compelling data, institutional relationships, and strategic optionality to bolster the Company's long-term growth.

Management Team

TEZCAT's management team is led by the scientific co-founders, Drs. Craig Ramirez (CEO) and Andrew Hauser (COO). Combined, they have over 23 years of research experience in RAS cancers, 17 of which were studying RAS-driven macropinocytosis, the biological process underlying TEZCAT's technology. Their deep understanding of the science, ability to meet deadlines in a fast-paced environment, and foundation of advisors, CDMOs, and CROs will ensure adherence to timelines and efficient execution of TEZCAT's development plan. The team has shown the ability to recruit top advisors, such as Dr. Matthew Vander Heiden (Director of the Koch Institute at MIT), Dr. Anirban Maitra (Scientific Director of the Pancreatic Cancer Research Center and Leader of the Pancreatic Cancer Moon Shot at MD Anderson Cancer Center), and Dr. Ralph Garippa (leading authority on therapeutic platform and novel technologies at Memorial Sloan Kettering and Research Leader at Roche Discovery Technologies for 28 years). The team is also supported by leading research scientists who are collaborating on projects, such as Dr. Dafna Bar-Sagi (leader in field of RAS cancers and Chief Scientific Officer/Vice Dean of Research at NYU Langone Health), Dr. Gareth Morgan (Director of Multiple Myeloma Research at NYU Perlmutter Cancer Center), and Dr. Shohei Koide (Director of Cancer Biologics at NYU Perlmutter Cancer Center). Their network access to top scientific advisors, clinicians, VCs, and patient advocacy groups will increase TEZCAT's chance of successful commercialization of TZT-102.

Overview of Scientific Approach