Genesist LLC.
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Industry: Therapeutic

Management:
CEO & Founder: Ashkan Novin, PhD in Biomedical Eng. UConn
CSO: Kshitiz, PhD in Biomedical Eng. Johns Hopkins
CTO: Yasir Suhail, PhD in Biomedical Eng. Johns Hopkins

Board of Scientists:
Dr.Wagner (Professor of Evolutionary Biology, Yale)
Dr.Stevenson (Breast cancer surgeon, UCHC)

Board of Business Advisors:
Dr.Analui (Professor of Entrepreneurship, UConn)
Dr.Daneshmandi (Assistant Professor of Entrepreneurship, UConn)

Number of Employees: 3

Finance:
Accounting/Tax: Wiggin and Dana LLP

Funding to Date:
NSF I-Corp.: $3,000
CCEI: $15,000
Startup UConn Wolff Award: $5,000

Financing Sought: $4.5M
For: Pilot Studies
R&D
IP
Operating Costs
Overhead

IP: Wilson Sonsini

Business Description / Company Background:
Genesist is a biotech startup specializing in CRISPR-based therapeutics for preventing cancer metastasis and recurrence. Our innovative approach combines evolutionary biology and CRISPR technology to empower surrounding tissue and make it more resistant to cancer and prevent metastasis. The idea started around 8 years ago in a research lab that studies cancer biology.

Market Opportunity / Unmet Need:
Cancer metastasis and recurrence remain significant challenges in cancer treatment, leading to high mortality rates and healthcare costs. Breast cancer is the second leading cause of cancer death with high recurrence rate (can be higher than 30%)[1]. With an obtainable market of $13.3 billion, Genesist's approach to preventing cancer metastasis and recurrence presents a unique market opportunity. Our CRISPR-based therapy has the potential to address a significant unmet need in cancer treatment and has broad applications across various cancer types.

Products / Services – Launched & Pipeline:
By leveraging our expertise in evolutionary biology and CRISPR technology, we can empower the healthy cells around the tumor to stop cancer from metastasizing and invading. With an intratumoral injection, the RNA compound will be loaded at the tumor to target healthy cells. Our in vivo results demonstrate that normal cells around a tumor can become more resistant to cancer invasion.
Skin cancer is the second program in our pipeline that we aim to develop since it has a high recurrence rate, and we have access to the tissue. Our first round of animal studies is showing a consistent result as well.

Commercial / Technical Milestones:
Our team has successfully developed and tested a CRISPR-based technology that can selectively modify stromal cells to make them more resistant to cancer. We have started our in-vitro studies in 2018 and our partnership with UCHC and Yale University in 2020 to receive breast cancer patients' samples. The animal protocol was approved in 2021 and we have demonstrated the efficacy of this technology in preventing the spread of cancer to healthy cells in pre-clinical models (mice). Our next milestone is to finalize animal studies and file our patent. We are planning to submit our SBIR/STTR grants in the next cycle. Then we will submit all the IND documents before starting the first phase of clinical trial by the end of next year.

Competition / Competitive Advantages / Customer Benefits:
While there are other adjuvant cancer therapies on the market, Genesist's CRISPR-based therapeutic presents a unique value proposition. In our personalized approach, we focus on healthy tissue surrounding a tumor to empower them based on the genetic database and tailored treatment plans for the patient. We believe our therapy can complement existing cancer treatments synergistically. This technology has broad applications across various cancer types, providing a significant market opportunity.

[1] American Cancer Society, National Breast Cancer Coalition

CRISPR Therapeutic, Caribou Biosciences, Intima Bioscience and Editas medicine are similar companies working in the field.

Financial Projection (Unaudited):

We aim to capture a significant share of this market by focusing on early-stage breast cancer treatment. We plan to raise $4.5 million in pre-seed funding to support our pre-clinical development, SG&A and operating mechanisms. We aim to reach the IND submission milestone within 1.5 years and first phase of clinical trial in a 3-year time period.