

MelEvi: Precision Cancer Therapeutics

Suppressing Genes to Cure Cancer

The Team:

Anita Rajamani, Biomedical Engineering PhD Candidate, 4th year
Jenna Harvestine, Biomedical Engineering PhD Candidate, 4th year
Jennifer Price, Biomedical Engineering PhD Candidate, 4th year
Sophia Armstrong, JD and MBA Candidate, 2nd year

MelEvi, which made its debut in the Little Bang Competition, was an idea that developed over the course of a few months. I and Keller Pathway Fellow Anita Rajamani have had long-term interest in the entrepreneurial space, and could not resist the opportunity to dive in immediately. BD Fellow Jenna Harvestine, interested in exploring the business and leadership applications to compliment her PhD, joined our team shortly after to help us bridge the gap in knowledge between business and biotech. Later we actively sought out a management candidate to complement our skill sets, and connected with Sophia Armstrong at a Big Bang! Workshop Mixer. We are the driving force behind MelEvi and were excited to make our debut at the Little Bang! Competition.

MelEvi targets the genetic driver of acute myeloid leukemia to circumvent the harsh side effects of traditional treatments.

The Goal:

85% of acute myeloid leukemia (AML) patients are not suited for chemotherapy and require alternative therapeutic options. Our company, MelEvi, focuses on preclinical development of a suite of precision therapeutics using a portfolio of pre-identified genes. Our first product is designed for the 30% of AML patients with a genetic driver causing a particularly aggressive form of leukemia. Our solution will extend the life and potentially cure AML patients by suppressing the genes which cause uncontrolled cell growth.

Compared to current approaches, the physical burden of our technique on the patient is low and we can specifically target cancer cells. Our hope is to develop a drug that has been validated using preclinical animal models and can be licensed to a pharmaceutical company for clinical testing.

Next steps:

Interviews

At this stage we would love to hear from clinicians, pharmaceutical and biotech companies, and academic researchers in drug delivery systems, oncology, pharmacology, or related areas. Additionally, anyone with experience working through FDA regulations or who has seen a drug from bench-to-bedside would be great to talk to. Please, do not hesitate to contact us (jlprice@ucdavis.edu).

Otherwise, we have actively been reaching out to professionals found through our direct and extended network. Networking events with the Big Bang! have provided one means of seeking further connections. We have also identified relevant researchers and clinicians within the UC System that we are seeking input from.

Mentors

Ariz Precision Medicine has been a huge source of support and mentorship for our team. We first connected with CEO Lonnie Bookbinder at the 2017 Biomedical + Engineering Entrepreneurship Academy at UC Davis, who found alignment in our interests. Since then Ariz has provided us with a wealth of connections and feedback that has expedited our progress immensely in the business, legal, and research aspects of our pursuits.

Developing our Skills

Though our team has become better balanced, we still have a heavy background in science and engineering. Hence we are strengthening our ability to communicate with broad audiences and our understanding of the basic business, management, and legal concepts needed to create a successful startup. As a team, a major challenge we will address is our ability to secure funding.

We are grateful for events hosted through The Big Bang! Competition and UC Davis Mike and Renee Child Institute for Innovation and Entrepreneurship, which have provided many opportunities to develop our understanding of these areas.

Additional Support

We are currently evaluating our ideas at the bench level to strengthen our patent application. Hence, we are interested in obtaining cell lines in AML.

Our Little Bang! debut

MeEvi made its debut at the Little Bang! Poster Competition. That's us front and center – our first investment of hopefully many more.



This first check will likely be put towards patents and legal fees, to further protect our solution. The importance of intellectual property has been reiterated over the workshops provided by the UC Davis Institute for Innovation and Entrepreneurship, and we hope to file a patent within the next couple of months.

Another point reiterated is that having a qualified and motivated team is just as important, if not more, in our ultimate success. We will continue to persevere through challenges, and use feedback from this competition and future ones to help us develop the ideal solution.