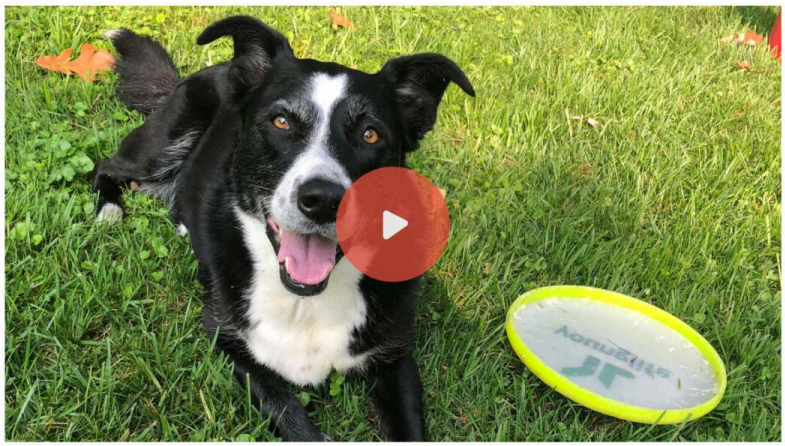
LEAH LABS

Curing Cancer in Dogs



leahlabs.com Rochester MN

Technology | Bio Tech | Y Combinator | R and D | Healthcare

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Highlights

1. We're developing CAR-T cell therapy for dogs. It's already curing human patients with lymphoma.
2. We've built our MVP and are testing its safety right now. Preliminary data looks great!
3. Booming companion animal market. Over 90M dogs in the USA, $100B+ yearly spend in the space.
4. We're a team of world leading experts in gene editing, immunotherapy, and veterinary oncology.
5. We've received $394,000 in grant funding, including an NSF Phase I SBIR
6. We use CRISPR to genetically engineer T cells, making them cancer fighting machines.
7. We're backed by Y Combinator, W19. Other alumni include Ginkgo Bioworks, Atomwise, Science Exchange

Our Team

Wesley Wierson Chief Executive Officer

Genome hacker. Layla the mutt's dad. Gene editor since 2011. PhD in Molecular, Cellular, and Developmental Biology.

Dogs are part of the family and we don't feel that the current care they get is up to par; they deserve the same technological advances in healthcare that their humans get. Using our expertise in gene editing, we can bring innovation to the veterinary market that has never before been possible.

Alex Abel VP of Cell Biology

PhD in immunology. Rosie the Burnese's dad. Author of Natural Killer cell review read by nearly 100k scientists to date. Former technical sales at Miltenyi, world leader in cell biology applications.

Stephen Carl Ekker Scientific Founder - Translational Medicine

Entrepreneur with 1 exit. Gene editor for 30 years. Dean, Graduate School of Biomedical Sciences. PhD, Molecular Biology & Genetics.

Jonathan Mochel Scientific Founder - Veterinary Pharmacology

Veterinary pharmacologist. Founded Animal Health Modeling & Simulation Society. PhD, Pharmacology.

Saad Kenderian Scientific Founder - Immunotherapy

Physician scientist, hematologist, expert/inventor in CAR-T cell therapy. Developed first CAR-T IND submission at his institution. Assistant Professor, Medicine, Oncology

We're using human's best science for human's best friend

LEAH LABORATORIES

Living therapies for companion animal health

LEAH Labs is the first company utilizing gene editing to engineer living therapies for dogs. Using our proprietary technology, we give living cells the genetic information to seek out and destroy cancer.

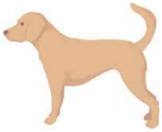
We're using human's best science, for human's best friend.

Traction since our last Wefunder…

- ✓ Received four non-dilutive grants - $394,000 total
  - ✓ LaunchMN grant - $35,000
  - ✓ Regenerative Medicine Minnesota BioBusiness Grant - $100,000
  - ✓ NSF Phase I SBIR - $225,000
  - ✓ Iowa State Immunotherapies Grant - $34,000
- ✓ Hired our VP of Cell Biology – Dr. Alex Abel
  - ✓ Built standard operating procedures and begun optimizing our proprietary gene editing platform
- ✓ Proof of concept CAR-T cell therapy manufacturing runs
- ✓ Currently studying our MVP in a safety study, the critical step needed to trial our product in sick dogs…the data is looking great!

You've seen us before. We raised $468,000 on Wefunder in late 2019/early 2020. Since then, we've accomplished a ton.

The companion animal market is booming

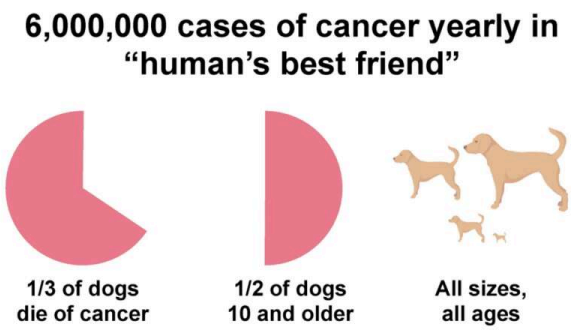


90 million+ dogs in USA

$90 billion spent on pets

$36 billion spent on veterinary care

We're building this company because the booming companion animal market needs us. There's over 90M pet dogs in the USA right now, and over $90 billion is spent in the pet industry annually. Of that, $36B is spent on veterinary care. Our dogs literally are part of the family, and we spend the money to prove it. COVID19 has only boosted the pet market, and these numbers are sure to grow.

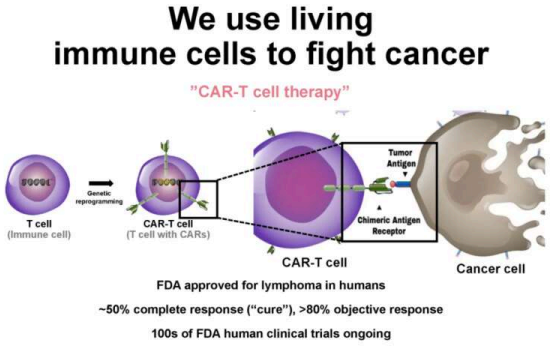


Unfortunately, in a few years, another already huge number will grow. Cancer in dogs.

Right now, 6,000,000 dogs die of cancer every year. All sizes of dogs and all ages of dogs get cancer.

Current treatments are outdated, expensive, and non-curative

When our dogs get sick with cancer, their options are limited to outdated, expensive, and non-curative therapies. In fact, only a few drugs have ever been developed specifically for dogs. Most current options are generic chemotherapies first developed for humans, or expensive and invasive surgeries and radiation. We believe that our furry family members deserve better.



We use living immune cells to fight cancer. It's called "CAR-T cell therapy" and it's an FDA approved treatment already CURING human patients in the clinic today.

Here's how it works:

- T cells are isolated and reprogrammed using gene editing with DNA encoding a chimeric antigen receptor (CAR)
- CARs are engineered to be specific to certain shapes, called antigens, on cancer cells
- CAR-T cells are infused into sick patients
- CAR-T cells seek out cancer, recognize it like a lock and key, and destroy it

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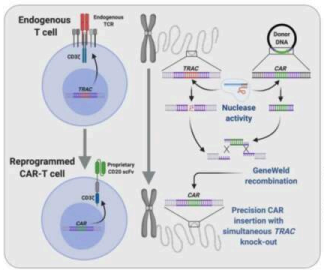
Gene editing enables us to bring this innovation to our pets



GeneWeld developed by CEO during PhD

Licensed to LEAH Labs from Mayo Clinic/Iowa State

In humans, CAR-T cell therapy is $400,000+. While there's probably a few dog owners who would pay that for their furry family members, we want to bring this life saving treatment to our pets for something broadly affordable.

Because of gene editing technology that our CEO developed during graduate school, we are able to bring CAR-T cell therapy to dogs.

B cell lymphoma kills 250,000+ dogs every year

Standard of care **CHOP chemotherapy**	**LEAH Labs** **CAR-T cell therapy**
• 12-16 vet trips over 5 months • $7k-$12k • Buys 10-12 months of life • Non-curative	✓ 1 trip to the vet ✓ $5-7k ✓ 80% response ✓ ~50% complete response ✓ "Curative"

While there are many cancers in dogs that we want to treat, and eventually will, we are first targeting B cell lymphoma in dogs. This disease is the clinical analog of non-Hodgkin's lymphoma in humans, a cancer that is now curable with CAR-T cell therapy.

B cell lymphoma kills at least 250,000 dogs every single year in the USA alone. Right now, when a dog gets B cell lymphoma, they're treated with CHOP chemotherapy, a therapeutic combination of chemotherapies originally developed to treat humans in the 1970s. To treat a dog with this therapy, a pet owner has to go to the vet 12-16 times over 5 months; it's a huge burden for owners, and can be quite toxic to pets. In all, it costs $7,000-$12,000 for this therapy.

CAR-T cell therapy would be a 1 time trip to the vet, and we're targeting a price point to undercut the standard of care, ensuring more owners can afford life-saving treatments for their beloved family members.

$500,000,000 spend

50,000 dogs treated with CHOP
X
$10,000 for CHOP

Even with all the negatives, there's still $500,000,000 spent every year on CHOP chemotherapy because right now, it's the best that we can offer our pets.

Veterinary oncologists prescribe our treatment

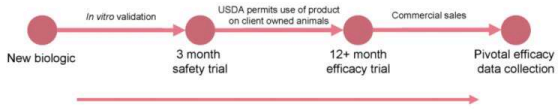
50k dogs treated with ~~CHOP~~ CAR-T X $2.5k/treatment → **$125MM available market**

Market penetration

	Year 1	Year 3	Year 5
Number of dogs	500	5,000	20,000
Gross Revenue	$1.25MM	$12.5MM	$50MM

Veterinary oncologists are our customers, and we see a path to being a "blockbuster" in animal health with a potentially curative treatment option that disrupts the current market.

We're regulated by the USDA 'Center for Veterinary Biologics'



USDA-CVB 2-3 years, $5 million to market
vs.
US-FDA 5-10+ years, >$1 billion to market

This slide contains forward looking projections which cannot be guaranteed

Interestingly, our product is regulated by the USDA-CVB, not the FDA. This saves us literally hundreds of millions of dollars in drug development and regulatory costs.

The USDA path of approval for us is quite straightforward. After safety studies, which we're currently running, and identifying a lead asset with the funding we raise on Wefunder, we will be allowed to go right into efficacy trials.

In most studies for new drugs, you have to do double-blind treatments where one group gets a placebo. Thankfully, we don't have to give anyone's pet dog a placebo treatment. Rather, our therapy will be gauged against a historical non-treated control for B cell lymphoma, which we know from decades of evidence is just 30 days of life post-diagnosis. After we beat that, we can be awarded a conditional license and can begin to sell our therapy to pet owners who desperately need it for their pets.

Our pipeline for lead identification and USDA licensure

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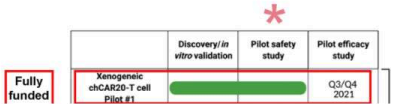
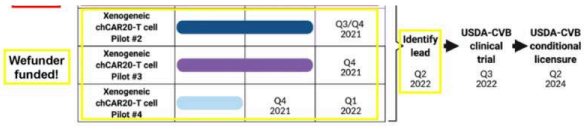


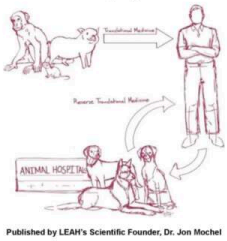


Right now, helped by our investors the first time we raised on Wefunder, we're in the middle of a Pilot Safety Study where we're ensuring our therapy is safe for pet dogs. After that, in collaboration with Iowa State University and **this grant**, we're fully funded to trial our first product in dog patients later this year.

But here's where YOU come in. We're saving part of our Seed Round to give YOU a chance to help fund the expanded pilot trials we have planned. The point of these trials is to alter the dose of therapy, test different pre- and post-treatment options, and even trial entirely novel cell therapy strategies to help us identify a lead asset to enter USDA-CVB trials with next year.

Wefunder helped us when we needed it the most, and we want to give you another chance to invest in our vision.

We're building a discovery engine for novel cell therapy development



Published by LEAH's Scientific Founder, Dr. Jon Mochel

"One Health Model"

What's most exciting about what we're building is that everything is designed to help humans, too.

The traditional way of drug development is through what's called "translational medicine." In this approach, primates, pigs, or mice are given disease (it's not natural!) and new therapies are tested on them. When something works, and it often does, those trials then get converted into FDA clinical trials where they are tested in humans with the natural disease.

Unfortunately, this fails. A LOT. >90% of drugs fail in the current way they're developed. It costs BILLIONS of dollars and untold numbers of lives.

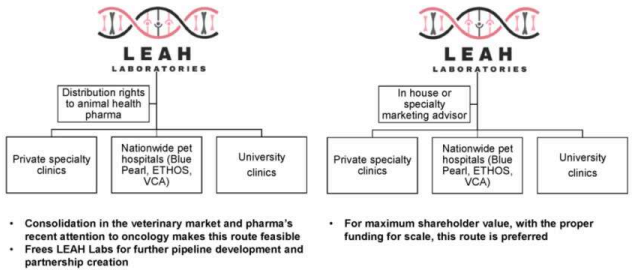
We think there's a better way.

We're building LEAH Labs with the "One Health Model" in mind and what's called "Reverse Translational Medicine." This is the idea that real world evidence of therapies in spontaneous disease informs how they're applied to other animals. It can help humans, and dogs. The whole hypothesis of our company is that because CAR-T cells work so incredibly well in humans, they will work well in dogs, too.

But what's even more exciting is that when we trial something in dogs, with spontaneous disease that perfectly replicates the same type of disease in humans, it has a better chance to work when translated to people.

This model will allow us to partner with pharmaceutical companies and academic institutions who have novel cell therapies they want to test. We can offer these therapies to dogs in what's called "compassionate use" cases, where dogs with incurable diseases can be given a chance at a healthy life, while also gleaning valuable clinical insight of a new therapy's activity to be used in humans some day.

Go-to-market strategy



- **Consolidation in the veterinary market and pharma's recent attention to oncology makes this route feasible**
- **Frees LEAH Labs for further pipeline development and partnership creation**

- **For maximum shareholder value, with the proper funding for scale, this route is preferred**

Our go to-market strategy could follow two paths.

In one path, we license the distribution rights of our product to animal health pharma companies like Elanco. Recent consolidation in the pet space makes this an attractive approach. In fact, one of the recent lymphoma chemotherapies to come to market Tanovea, is being distributed this way right now. We've already begun conversations with the top 5 animal health pharmas about our product.

The other path requires us to do the marketing and distribution of our product. We think this is a viable option as well, and would retain maximum shareholder value.

We're founded by a truly world class group of scientists. Our full time employees are our CEO, Dr. Wes Wierson, and our VP of Cell Biology, Dr. Alex Abel. Dr. Wierson and Dr. Abel are a great 1-2 punch for us; Dr. Wierson does the molecular biology and gene editing experimental design, and Dr. Abel runs the cell biology lab, testing our hypotheses and building our cell therapy platform.

We're surrounded by an A+ team of scientist advisors.

Dr. Saad Kenderian is an inventor on the CAR-T cell therapy patent that currently treats human patients today, and he develops CAR-T cell therapy strategies for humans during his day job. In fact, his research recently got approved for the first FDA sanctioned CAR-T cell therapy trial sponsored by his institution.

Dr. Jon Mochel and Dr. Chad Johannes are our veterinary pharmacologist and veterinary oncologist advisors. They have decades of experience in both academia and industry veterinary health positions.

Our of Board of Directors consists of Dr. Stephen Ekker, a professor of biochemistry and entrepreneur, and Dr. Frank Prendergast, a renowned physician and former director at Ely Lily Cancer Company.

Thanks for reading, and thanks for considering an investment in LEAH Labs.

We'll leave you with this:

There's never been a better time to bring this technology to our pets. And, through a streamlined regulatory process, we have the expertise to get it done.

Dogs need our therapy, but we also know that what we learn in dogs can help humans too.

At LEAH Labs, we're excited to be using human's best science for human's best friend.

friend.

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Lead Investor info for LEAH Labs – Adam Hallett

How much are you investing in LEAH labs on these terms? $50,000

Terms:
Future Equity
$12M $10M valuation cap
First #200k will invest in a SAFE with a $10M valuation cap

How much have you already invested in LEAH Labs on better terms? $6,000

Title & Company - Senior Software Engineer at Freeosk
LinkedIn - https://www.linkedin.com/in/adamhallett/

Why are you investing in LEAH Labs?
As an early investor I'm investing in LEAH Labs because I believe in the power of what they are doing to cure cancer in dogs with CAR-T therapy. This technology has been successful in humans but has been overlooked in dogs. Wes and his team are the first company that are bringing this therapy to the veterinary market. Because they are taking the expedited USDA approach there could be a therapy on the market in three years. This is an exciting time for all dog owners and I'm excited to be part of a potentially curative therapy.