

# LEAP FORWARD

Annual Review 2023





## LEAP FORWARD



### **Key Milestones** 2023

New investments announced in 2023

NextPoint Therapeutics Paratus Sciences ChrysaLabs Boundless Bio 65LAB

New investments incl. follow-on investments 2023

**# of portfolio companies** 2015 – 2023

15+

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**Total amount invested in Leaps portfolio** 2015 – 2023

## 1.9+ billion USD

#### Key portfolio

company news

#### Health

**BlueRock Therapeutics,** which is developing a stem cell derived investigational therapy for treating Parkinson's disease, is first to show positive results in a Phase I clinical study and is in the process preparing for Phase II trials.

Six of our portfolio companies entered and/or completed their Phase I clinical trials in 2023. These include: **ReCode Therapeutics, Deka Biosciences, Indapta Therapeutics, BlueRock Therapeutics, Bloom Science, and Century Therapeutics.** 

#### Agriculture

**Oerth Bio** and **Pairwise** announced independent collaborations with Bayer Crop Science with the aim of combining expertise to further advance innovations in crop health and create a more sustainable tomorrow.

**Fork & Good** opened their first cultivated meat factory to make sustainable pork meat more affordable and scalable. The facility can produce six to ten times more pork per sq ft than using traditional farming methods, with less water and minimal impact on the environment.

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**"Together with our portfolio** companies, we share a tireless pursuit of a healthier, more sustainable future. 2023 was a year with great progress in reaching our mission of Health for All, Hunger for None. Highlights like the announcement of multiple Phase I clinical trials, promising collaborations between Leaps portfolio companies and the broader Bayer organization bring us one step closer to reaching our 10 Leaps."

Juergen Eckhardt Head of Leaps by Bayer

## Portfolio Overview New Additions

We are truly proud of our collaborations with talented pioneers, visionaries, and leaders within our healthcare and agriculture portfolio. Meet some of the newest members of the Leaps family and learn about their vision, work, and ambitions.

**NextPoint** is opening up new, innovative avenues for precision immune-oncology. It leverages key biomarkers to develop therapies for patients who cannot benefit from current immune checkpoint inhibitors.

## **%** nextpoint

![](_page_9_Picture_5.jpeg)

"Our innovative approach integrates foundational science with a defined clinical biomarker to deliver a new class of monotherapies against certain hard-to-treat cancers. To develop life-changing therapies it takes a village of talented people working together. Our team of proven drug developers is working closely with our renowned scientific founders to expand the potential of immunotherapy and shift paradigms in oncology."

Detlev Biniszkiewicz, CEO of NextPoint Therapeutics

![](_page_10_Picture_0.jpeg)

"With over 60 million years of evolution, certain bats developed remarkable physiological traits like the ability to tolerate viral infections, resist cancer, and live extraordinarily long lives. By studying these fascinating mammals and utilizing genomics and informatics, we are in the midst of developing a drug discovery platform to create new therapeutic targets for high unmet medical needs, with the goal of having a clinical proof of concept with our first program in 3 years."

Amir Nashat, CEO of Paratus Sciences

## paratus SCIENCES

Paratus Sciences is leveraging bat biology to improve human health outcomes. Bats have evolved to control inflammation, tolerate viral infection, and resist cancer. Unlocking the secrets of the bat genome may inspire new therapeutic avenues.

## **Portfolio Overview** New Additions

**ChrysaLabs** has developed spectroscopy-based soil probes that empower farmers to rapidly monitor and respond to soil conditions. Better soil intelligence leads to better decisions, increasing agricultural outputs for a healthier, greener planet.

![](_page_11_Picture_3.jpeg)

![](_page_11_Picture_4.jpeg)

"Our vision is simple – better soil insights for better decisions. By leveraging proprietary technology including cloud computing, AI, and sensing, our technology provides highly accurate insights into soil nutrients and soil health within seconds. This is a tremendous advancement over the status quo of mailing soil samples to a lab, which is more costly and delays the grower's ability to manage their soil. I firmly believe that through technologies as such, we will be able to transform the agricultural industry and increase transparency on the carbon verification market."

Samuel Fournier, CEO of ChrysaLabs

![](_page_12_Picture_0.jpeg)

"Unbound by convention and bound to save lives, we envision a world in which patients with ecDNA-driven cancers have access to powerful anti-cancer therapies that improve and extend their lives. ecDNA have been observed in 14% of early-stage cancers and up to 30% of metastatic cancers and are a root cause of oncogene amplifications, which drive both oncogenesis as well as resistance to current therapeutic approaches. By leveraging a unique understanding of the vulnerabilities of ecDNA biology, we aim to deliver next-generation precision oncology to the up to 400,000 patients newly diagnosed in the US each year with previously intractable oncogene amplified cancers."

Zachary Hornby, CEO of Boundless Bio

![](_page_12_Picture_3.jpeg)

**Boundless Bio's** approach to precision oncology targets extra-chromosomal DNA, which can drive tumor development and therapy resistance. Their technology can help provide therapies for patients with oncogene amplified cancers whose treatment options are currently limited and largely ineffective.

## Portfolio Overview New Additions

**65LAB** aims to advance drug discovery and the creation of new start-ups in Singapore by catalyzing academicindustry collaborations. Its mission is to turn innovations into life-saving medicines by bringing together leading Singaporean research institutions, established life science investors, and experts in drug discovery and development.

![](_page_13_Picture_3.jpeg)

![](_page_13_Picture_4.jpeg)

"65LAB is a unique entity that brings together public and private partners in a shared vision to commercialize the great science emerging from Singapore. We're thrilled to channel our collective development capabilities and expertise to translate the exciting innovations and ideas from its world class institutions into new medicines that benefit patients globally."

Wen Qi Ho, 65LAB Board Member

![](_page_14_Picture_0.jpeg)

Leaps by Bayer aims to conquer ten huge challenges facing humanity. Some call them impossible. We call them Leaps.

By leveraging transformative technologies, we aim to tackle ten Leaps that could have the greatest impact on humanity. Our Leaps are the articulation of our goals, based on where our expertise as a company can make the biggest difference.

#### 01/ Cure genetic diseases

#### HEALTH

Stopping genetic diseases before they develop or progress could prevent chronic suffering and give many of us the chance to live a full and healthy life.

#### 02 / **Provide** sustainable organ and tissue replacement

#### HEALTH

Cell and gene therapies hold tremendous promise to restore health, reverse the course of degenerative diseases, and prevent organ failure.

#### 03 / Reduce environmental impact of agriculture

#### AGRICULTURE

From carbon sequestration to reducing land and water usage, innovation has the power to transform modern agriculture.

#### 04 / Prevent and cure cancer

#### HEALTH

Biotechnology that leverages the immune system and other emerging platforms could make huge strides in the fight against cancer.

#### 05 / Protect brain and mind

#### HEALTH

Neurodevelopmental and neurodegenerative diseases along with mental health disorders represent a massive and growing unmet need with no simple solutions available.

#### 06 / **Reverse**

autoimmune diseases and chronic inflammation

#### HEALTH

Systematically addressing autoimmune diseases and chronic inflammation could enable lives free of pain, disease management, and life-threatening conditions.

#### 07/ Provide next-generation healthy crops

#### AGRICULTURE

The Green Revolution lifted millions out of starvation, yet new approaches are needed to provide comprehensive nutrition at a global scale.

#### 08 / Develop sustainable protein supply

#### AGRICULTURE

Nourishing a global population will require new approaches to sustain both a healthy planet and healthy people.

#### 09 / Prevent crop and food loss

AGRICULTURE

A pandemic, climate volatility, and an increasingly long and complex supply chain expose the fragility of our global food system and the need for resilience.

#### 10 / Transform health with data

#### HEALTH

From wearable devices to artificial intelligence and protein modeling – digital technology is sparking a revolution in medicine. 

## **Portfolio Company** Achievements

#### **Scientific Milestones**

FAA permission

![](_page_17_Picture_4.jpeg)

**Guardian Ag** received approval from the US Federal Aviation Administration to operate its innovative Electric Vertical Take-Off and Landing (eVTOL) systems nationwide. They are the first EVTOL that received permission by the FAA in this category, putting them in prime position to lead this market. Phase I clinical trial results

![](_page_17_Picture_7.jpeg)

**BlueRock Therapeutics** announced positive results from its Phase I clinical trial of its investigational neuronal stem cell therapy, a potential first-in-class therapy for Parkinson's disease. The company plans to begin enrolling patients in a Phase II study in early 2024.

Receipt of FDA's "Safe to Proceed"

![](_page_17_Picture_10.jpeg)

Both **Affini-T** programs (AFNT-111 and AFNT-211) were successfully filed for an IND and received FDA's "Safe to Proceed" as planned and on time in the 2<sup>nd</sup> half of 2023. Affini-T's innovative approach aims to unlock the power of T cells against oncogenic driver mutations, creating a new avenue for cancer therapies.

Multi-condition regulatory approval

⊕ H U M A

**Huma Therapeutics** has become the only company in the world to receive EU MDR 2017/745 Class IIb certification for its digital health platform. This certification allows to monitor patients of all ages with any condition, to connect to a range of external devices, and host machine learning algorithms for risk prediction, disease diagnosis, and prognosis.

## Phase I clinical trial approval

![](_page_17_Picture_16.jpeg)

**Indapta Therapeutics** has received approval to begin Phase I trials of its allogeneic natural killer cell therapy to treat multiple myeloma and lymphoma patients. Its platform harnesses the power of natural killer cells to enhance the efficacy of monoclonal antibody therapies to fight cancer. Phase I clinical trial start

![](_page_17_Picture_19.jpeg)

**Century Therapeutics** began Phase I trials of its engineered cell therapy for relapsed or refractory CD19 positive B-cell lymphomas. Century's innovative allogeneic cell therapies utilize gene editing to enhance tumor targeting and prevent host rejection.

#### First CRISPRedited salad

![](_page_18_Picture_1.jpeg)

**Pairwise** has rolled out a new type of mustard greens engineered to be less bitter than the original plant while keeping the same beneficial nutritional value. The vegetable is the first CRISPR-edited food to hit the US market. **ReCode Therapeutics** has announced first patients dosed in a Phase I healthy volunteer clinical trial to evaluate safety and tolerability of a single ascending dose of RCT100, an inhaled mRNA-based genetic medicine.

Pilot facility for cultivated meat

![](_page_18_Picture_6.jpeg)

### First epigenetically bred vegetable

Phase I clinical trial

with first participants

Sound 😽

ReCode

**Fork & Good** launched a pilot facility in Jersey City NJ, USA, to produce cultivated meat, with an initial focus on pork. Its innovative bioprocessing approach maximizes yield, helping lower the cost of cultivated meat and bring more sustainable protein to consumers worldwide. **Sound** announced the launch of its Summer Swell tomato, the first epigenetically bred vegetable to enter the market. Their epigenetic engineering approach helps develop crops that are both flavorful and durable.

## Phase I clinical trial start

![](_page_18_Picture_12.jpeg)

**Deka Therapeutics** began Phase I trials with its novel cytokine therapy to treat cancer and inflammatory diseases. Deka's unique technology involves coupling cytokines together to improve their precision, efficacy, safety, and manufacturability.

## **Portfolio Company** Achievements

#### **Partnering Milestones**

New platform for singlevector gene-editing

![](_page_19_Picture_4.jpeg)

**ReCode Therapeutics** announced a multi-year partnership with **Asklepios BioPharmaceutical** (AskBio), a wholly owned and independently operated subsidiary of Bayer, to develop a new platform for single-vector gene-editing. These gene-insertion platforms are crucial steps in the development of precision medicines. Research collaboration on oncology

![](_page_19_Picture_7.jpeg)

**Bayer** and US-based **Recursion Pharmaceuticals** have announced that they have updated the focus of their research collaboration to precision oncology. The collaboration will leverage Bayer's small molecule compound library and expertise in biology and medicinal chemistry as well as Recursion's purpose-built artificial intelligence-guided drug discovery platform.

#### 5-year collaboration on short-stature corn

![](_page_19_Picture_10.jpeg)

**Bayer** and **Pairwise** announced a new five-year collaboration to develop short-stature corn – a more climateresilient and sustainable alternative to traditional corn. This new collaboration builds on the successes of the companies' prior five-year partnership focused on developing more input-efficient corn, soy, wheat, cotton, and canola.

### Partnership for crop protection products

![](_page_19_Picture_13.jpeg)

**Bayer** and **Oerth Bio** announced a collaboration to develop the next generation of crop protection products. Oerth's unique protein degradation technology provides new avenues for enhancing climate change resilience for crops.

#### Recognitions

#### Nobel Prize for mRNA discoveries

![](_page_20_Picture_2.jpeg)

Drew Weissman, the co-founder of **Capstan Therapeutics,** received the Nobel Prize in Medicine together with Katalin Karikó for their pioneering work on mRNA vaccines. Capstan aims to develop in vivo RNA-based therapies that can engineer immune cells and target pathogenic cells.

World Economic Forum recognition

![](_page_20_Picture_5.jpeg)

#### **Fork & Good** was named as a 2023 Technology Pioneer by the World Economic Forum in recognition of its work in producing cost-effective cultivated meat. Companies are selected based on their innovation, impact, and leadership in addressing issues that face people and the planet.

eGenesis was named as one of 10 Breakthrough Technologies in 2023 by MIT. The company is committed to using its multiplex gene editing and genome engineering platform to transform solid organ and therapeutic cell transplantation for the treatment of serious diseases.

#### FoodTech 500 list

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![](_page_20_Picture_10.jpeg)

**BOUNDLESS** BIO

egenesis ENGINEERING HOPE

Portfolio companies **Pairwise, Sound Agriculture, and AgBiome** were selected as part of the FoodTech 500 list. This list showcases international start-up and scale-up companies at the intersection of food, technology, and sustainability that are creating a brighter future of food.

## therapeutics 2023 honoree

**Boundless Bio** is one of the 15 companies out of hundreds of nominations that made it to the renowned Fierce 15 list announced by Fierce Biotech. Boundless Bio's approach to precision oncology targets extrachromosomal DNA, which can drive tumor development and therapy resistance.

#### 10 Breakthrough Technologies by MIT

**Fierce Biotech's** 

Leaps by Bayer Annual Review 2023

## **Interview with Drew Weissmann** 2023 Nobel Prize Laureate

Juergen Eckhardt and Kira Peikoff, Leaps' Deputy Director of Communications, recently had the honor of interviewing 2023 Nobel Prize Laureate Drew Weissman, who together with Katalin Karikó discovered how to enable the human immune system to tolerate lab-made mRNA. Weissman and Karikó's groundbreaking research has spurred great excitement about not only a new way to make vaccines, but also therapeutics for a wide range of diseases. Weissman is also the scientific co-founder of Capstan Therapeutics, one of the companies in our Leaps portfolio. In this edited and condensed interview, he shares his insights about what's on the horizon for mRNA in medicine:

#### Juergen: When you and Katalin started to work together to help make mRNA survive the immune system, were vaccines the initial therapeutic benefit you had in mind?

Drew: When we first started working together back in 1997, as a clinician researcher, that's the first thing that I thought of. Vaccines for infectious diseases, for viruses, bacteria, parasites, for cancer, for autoimmune diseases, for food allergies, for environmental allergies, as well as therapeutic protein delivery. So, delivering proteins to the brain, to the lungs, to the spleen, to the heart, to the kidneys, to the immune system, to modulate function, as well as gene therapies.

#### Juergen: So the field was basically wide open.

Drew: It had enormous potential. And that's one of the reasons we never gave up on it.

#### Juergen: And now of course the world has seen how powerful the technology is with the COVID pandemic. Do you think in the future all vaccines will be mRNA based?

Drew: No, I certainly don't think everything. For all of the more difficult diseases, RNA is leading the development: HIV, Hepatitis C, TB, malaria. For common diseases, you know how difficult it is to replace a good existing technology with something new. So the MMR (measles, mumps, rubella) vaccine is dollars to produce, and it works great. I don't think that's ever going to be replaced with RNA or if it is, it's going to be a long time coming.

#### Juergen: Switching gears to cancer, we've seen autologous CAR T therapies, which work for liquid tumors. What do you think the future of CAR T therapies looks like and do you think we have better approaches with mRNA-based technologies?

Drew: There's two main difficulties. One is, how do we get solid tumors to be able to be attacked by CAR Ts? And then the second is, how do we give CAR T therapy faster, easier, and cheaper? The second is where we do a lot of our work with targeted T-cell delivery. We've shown in our cardiac fibrosis paper that we can cure a mouse with a single treatment. We've done macaque experiments where we've delivered CAR Ts and we get incredible efficacy at knocking out B cells in macaques using just RNA lipid nanoparticles targeted to T cells.

We know it works in Macaques, which means that it's going to work in humans.

And Capstan is moving towards starting clinical trials in a year plus, looking at this likely for autoimmune diseases.

I think the in vivo CAR Ts are going to change the therapy because they're going to allow simple treatments around the world at much lower prices. Getting them to work on solid tumors is another issue. **Drew Weissmann** Photo: University of Pennsylvania School of Medicine

## Juergen: What hope do you have that we could bring to solid tumor patients with this new technology?

Drew: I suspect it's going to be a multi-step process because there's lots of issues with solid tumors. The environments are immunosuppressive. So even if a CD8 or a CAR T gets into a solid tumor, it gets turned off and energized and can't kill. Then we have to address the antigen problem to stimulate the CAR Ts. And we have to figure out how to keep the CAR Ts functional, because when they go into that environment and get turned off, you have to know how to turn them on.

#### Juergen: Understood. So, what else are you working on these days in the lab?

Drew: We've got a couple of HIV vaccines in clinical trials, some universal influenza vaccines in clinical trials, a pan-coronavirus vaccine that'll go into clinical trials soon. And we're continuing the basic science for their development. The most interesting things we're working on are targeted to the liver. As you know, the issue with lipid nanoparticles (LNPs) is they go to the liver. And Intellia did a gene therapy for liver and it worked great. But if you wanted to target something else, you can't do that. So we figured out how to target LNPs to other cells and tissues.

We had a paper in Science a few weeks ago where we targeted repopulating bone marrow stem cells with incredibly high efficiency, approaching 100% for gene editing. To me, I think that's the future of gene therapy.

And we're working with Gates and with other researchers to develop a sickle cell treatment.

I think that the future is going to be: We can go to Africa and the entire world, give people a single injection of RNA LNPs that are targeted to bone marrow stem cells, and correct the gene mutation for sickle cell and cure it with just a simple injection. I don't know what that will cost, but it won't be millions of dollars a patient. You can then expand that to the thousands of other bone marrow genetic diseases. We can also target brain, lung, heart, kidneys, spleen, adrenals so we can deliver either therapeutic proteins or gene editing technology to address a variety of diseases.

Capstan has licensed the targeting technology and a few other companies have also licensed it. But my lab is developing the next generations of all of this.

![](_page_22_Picture_9.jpeg)

Juergen: That sounds exciting. Targeted delivery is the next big thing we need to figure out so we can have a bigger impact on patients.

#### Kira: I'm curious about when you think these advances using mRNA to treat cancer and autoimmune diseases will reach patients?

Drew: There are already cancer vaccines in clinical trials that have shown efficacy for melanoma and pancreatic cancer; they're in Phase II now. I'm sure they'll move to Phase III very quickly. And they're continuing to study many other types of cancer with personalized vaccines. The in vivo CAR clinical trials will start in a year or two and it'll probably be a few more years before it's an FDA approved treatment.

Juergen: Yeah, that takes time. Drug development is a lengthy process.

#### Kira: Lastly, to end on a lighter note, if you could snap your fingers and solve one scientific question today, what would that be?

Drew: Oh, that's a hard one. If you asked my wife, it would be aging and wrinkles [laughs]. But I wouldn't put that at the top of my list. Cancer is a huge problem. Genetic diseases, infectious diseases, they're all enormous problems that torture the human race. So, I would put them all in.

#### Juergen: Lots to do for the next few generations of scientists.

Drew: Definitely.

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CLICK OR SCAN THE QR CODE TO WATCH THE CHAPTER III CAMPAIGN FILM 'LEAP FORWARD'

![](_page_23_Picture_2.jpeg)

### BREAKING THROUGH IMPOSSIBLE. TOGETHER.

![](_page_23_Picture_4.jpeg)

![](_page_24_Picture_0.jpeg)

## **100 Ways** to Fix the Future

How can we work together to positively impact the world?

One answer comes from Norrsken Foundation, which has built an impact ecosystem to promote collaboration between entrepreneurs who are working to make the world a better place. Its Norrsken Houses in Stockholm, Kigali, and Barcelona create a purpose-filled community connecting founders with the capital, knowledge, and network they need to succeed.

Every year, Norrsken Foundation names its Impact/100, a list of the world's most promising impact start-ups. This list highlights innovative entrepreneurial projects that drive positive change. We are honored that seven Leaps portfolio companies were included in the 2023 Impact/100.

#### <norrsken>

Announcement of the 100 companies on this year's Impact/100 at the NASDAQ NYT Times Square board

![](_page_25_Picture_7.jpeg)

#### About Impact/100

The Impact/100 shines a spotlight on the world's most promising impact start-ups – companies with the potential to scale rapidly and help solve the world's greatest challenges.

Now in its second year, the ambition is to become the "Nobel Prize for impact", in order to provide impact entrepreneurs with the same level of recognition as Nobel Prize winners.

Impact/100 companies have been nominated by a number of distinguished partner organizations – including Atomico, Fifty Years, DCVC, and Khosla Ventures – and selected by a world-class jury.

"The business world desperately needs better role models. I want to see a world where the next generation of founders are inspired by entrepreneurs who are positively impacting the world and not just focused on growth and profitability," says Niklas Adalberth, Founder at Norrsken Foundation.

![](_page_26_Picture_5.jpeg)

Niklas Adalberth, Founder at Norrsken Foundation

## Our Leaps portfolio companies included in the 2023 Impact/100

#### Ada Health

Ada has developed a digital-health platform that empowers patients and clinicians to monitor and assess symptoms and manage care. Its medical AI shortens the time to diagnosis and treatment for 13 million users around the world.

#### Cellino

Cellino aims to create scalable, highthroughput autologous cell therapies that are accessible to all patients in need. Its innovative platform uses imaging, laser editing, and machine learning to automate cell reprogramming, making it possible to process thousands of patient samples in parallel.

#### **Oerth Bio**

Oerth Bio is creating more sustainable harvests by developing innovative protein degraders that are unlocking new possibilities for crop protection and plant health. Its products aim to enhance the resilience, durability, and quality of our global food system while minimizing the environmental footprint of agriculture.

#### **Apollo Agriculture**

Apollo Agriculture empowers smallscale farmers to achieve more profitable harvests by providing inputs, financing, insurance, and training. More local farming will improve the sustainability and security of the food supply.

#### **Pivot Bio**

Pivot Bio harnesses the ancient partnerships between plants and soil microbes to produce sustainable, zero-waste nitrogen fertilizers. Synthetic nitrogen fertilizers are a large contributor to carbon emissions, and innovative new fertilizers are crucial to making agriculture more sustainable.

#### **Woebot Health**

Woebot Health has developed an Al-assisted digital mental health platform that is available whenever and wherever patients need help. Its evidence-based behavioral health solutions expand access to mental health care options in a scalable and cost-effective manner.

#### Pairwise

Pairwise uses CRISPR and gene editing to breed better fruits and vegetables. This new generation of more flavorful, nutritious, climate-resilient crops will help build a healthier, happier world.

## Forbes Opinion Pieces Op/eds by Juergen Eckhardt

## **Forbes**<sup>®</sup>

One of my personal milestones of 2023 has been joining the Forbes contributor network as an expert voice on innovation. Every two weeks, I publish an opinion piece covering scientific advancements in the biotech world. While every piece is dear to my heart, I would like to share with you my favorite top 3 picks.

![](_page_27_Picture_4.jpeg)

Juergen Eckhardt Head of Leaps by Bayer Why the Next Blockbuster Therapy May Come Out of Singapore

It is fascinating to watch how the biotech market has evolved over the years. One of the most recent shifts within the industry is the emergence of Singapore as a biotech hub. Back in 2000, the Singaporean government announced that it was investing in the life sciences as the 'fourth pillar' of the state economy alongside electronics, chemicals, and precision engineering. Since then, billions of dollars have gone toward building dedicated hubs for biomedical research to turn Singapore into a biotech superpower. With our latest investment in 65LAB, Singapore also serves as a valuable entry point into the Asian biotech market for Leaps. As a nation with an abundance of great academia and emerging talents, it is definitely an area that I will personally keep a close eve on.

SCAN TO READ FULL ARTICLE

![](_page_28_Picture_3.jpeg)

Farms of the Future Will Grow Food While Restoring the Environment Here's how: Our changing climate is constricting arable land and threatening the livelihood of many farmers already, while our growing population is set to hit 10 billion by 2050. When put together, it seems like an impossible task: How will farmers be able to grow more food, with less land, decreasing their reliance on the status quo, while facing more droughts, heat waves, and floods? In this op-ed, I share how farming advancements like carbon sequestration or nitrogen fixation are crucial in reducing climate instability and aim at turning agriculture into a climate-positive industry.

SCAN TO READ FULL ARTICLE

![](_page_28_Picture_7.jpeg)

A New Tomato and a Potential New Class of Medicine Share this Fascinating Technology

One technology that I believe has the potential to revolutionize both healthcare and agriculture is epigenetic editing. Its potential is astounding. In agriculture, epigenetic editing has shown great results compared to traditional breeding methods, speeding up scientific progress, making crops more resilient to environmental challenges, and ensuring a longer shelf life of produce. In healthcare, by selectively silencing one gene on one specific chromosome, the technology might provide scientific breakthroughs for various currently hard to treat diseases like cancers, autoimmune, neurological, and multifactorial genetic diseases.

SCAN TO READ FULL ARTICLE

![](_page_28_Picture_11.jpeg)

## **Community Engagement** 2023

In addition to a year filled with scientific and partnership milestones, 2023 was also accompanied with our attendance at exciting events and conferences. Starting off with successful receptions and meetings at JP Morgan Healthcare Conference and World AgriTech 2023, we continued the year with the reactivation of our "Breaking Through Impossible – The Escape Game" at the internationally renowned SXSW Festival in Austin as well as at the Tech Open Air Festival in Berlin. We ended the year with a unique pairing of speakers for our 11<sup>th</sup> Leaps Talk "Mind to Machine" at The Atlantic Festival.

#### JP Morgan Healthcare Conference

JP Morgan Healthcare Conference is the largest and most comprehensive healthcare investment gathering in the industry, which connects global industry leaders, emerging fast-growth companies, innovative technology creators, and members of the investment community. With creative meeting spaces for our portfolio companies, thought-provoking 1-1 sessions, and more, we created the most vibrant biotech start-up hub at JP Morgan.

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![](_page_29_Picture_6.jpeg)

#### World AgriTech

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The World Agri-Tech Innovation Summit has become the most relevant annual meeting place for the global agtech ecosystem. In 2023, the Summit welcomed over 2,500 agri-food businesses, technology giants, start-ups, and investors to exchange insights, get inspired, and identify future collaboration partners. Our Leaps Lounge served as a hotspot for innovators to convene.

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#### SXSW Festival

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Bringing thousands of visitors to Austin each March, SXSW is one of the world's premier events showcasing music, film, and interactive media innovation. Coinciding our sponsorship of SXSW, Leaps re-launched its Escape Game – Breaking Through Impossible. In a 20 minute immersive experience, players had the opportunity to experience the rush of landing a biotech moonshot and saving the world.

#### **TOA Festival**

![](_page_30_Picture_5.jpeg)

During Tech Open Air, Berlin transforms into a melting pot of tech founders, investors, creatives & industry leaders that will shape our days well after tomorrow. Our Leaps by Bayer Escape Game Tour continued at TOA, offering the on-site participants to transcend into an underwater research lab and put their teamwork skills to test. In a fireside chat between a German journalist and COO of Leaps portfolio company Ada Health, the panelists explored how the current landscape of Al-powered health services is shaped and what potential opportunities and threats the future might bring.

![](_page_30_Picture_7.jpeg)

### Meet Great Minds Who Don't Think Alike

The Atlantic Festival SEPTEMBER 28 & 29 WASHINGTON D.C. & VIRTUAL

Mustafa Suleyman Underwritten by Co-founder and CEO, Inflection AI

![](_page_30_Picture_11.jpeg)

#### **The Atlantic Festival**

#### The Atlantic Festival

We collaborated with The Atlantic for their 15<sup>th</sup> annual festival, which brought together influential and provocative political, cultural, business, tech, and climate leaders for two full days of in-depth interviews, timely forums, intimate breakout sessions, book talks, screenings, and networking opportunities. As part of The Atlantic Festival 2023, our 11<sup>th</sup> Leaps Talk 'Mind to Machine', sparked lively conversations around how AI might address mental health burdens.

## **Chapter III** BBC Documentary, Awards, Giving Back Approach

#### BBC documentary 'Crossing The Line' Chapter III campaign

In 2023, we continued the launch of our Chapter III 'Leap Forward' campaign. The documentary 'Crossing The Line', produced by BBC StoryWorks Commercial Productions, takes us to Samoa, behind the scenes of Leap Forward, when we brought together a kite surfer and a weather scientist to cross the International Dateline. Their experience of challenging, unpredictable weather opens a window to the reality of climate change on this remote island, located quite literally on the edge of tomorrow.

Interviews with Olivia Jenkins and Dr. Alicia Ageno, as well as Samoan scientists and community leaders underline the urgency that we need innovation and immediate action to combat climate change. Together.

![](_page_31_Picture_5.jpeg)

![](_page_31_Picture_6.jpeg)

#### Awards Chapter III

Following the success of our Chapter I and Chapter II campaigns, Chapter III has been honored by the prestigious Art Director's Club and others. The documentary "Crossing The Line", produced by the BBC, has also made it onto two award shortlists, where we are still eagerly awaiting the results of the Drum Award.

The Leaps by Bayer Chapter III documentary 'Crossing The Line'

#### Shortlist

World Media Group Award Social Good category

Drum Award Best Video category

The Leaps by Bayer Chapter III campaign film 'Leap Forward'

![](_page_31_Picture_14.jpeg)

Winner

1 x ADC - Photography - Sports / Recreation

#### Shortlist

2 x ADC Award

- Nature
- Craft in Motion / Film -Cinematography

1 x The One Show Award

- Cinematography - Single

CLICK OR SCAN THE QR CODE TO WATCH LEAPS BBC CAMPAIGN DOCUMENTARY

![](_page_31_Picture_24.jpeg)

#### **Carbon Offset**

Chapter III campaign

In addition, we decided to fully offset our Chapter III campaign production through the German organization Moor Futures.

#### About Moor Futures

Moor Futures certificates help to restore peatlands in order to store CO<sub>2</sub> emissions.

Project planning, approval procedures under water law, possible compensation payments from land users, structural implementation steps, and monitoring of the climate impact are financed in this way.

The Moor Futures® projects are intensively managed over a period of 50 years.

#### **Giving back approach**

As explored by our documentary, recent developments in Samoa have underpinned the urgency to preserve cultural traditions and combat climate change. To give back to an island and its people, who have shown us tremendous hospitality during our stay, Leaps by Bayer decided to donate money to **Conservation International Samoa** to support its joint project with the **Samoa Voyaging Society.** 

**Conservation International** is an NGO and NPO working closely together with the Samoan government to tackle overfishing, habit destruction, climate change, and ocean acidification. The **Samoa Voyaging Society** is a non-profit organization that aims to encourage and develop traditional Polynesian voyaging, navigation, and maritime skills among Samoans and other Pacific Islanders and to encourage conservation, protection, and awareness of the Pacific Ocean and island environments.

Our donation went to the joint **Guardians program** executed by **Conservation International** and **Samoa Voyaging Society**. The Guardians program is being integrated into the national primary school curriculum and being led by the Ministry of Education Sports and Culture Samoa with support from UNESCO and the Japanese Fund in Trust (JFIT) Education for Sustainable Development Program.

The primary goal of a campaign of this nature is to increase the environmental literacy of Samoan communities through empowering youth to enhance the management of our natural resources.

Giving back to the Samoa Voyaging Society Photo: Schannel van Dijken, Conservation International

![](_page_32_Picture_16.jpeg)

![](_page_32_Picture_17.jpeg)

## Leaps Talk #11 at The Atlantic Festival Mind to Machine

As part of The Atlantic Festival 2023 in Washington D.C., our 11<sup>th</sup> Leaps Talk featured two prominent voices in the tech space, Karlie Kloss, Supermodel, Entrepreneur, and Philanthropist, and Mustafa Suleyman, Co-founder and CEO, Inflection Al, to explore the promises and perils of entrusting our psychological health and well-being to machines. The discussion was moderated by Nick Thompson, CEO of The Atlantic.

Today, one in five adults in the U.S. struggles with their mental health, and nearly half of the country's highschool students experience persistent feelings of hopelessness. The advent of AI-based diagnostic tools and chatbots could result in many more people accessing crucial therapeutic services. At the same time, humans are wired for connection—centering that fact is the only way the technology will be effective when it comes to matters of the mind. In a conversation facilitated by Leaps by Bayer, Nick Thompson sits down with two prominent voices in the tech space, Karlie Kloss and Mustafa Suleyman, to explore the promises and perils of entrusting our psychological health and well-being to machines.

#### **Moderator:**

#### **Nicholas Thompson**

CEO of The Atlantic and the former editor-in-chief of WIRED

**Speakers:** 

#### **Mustafa Suleyman**

Co-founder and CEO, Inflection AI

**Karlie Kloss** 

Supermodel, Entrepreneur, and Philanthropist

CLICK OR SCAN THE QR CODE TO WATCH FULL LEAPS TALK #11

![](_page_33_Picture_13.jpeg)

#### **About Leaps Talks**

Breakthroughs in biotech could change the world for the better, but they also raise important ethical questions that cannot solely be answered by scientists and investors. That's why Leaps by Bayer aims to engage society in this critical dialogue. Leaps Talks is a speaker series that gathers leading minds from distinct disciplines to discuss ethics, opportunities, and challenges in biotech innovation.

> From left to right: Mustafa Suleyman Nicholas Thompson Karlie Kloss

![](_page_34_Picture_3.jpeg)

The Atlantic Festival

![](_page_34_Picture_5.jpeg)

## Introducing WALY A Universal Approach to Measuring Impact Investments

What distinguishes impact investments from other types of investing is its intentional selection of investments in projects, funds, or companies that are projected to create measurable positive social or environmental impacts alongside financial ROI. Nevertheless, the main industry question still lies in: How does one measure and define impact outcomes? To do so, Leaps by Bayer tasked the Happiness Research Institute, to develop a custom impact measurement framework based on the "return for humanity" our investments create. To measure "return for humanity", Leaps and HRI introduced a new unit – WALY (Wellbeing Adjusted Life Years).

WALY is a data-driven, human-centered model that estimates the impact of investments on the wellbeing of the population. By using well-known external, independent datasets, like the European SHARE data, that provide insights into the life satisfaction of a diverse set of age groups, nations, and more, it allows for comparison of life satisfaction between affected and non-affected people from diseases/environmental impacts.

#### 1 WALY = 1 year lived in the same wellbeing as if not affected

![](_page_35_Figure_5.jpeg)

rience on a scale from 0 (lowest wellbeing) to 1 (highest wellbeing)

![](_page_35_Picture_6.jpeg)

![](_page_36_Figure_0.jpeg)

### What is unique about WALY?

By using life satisfaction as our baseline KPI, WALYs can be used to assess the impacts of various types of investments and are not limited to one industry in particular. This concept can be scaled from healthcare, agriculture, to real estate, and more.

### Curious to find out more?

Read our last two reports about our universal metric 'WALY' that measures impact investing beyond financial ROI and learn how solving 10 huge challenges will have a profound impact on humanity.

CLICK OR SCAN THE QR CODE TO READ 'WALY' REPORTS

![](_page_36_Picture_6.jpeg)

## Carbon Offsetting the Annual Review

Climate change is leading to global challenges. As an impact investor, we are committed to challenge our own thinking and our marketing practices in terms of its environmental impact. In line with these efforts, we wanted to create a climate compensated Annual Review that meets our standards of quality but simultaneously impacts the environment as little as possible.

#### Our approach to a climate compensated Annual Review

#### How did we achieve this?

By continuous project management tracking that allowed us to calculate the  $CO_2$  emissions generated throughout the content creation process.

#### How did we offset our carbon emissions?

Through buying carbon credits from our Leaps portfolio company Andes. Andes offers public services that allow companies to neutralize their emissions with a carbon price of 212 USD per tonne.

Andes engineers microorganisms to permanently remove  $CO_2$  from the atmosphere. Their beneficial microorganisms are added to the soil along with agricultural seeds, such as corn and wheat. These microorganisms grow with plant roots and accelerate the conversion of  $CO_2$  into minerals. With rainfall, the minerals move deep into the soil, making room for annual  $CO_2$ removal.

#### What else did we do?

A main contributor to the climate emissions of creating such an Annual Review lies in the printing of the document. This hard copy is a climate neutral report, printed on 100% recycled paper in Germany. We ensured that all 250 printed editions have been compensated through buying carbon credits from the Leaps portfolio company Andes. Neutralizing emissions through carbon credits from Andes

![](_page_37_Picture_14.jpeg)

CLICK OR SCAN THE QR CODE TO LEARN MORE ABOUT ANDES

![](_page_37_Picture_16.jpeg)

## **Diversity, Equity** & Inclusion

We are committed to furthering Diversity, Equity, and Inclusion (DE&I) efforts within our organization, our industry, and the companies in our portfolio. We asked our companies to share their perspectives on DE&I and we are excited to report the 2023 survey results.

![](_page_38_Figure_3.jpeg)

Based on 50% response rate from portfolio companies. Gender equity percentages are largely aligned with industry data, as per BIO's most recent report 'Measuring Diversity in the Biotech Industry'. 2022.

total company

leadership

CLICK OR SCAN THE QR CODE TO LEARN MORE ABOUT BAYER'S DE&I EFFORTS

goals, programs

and other tools

![](_page_38_Picture_6.jpeg)

and hiring

process

#### Social Media

Performance

	in	<b>O</b>	
Follower Growth	<b>34</b> %	<b>141</b> %	<b>16</b> %
Video Views Impressions	<b>45</b> M	9 м	<b>34</b> M

## Team & Offices

#### **Global Offices**

#### **Team Members**

01

02

03

04

Health

05

06

Health

07

08

09

Administrative

Community

Engagement

Support Brand &

Juergen Eckhardt

Head of Leaps

Rakhshita Dhar

Senior Director of

André Guillaume

& Community

Engagement

Lee Cooper Senior Director of

VP / Head of Brand

Venture Investments

**Doerte Fiebiger** Brand & Community

**Engagement Support** 

Ruzha Draganova

Lucio lannone

VP of Venture

Investments Health

HR Business Partner

Venture Investments

by Bayer

#### Europe /

Basel Berlin

#### North America /

Boston San Francisco St. Louis

#### Asia /

Singapore

10 Paimun Amini Karyn Riegel Senior Director of **Deputy Director of** Venture Investments Brand & Community Agriculture Engagement

11 Natasa Bazdarevic **Billie Othman Executive Assistant** 

> 12 Ingo Klöckner Head of Portfolio Strategy & Reporting

13 **Denise Boehme Director of Portfolio** Strategy & Reporting

14 Julie Yang Senior Director of Venture Investments Health

#### 15

Sara Olson **Director of Venture** Investments Agriculture

16 **Neele Piekarz Brand & Community** Engagement Associate

17 Fabio Pucci Senior Director of Venture Investments Health

18 Nicki Saee Brand & Community Engagement Associate

19 **Derek Norman** VP of Venture Investments Agriculture

20 Pamela Sisson Senior Director of Legal Affairs

21 Pei Sze Ng **Director of Venture** Investments

22 Alev Oezmen Portfolio Strategy & **Reporting Support** 

#### 23 Ryan D. Teksten Senior Director of

Venture Investments Agriculture

24 Kira Peikoff **Deputy Director** Communications

![](_page_40_Picture_0.jpeg)

![](_page_40_Picture_1.jpeg)

![](_page_40_Picture_2.jpeg)

![](_page_40_Picture_3.jpeg)

![](_page_40_Picture_4.jpeg)

![](_page_40_Picture_5.jpeg)

![](_page_40_Picture_6.jpeg)

![](_page_40_Picture_7.jpeg)

![](_page_40_Picture_9.jpeg)

![](_page_40_Picture_10.jpeg)

![](_page_40_Picture_11.jpeg)

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![](_page_40_Picture_17.jpeg)

![](_page_40_Picture_18.jpeg)

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![](_page_40_Picture_26.jpeg)

![](_page_40_Picture_27.jpeg)

![](_page_40_Picture_28.jpeg)

![](_page_40_Picture_29.jpeg)

![](_page_40_Picture_31.jpeg)

![](_page_40_Picture_32.jpeg)

Leaps by Bayer Annual Review 2023

![](_page_40_Picture_34.jpeg)

## We are impact makers and innovators. We are pioneers and trailblazers.

![](_page_41_Picture_2.jpeg)

## Manifesto

We believe in what we can prove. In facts and figures. In evidence.

But at the same time we are fascinated by the things we can't yet prove.

The small things – and the big questions that move humankind.

Our achievements are the result of our insatiable curiosity and our stubbornness about never giving up.

We love the problem, but adore the solution.

We are analytical and creative. We are critical and passionate. We scrutinize and practice.

We are architects of possibilities where others only see limitations.

We are logicians finding riddles worthwhile enough to spend a lifetime pondering.

We are advocates for nothing less than changing the world for the better.

Not because we're asked to do it, but because we have to.

Leaps by Bayer is the impact investment unit of Bayer. Leaps invests in paradigm-shifting advances in the life sciences and in technologies with the potential to change the world for the better. To date, Leaps by Bayer has invested over \$1.9 billion of minority equity into over 60 portfolio companies.

With portfolio companies in health and agriculture, Leaps is seeking to achieve ten ambitious goals – the 10 Leaps for humanity. The primary goal is to push the advancement of breakthrough technology through the creation of business models that balance profitability with sustainability.

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![](_page_44_Picture_1.jpeg)

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Social Media leapsbybayer

![](_page_45_Picture_13.jpeg)

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![](_page_46_Picture_0.jpeg)

## leaps.bayer.com