ADDITIONAL
VENTURES

2021 Annual Report

SOLVING SINGLE VENTRICLE

Front cover image:
Troponin Staining, Jaci Bliley, PhD, Carnegie Mellon University

Contents

A Letter From Our President

Science has the potential to make extraordinary leaps when the right people, ideas, and technology come together to solve complex problems. Since our founding, Additional Ventures has partnered with a dynamic community of scientists, engineers, and clinicians from around the world to address the challenges and unknowns in single ventricle heart defect research and care.

Our relentless optimism and dedication to patients and families continue to power our quest toward a functional cure for single ventricle heart defects.

Our first-ever annual report outlines our principles, strategies, and investments—and highlights the progress we've made toward our goals. In this report, we take a comprehensive look at the work we've accomplished and provide an overview of the exciting developments on the horizon for Additional Ventures and our partners.

While palliative treatments for single ventricle heart defects exist today, we believe this isn't enough. Patients and their families deserve more. As you'll read, we are confident that through coordinated strategic and interdisciplinary work, dynamic teaming, and flexible funding, we can illuminate a functional cure for single ventricle. We recognize the need to build on progress and create opportunities for collaboration, open data sharing, and large-scale research to push us forward and change the face of this disease. It will take all of us to make that vision a reality.

There is no time to waste for the children and adults living with these defects. We're at a pivotal time in the history of this disease, and we have the research tools we need to spur significant progress. I'm proud of the leaps we have already made and our efforts to shape a healthier, more equitable world for all. With the right roadmap and a growing network of experts, we collectively have an enormous opportunity to move the field forward and dramatically improve the lives of patients and their families.

We know we can't make these discoveries alone. Thank you to our network of research partners, collaborators, and supporters for the work you do.

We've made so much progress, but we still have a long way to go—I look forward to the work and collaboration ahead.

Sincerely,

ERIN HOFFMANN
PRESIDENT & CO-FOUNDER, ADDITIONAL VENTURES

In this report, we showcase our strategy in action and dive deep into our philosophy, approach, and—most importantly—impact.

Our Approach

Additional Ventures is on a **singular mission** to solve single ventricle heart disease—a complex condition with a spectrum of causes and outcomes. Complex challenges require comprehensive solutions. We knew there was a need for new research and more informed care—but more broadly, there was a need for a **clear path forward**.

Through our work, it has become clear that single ventricle care must be rooted in a fundamental understanding of the disease and built to overcome the complications and comorbidities that disrupt a patient's quality and duration of life. While both these conditions are necessary—we're thinking bigger. We must concentrate on the development of solutions that deliver a **functional cure** rather than palliative treatment, enabled by collaboration of diverse fields with one unified vision.

OUR VISION FOR THE FUTURE IS CLEAR: SINGLE VENTRICLE SOLVED.

We knew that we could not solve this complex condition alone, and we needed to take a multi-disciplinary lens with community buy-in. We convened a diverse group of investigators across the scientific, engineering, and clinical spectrum to work together in small groups over several months. Together, they designed targeted research programs aimed at solving the key challenges identified as critical to moving the needle in single ventricle. Their work culminated in a series of team presentations and feedback from all of the participants.

The output was more than we could have imagined, outlining five key areas of investment from which we could build actionable projects and programs.

We published our findings in partnership with our collaborators as a living **Research Roadmap**—a ten-year plan toward comprehensive, multidisciplinary, and programmatic solutions.

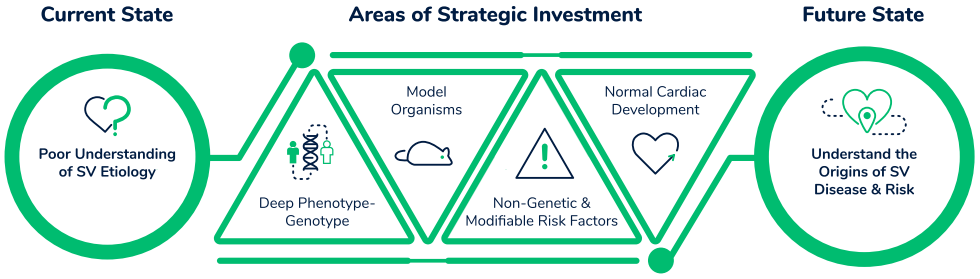
Our hope is that the roadmap will unite single ventricle research and clinical care by highlighting the various needs across sectors and aligning investments to meet them. While this roadmap is only the first step, our team and others can begin the hard work to shift the single ventricle research paradigm.

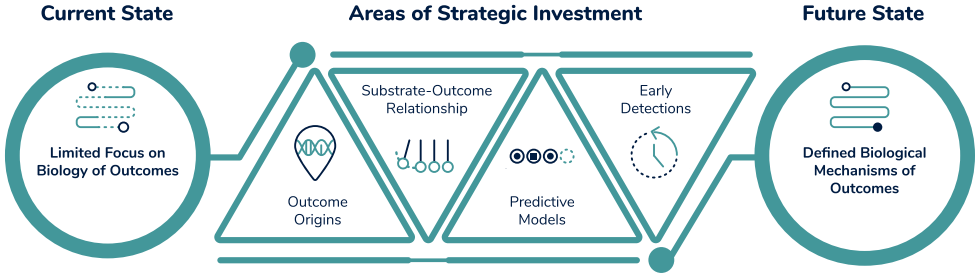
Now, we are capitalizing on the momentum within the single ventricle community and adjacent genomics, engineering, and regenerative medicine fields through strategic investment in discovery science, infrastructure, and research tools. Through our programs, we are helping to address fundamental questions about contributing molecular and cellular mechanisms, initiating factors and events, genetic risk, conduits for improved flow, de novo organ development, end-organ intervention, and much more.

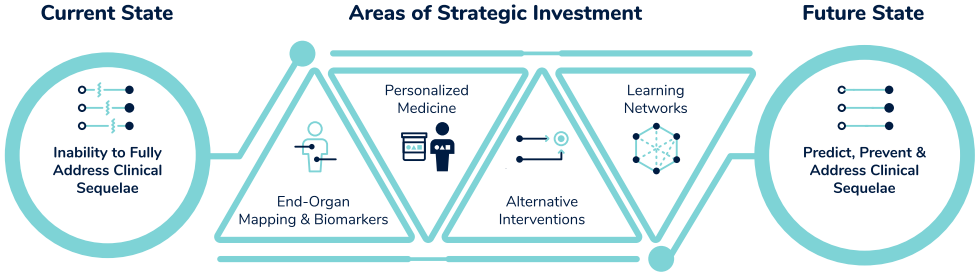
Our vision for the future is clear: Single ventricle solved. We can only accomplish this through the thoughtful investment of time and resources into the most pressing scientific questions—recognizing that directions change over time as knowledge grows. We will continue to develop tailored solutions that fit the problem at hand and encourage bold, relentless scientific exploration until we achieve our goals.

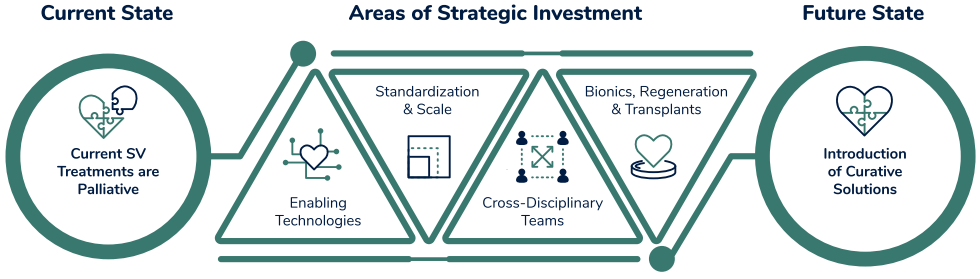
The Research Roadmap to Solving Single Ventricle Heart Disease

Our findings in partnership with our collaborators produced a living ten-year plan toward comprehensive, multidisciplinary, and programmatic solutions.









Our Principles

Strategic investment can help us answer the biggest questions in science and medicine, including single ventricle heart disease. With this in mind, we developed our core principles, which guide us in both our decision-making and mindset as we advance on our mission to solve single ventricle:

▶ IMPACT FOCUS

Guided by our Research Roadmap, we are focused on areas where we can have the most meaningful impact—incorporating burgeoning ideas and areas of study that are deemed unpopular, high-risk, or out-of-scope for other types of funding. This requires creative and critical consideration of research questions outside of a single area of expertise.

▶ URGENCY

Single ventricle heart disease patients deserve answers. We operate with a sense of urgency befitting the problem, removing barriers, and altering methods to accelerate progress with intention.

▶ COLLABORATION

Charting a new path will require inter- and multi-disciplinary cooperation from both single ventricle and non-single ventricle investigators. We provide guidance and support to create a new model of trust built on sharing and cooperative behaviors that transcend disciplines represented within our community.

▶ AGILITY

Science is not static, and our programs are not either. As the Research Roadmap goals are implemented, we are responsive to the evolving nature of research—and adjust focus as appropriate. To do so, we are actively seeking out new ideas and feedback, and remain open to revising our processes.

We value both transparency and open science—and put those fundamental values into practice in our work. To promote openness and accessibility, we support the free flow of data and resources within our collaborative network and make findings (including null and incremental results) available to the broader community. We also support the inclusion of a broad variety of scientists with different backgrounds, funding levels, and experience.

Our Strategy

Guided by our Research Roadmap and our principles, we are executing a four-part strategy:

1

MAKE TARGETED INVESTMENTS

Our grant programs are changing the game by making big and bold investments in specific research questions. They are thoughtfully designed to reimagine the future by reexamining processes to maximize our impact on both people and projects.

2

SUPPORT TEAM SCIENCE

Great minds must work together across fields and disciplines to tackle the challenges within single ventricle disease. To move towards a functional cure, we recruited a team of nine scientists across eight institutions with a spectrum of expertise to work closely together over the next five years, taking a regenerative medicine approach to improve cardiac function and outcomes.

3

BUILD FOUNDATIONAL RESOURCES

Foundational resources are required to ask and answer the most pressing questions in single ventricle science and care. We are supporting, building, and integrating datasets to create a comprehensive, open-access resource that will be available to the entire scientific and medical community.

4

CREATE SCIENTIFIC COMMUNITY

Single ventricle research is a growing field with exciting potential and possibility. We are convening a series of events to create a platform for learning, a place for collaboration, and a stage for sharing.

Rethinking Targeted Investments: The Additional Ventures Method

Our 2020-2021 award programs include our flagship programs: the Single Ventricle Research Fund and Tools & Technology Expansion Awards. They also include our partnership programs: the Life Sciences Research Fund, Enduring Hearts Research Award, and the Innovation Funds. Our approach to all of our funding is:

- **Focused** on addressing the most pressing questions in the field.
- **Informed** by the most recent scientific and technological advances.
- **Driven** by our determination to offer support to both people and projects.
- **Strengthened** by our connections with the scientific community.

HOW DO WE DESIGN OUR PROGRAMS?

TOPIC SELECTION

Each year, we choose a new topic or focus area for our award programs to ensure we are directing our efforts towards **the right science at the right time**—maximizing advancements and responding quickly as the field changes. To do so, we conduct assessments of the research landscape and consult with external experts, including our Scientific Advisory Board or our external partners (see page 13 to read more), to identify the best questions.

REQUEST FOR PROPOSALS

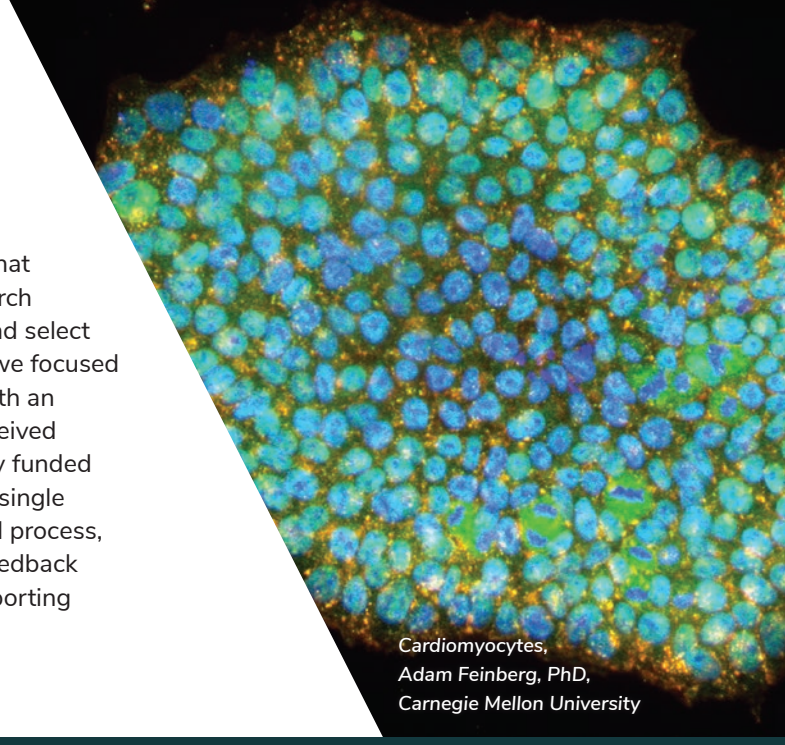
Our application processes are **targeted**, **thoughtful**, and **original**, just like our investigators' work. The process enables applicants to showcase their unique team and commitment to the scientific community while highlighting how their work can drive knowledge and advancement in the single ventricle field.

> ***The importance and challenges of finding a functional cure for congenital heart defects are great. It requires a paradigm shift, one that enables physicians, scientists, and engineers to more freely share ideas, data, and technological advances. Additional Ventures is leading the way by promoting this promising multidisciplinary approach.***

JAY HUMPHREY, PHD,
SINGLE VENTRICLE RESEARCH FUND AWARDEE

PROGRAM SPOTLIGHT

Our **Single Ventricle Research Award** is an annual program that provides significant financial support to investigators for research projects for up to three years. Each year, we review the field and select the topic that we feel will create an outsized impact. In 2020, we focused our program on non-invasive interventions and biomarkers, with an emphasis on multi-disciplinary approaches and teams. We received over 78 applications at the Letter of Intent stage and ultimately funded 17 outstanding proposals, adding 11 new investigators to the single ventricle community. We are also innovating in our post-award process, providing unique support through multiple opportunities for feedback from experts in-person and virtually, to make sure we are supporting recipients' work every step of the way.



Cardiomyocytes, Adam Feinberg, PhD, Carnegie Mellon University

REVIEW & SELECTION

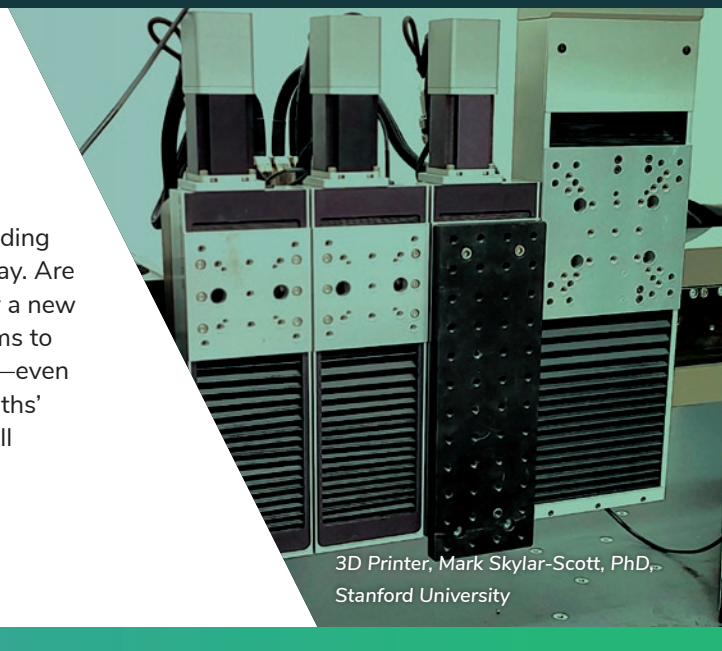
Science moves quickly, and so do our review processes. We recruit experts from relevant fields to ensure every proposal is assessed from diverse perspectives. We ask our reviewers to evaluate proposals with three key principles in mind: **sound and significant** science, **collaborative** approach, and **commitment** to advancing the field.

AWARD PROGRESSION

We support and celebrate our awardees, and we strive to be **true partners throughout the scientific process** for the duration of the award. We provide prompt, responsive feedback during our post-award management processes to engender trust and foster new avenues of thinking, and highlight our awardees in scientific community events like our Speaker Series (page 21) and Single Ventricle Investigator Meeting (page 22).

PROGRAM SPOTLIGHT

Our **Tools & Technology Expansion Awards** enable 'piggyback' funding to add new tools or technologies to existing studies already underway. Are you missing out on the new single cell RNA sequencing approach or a new collaborator down the hall? This creative award program allows teams to add additional approaches and new directions to their current work—even ones that weren't around when the study began—in under two months' time. In its inaugural year, we funded ten projects that we believe will springboard ongoing studies forward, faster.



3D Printer, Mark Skylar-Scott, PhD, Stanford University

Technologies for biological research are advancing at a breathtaking pace. New tools—combining chemistry and computer science—have now revealed a path toward creating a map of how defects in our DNA lead to defects in the heart. Support from Additional Ventures has allowed us to begin building such a genetic map of heart development.

JESSE ENGREITZ, PHD, INNOVATION FUND, TOOLS & TECHNOLOGY AWARDEE

Through a collaboration with a physician-scientist, Marlene Rabinovitch, we were encouraged to apply our lab's expertise in stem cell and developmental biology to our understanding of single-ventricle heart disease. Working together has been a gratifying experience to learn more about what patients experience, and how cutting-edge stem cell tools might be applied to single-ventricle disease.

KYLE M. LOH, PHD, INNOVATION FUND AWARDEE

Collaborative science is not only more fun, but it is more fruitful. Mechanisms like the Additional Ventures Single Ventricle Research Fund are truly changing the trajectory of single ventricle research in a tangible and invaluable way—we are so excited to be a part of it all.

ANASTACIA (TASHA) GARCIA, PHD, SINGLE VENTRICLE RESEARCH FUND, TOOLS & TECHNOLOGY AWARDEE

Understanding the developmental origins of mental health risk and resilience in congenital heart disease requires team science. In strong partnership with families, we have brought together basic, translational, and clinical scientists from eight institutions to solve challenges that none of us can solve alone.

NADINE KASPARIAN, PHD, SINGLE VENTRICLE RESEARCH FUND AWARDEE

Partner Programs: Collaborative Approaches for Transformative Change

ENDURING HEARTS

While heart transplantation has been life-saving for many infants and children born with congenital heart defects, including single ventricle, there are still many risks associated with this intervention. Enduring Hearts' mission is to fund research that improves the quality—and increases the longevity—of life for pediatric heart transplant recipients, making the organization the perfect partner in this space.

Together, we launched a funding opportunity to stimulate innovative research focused on identifying, reducing, and eliminating pre- and post-transplant risk factors that affect outcomes of children born with complex congenital heart disease, including single ventricle heart defects.

LIFE SCIENCE RESEARCH FOUNDATION

The Life Sciences Research Foundation (LSRF) supports exceptional postdoctoral researchers in all areas of basic life sciences discovery. We've partnered with the LSRF to extend our support to outstanding individuals making waves in basic and molecular science. The Foundation is developing tools and analyses that change the way we think about and incorporate basic science in our understanding of single ventricle biology.

ADDITIONAL VENTURES INNOVATION FUNDS

In collaboration with five outstanding research institutions, we launched the Additional Ventures Innovation Funds with the goal of accelerating scientific discoveries and improving our understanding of single ventricle heart defects and the development of functional cures.

Each institution uses these funds to seed high-risk projects that yield outsized, long-term impact. While the partner institutions work together and share knowledge, each manages their funds independently—leveraging unique knowledge, infrastructure, and talent to promote the best research.

The Cures Collaborative: Finding a Functional Cure

Finding a **functional cure** is central to solving single ventricle heart disease, but no one scientist, lab, or even field can do this alone.

That's why we created the Cures Collaborative: a multidisciplinary team of nine investigators across eight institutions brought together to develop a regenerative medicine solution that can improve cardiac function and reduce poor outcomes. Over the next five years, the team will work together with the members of their labs to accelerate the pace of science using an integrated approach that tackles the problem from all sides.

STRUCTURE

The Cures Collaborative is a unique model, built to:

- Keep pace with the changing needs of scientific discovery.
- Allow for rapid evaluation of results and changing directions.

COMMUNICATION

Sharing and engaging regularly is critical to the success of the group. Team members and their labs regularly meet to conduct experiments, discuss details and findings, and plan next steps.

RESEARCH

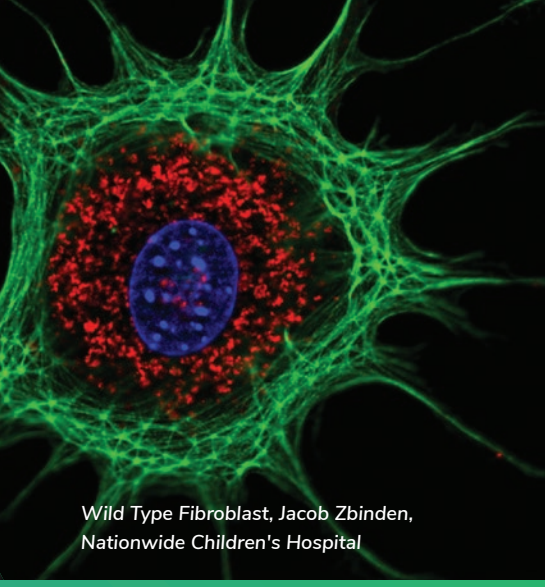
Together, team members determine overall research direction, developing group and individual research plans every six months, which the entire team reviews and approves.

FUNDING

Members share a pool of funds each year, which is divided based on the needs of each lab or project during each six-month period.

The Cures Collaborative Co-Directors **Dr. Chris Breuer** and **Dr. Tain-Yen Hsia** provide organizational and strategic support.

Professional Research Assistants (left to right): Angela Baybayon-Grandgeorge, BS, Valerie Olsen, BS, Ashley Pietra, BS, Garcia & Nakano Labs at the University of Colorado-Anschutz Medical Campus



Wild Type Fibroblast, Jacob Zbinden, Nationwide Children's Hospital

TOP DOWN GROUP

Their goal is to generate a large animal Fontan model to use as both a testing bed for regenerative medicine solutions as well as an input for creating a computational model to predict the best solutions to test.

The Breuer Lab is developing a large animal survival model to understand how the body reacts in response to the Fontan surgery—and test potential solutions.

The Davis Lab is focusing on the molecular and cellular level to identify biomarkers that indicate change after the Fontan surgery.

The Humphrey Lab is utilizing a small animal model to design a computational model that helps identify how the vascular system grows or changes post-Fontan.

The Marsden Lab is designing computational models to understand how changes in flow from the Fontan surgery affect the circulatory system.

BOTTOM UP GROUP

Their primary goal is to create appropriate cellular starting materials and generate a tissue-engineered conduit to assist Fontan circulation.

The Chi Lab is focusing on identifying molecular pathways that transform stem cells into specific heart cell types to create the building blocks for new solutions.

The Feinberg Lab is creating 3D printing techniques and tissue engineering platforms for future regenerative medicine solutions.

The Rentschler Lab is optimizing protocols that create certain types of heart cells from stem cells—and ensuring they are functional and mature.

The Skylar Scott Lab is developing scalable cell differentiation strategies so as not to limit the team in the types of solutions they create.

Project Singular: Building the Foundation for Research and Discovery

What causes a condition like single ventricle? Is it genetics, environment, or other factors? Why do patients experience it differently?

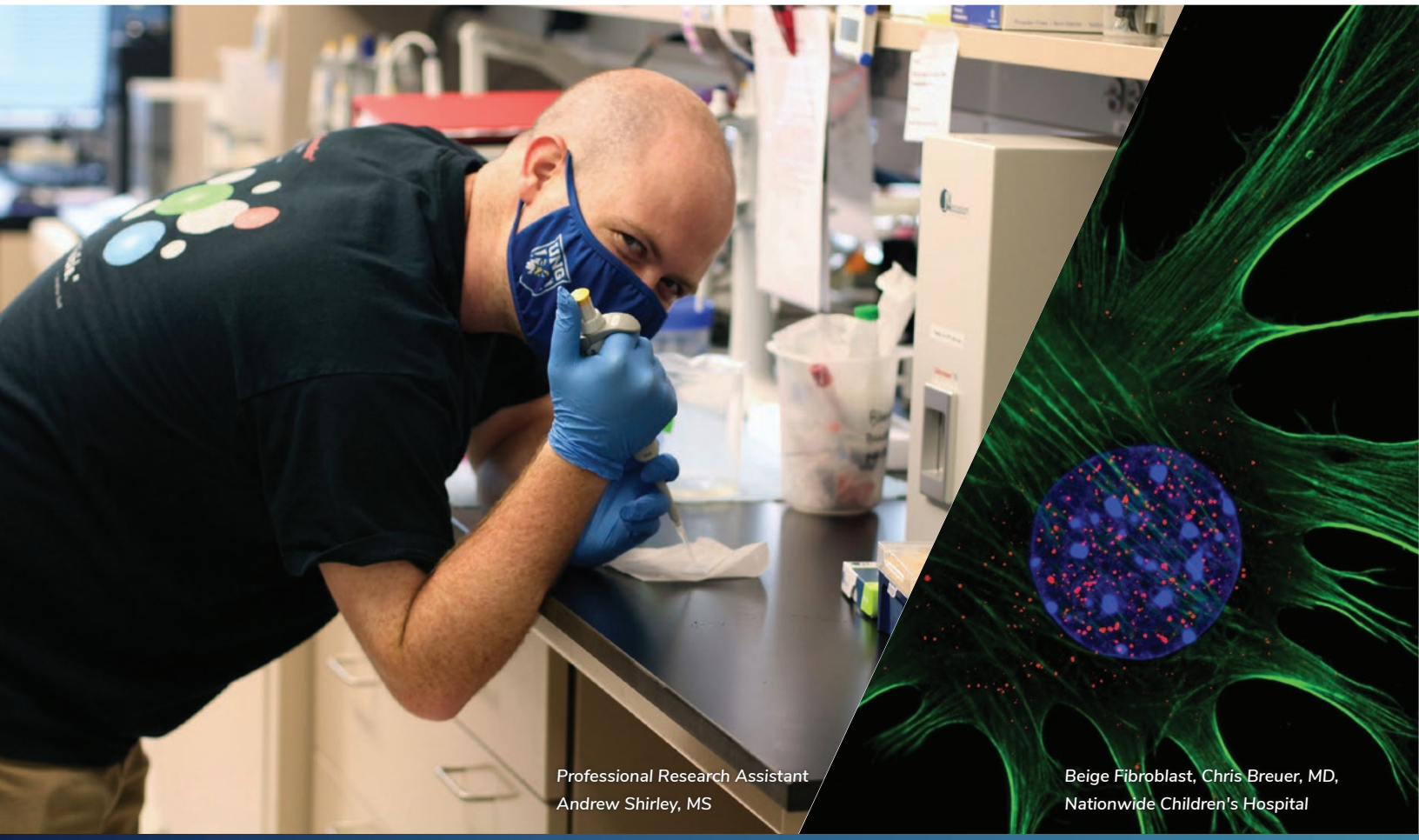
There are far too many questions surrounding single ventricle heart defects and not enough answers. Researchers and clinicians need a clear, fundamental understanding of what causes and complicates single ventricle to be able to prevent and treat it—and they're currently operating without a full picture of the disease. To reach that understanding, we need to build a foundation for research and discoveries with data.

This is why we established **Project Singular**, a research study to build a large-scale genetic database of single ventricle patients and their immediate family members. This will help us identify the underlying genetic elements that contribute to the development of single ventricle heart defects and their related outcomes.

PROJECT SINGULAR

Our success is driven by three guiding principles:

- A balance of open data access principles while protecting patient privacy.
- Rigorous support of other single ventricle registry efforts through data sharing.
- Leading by example to promote collaboration, transparency, and data democratization.



Professional Research Assistant Andrew Shirley, MS

Beige Fibroblast, Chris Breuer, MD, Nationwide Children's Hospital

HOW WE'LL MAKE IT HAPPEN

Build a user-friendly platform for patients and families to register right from their computer or phone, input their medical history, and sign up to receive a saliva collection kit at their home.

Collect medical records and saliva samples from at least 5,000 patients and their families. Then conduct whole genome sequencing to gather as much data as possible.

Spread our message and create awareness through outreach to the patient, family, and medical communities with social media and partnership-building.

Project Singular can only be successful with the needs of patients and families at the core of everything we do.

With patients and families as our partners, we can build a robust dataset and promote extensive research that may one day change the trajectory of single ventricle heart disease.

Focus on diversity, equity, and inclusion as a core principle of the study to ensure our participant population is representative across diagnosis, race, geography, age and stage of Fontan, and socioeconomic status.

Share this rich dataset as broadly, widely, and safely as possible through a free, open-source genetic library to inspire collaboration, communication, and ideally, more solutions.

Honor our participants' generosity by requiring our partners, users, and others to join us in utilizing the **FAIR data principles, so that data is democratized amongst all investigators, fields, and sectors**. All codes and findings must be shared, while ensuring anonymity and privacy of all participants through a rigorous de-identification process.

BROAD INSTITUTE

Boston Children's Hospital
Where the world comes for answers

We are working with the **Broad Institute of MIT and Harvard**, a biomedical research institution, to sequence patients and build our platform for data entry and analysis. Another partnership with **Boston Children's Hospital** will help us provide support for the study and its participants.

We are optimistic that this one-of-a-kind dataset will reflect the full picture of single ventricle heart defects, helping us understand why they develop and providing a clearer path toward a functional cure.

Integrated Datasets to Strengthen the Foundation for Single Ventricle Research

Our field must work **together** to create integrated, robust datasets to ask and answer the most pressing questions in single ventricle. In addition to Project Singular, we support and fund other initiatives that, together, can provide a launching pad to understand single ventricle:

ADVANCED CARDIAC THERAPIES IMPROVING OUTCOMES NETWORK (ACTION)

ACTION is a collaborative learning network of more than 50 cardiac care centers across the globe, working together to improve care and outcomes for congenital heart disease patients who are in heart failure, many of whom have single ventricle defects. We are funding initiatives to improve the timely referral of patients to transplant centers, stabilize the medical conditions of the listed patients, and improve donor/recipient transplant matching.

FONTAN OUTCOMES REGISTRY USING CMR EXTRACTIONS (FORCE)

FORCE is a newly-launched and rapidly-growing network of cardiac centers sharing retrospective imaging and clinical data in order to predict outcomes for single ventricle patients. FORCE will develop machine-learning algorithms to guide customized decision-making about when and how to introduce medical interventions. We are providing startup funding for this innovative registry.

FONTAN OUTCOMES NETWORK (FON)

The Fontan Outcomes Network is a soon-to-be-launched longitudinal, lifespan registry and collaborative learning network focused on improving the longevity and quality of life for single ventricle patients. The Network's goal is to optimize patient physical health and functioning, neurodevelopmental outcomes, and mental health and resilience. We are providing funding to build and launch the registry and the learning network with twelve pilot cardiac care centers.

Only through collaboration can we take advantage of all of the latest approaches in science and engineering to accelerate new cures for single ventricle defects.

MARK SKYLAR-SCOTT, PHD, INNOVATION FUND AWARDEE

Finding solutions from basic science, physics, engineering, and beyond will come from a collaboration from inside and outside the field.

JANE NEWBURGER, MD, MPH, SCIENTIFIC ADVISORY BOARD MEMBER

Ramping up scientific momentum in a new area requires a combination of young and seasoned investigators, taking a bold step and new idea into uncharted territory.

MARLENE RABINOVITCH, MD, INNOVATION FUND AWARDEE

Language and technology change so rapidly. It's a challenge to keep up. Bringing scientists on rounds inspires both groups. Bridging the gap doesn't happen by chance. You have to make it happen.

DEEPAK SRIVASTAVA, MD, SCIENTIFIC ADVISORY BOARD MEMBER & INNOVATION FUND AWARDEE

Single ventricle heart defects are tough to tackle in the clinic. Next-generation solutions will only come from the meritorious work and collaborative communication between physicians and scientists.

MINGTAO ZHAO, DVM, PHD, INNOVATION FUND, SINGLE VENTRICLE RESEARCH FUND, TOOLS & TECHNOLOGY AWARDEE

Meeting and connecting with other Additional Ventures scientists at the Single Ventricle Investigator Meeting and beyond catalyzed new projects focused on early cardiac development.

SUSAN LIAO, PHD, TOOLS & TECHNOLOGY, LIFE SCIENCES RESEARCH FOUNDATION AWARDEE

When basic scientists and clinicians work together effectively, their combined efforts amplify the skills of each to accelerate translational science and medicine.

R. MARK PAYNE, MD AND THOMAS O'CONNELL, PHD, SINGLE VENTRICLE RESEARCH FUND, TOOLS & TECHNOLOGY AWARDEES

With the support of the SVRF, we have truly taken translational science to heart—there is a genuine interplay of basic science and clinical medicine on a daily basis.

STEPHANIE NAKANO, MD, SINGLE VENTRICLE RESEARCH FUND AWARDEE

Creating Community

We're working to unite the scientific field—across disciplines—around single ventricle work. We created touchpoints for the investigator community to share information in a useful way.

Our **Additional Ventures Speaker Series** and annual **Single Ventricle Investigator Meeting** allow for diverse investigators to share knowledge, identify challenges, and exchange ideas to inspire innovative approaches to this complex disease.

Speaker Series: Building a Connected Community

HOW IT STARTED

The Speaker Series began as a small gathering of single ventricle-centric researchers and clinicians participating in biweekly 'Lunch & Learn' sessions. It quickly grew into an interactive meeting of over 130 multidisciplinary investigators committed to advancing our understanding of single ventricle heart disease.

130+

MULTIDISCIPLINARY INVESTIGATOR PARTICIPANTS

GROWING OUR COMMUNITY

The Next Generation of Science in Single Ventricle
In this biweekly seminar series, each session addressed ongoing research efforts in key knowledge gap areas identified on our Research Roadmap. In Part I of the series, we heard the most promising early career researchers in the single ventricle field present on topics including genetics and biomarker discovery, stem cell and tissue engineering approaches, mathematical and computational models, and clinical interventions.

In Part II, we continued to showcase the next generation of science and scientists by highlighting our own Additional Ventures awardees. They introduced their varied research projects addressing single ventricle etiology, biology of outcomes, clinical sequelae, and functional cures in dynamic virtual sessions.

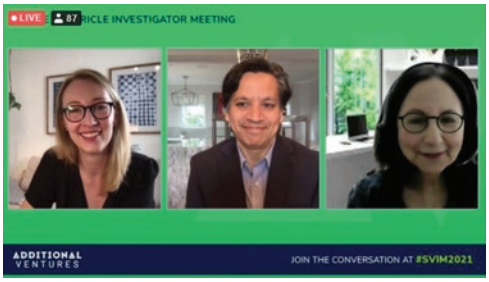
Single Ventricle Investigator Meeting: a Platform for Collaboration

We held the first annual **Single Ventricle Investigator Meeting (SVIM)** March 9-10, 2021—the largest event of its kind for this research community. We welcomed scientists, engineers, clinicians, and other single ventricle researchers to the two-day virtual meeting where they explored the intersection of basic science, translational medicine, engineering, and clinical care in single ventricle heart disease.

70
SPEAKERS ACROSS DISCIPLINES

300+
REGISTRANTS

During the conference, we welcomed over 70 speakers across disciplines and utilized multiple formats for presentation and conversation. We were thrilled to have over 300 registrants committed to creating an interactive, dynamic scientific event centrally focused on advancing single ventricle research.



Left to Right: Kaitlin Davis, PhD, Deepak Srivastava, MD, Jane Newburger, MD, MPH

Clockwise from top left: Diane Pickles, Rahul Rathod, MD, Sara Pasquali, MD, MHS, Jonathan Kaltman, MD

AT SVIM, ATTENDEES:

- **Listened** to renowned experts on the current state of science, clinical care, and patient care journeys for single ventricle heart disease.
- **Discussed** key topics through expert panel and audience participation in data sharing, registry building, and data democratization.
- **Heard** from a range of experts across four focus areas: Etiology Mechanisms and Models; Predicting, Preventing, and Addressing Clinical Sequelae; Biology of Outcomes; and the Development of Functional Cures in single ventricle.
- **Showcased** new talent and experienced investigators together during our Lightning Rounds—rapid fire talks highlighting the latest findings in basic science, clinical research, and engineering within single ventricle heart disease.

What's Next?

2020-2021 was a big year for us (our first full year!), and a big one for the world. We've made tremendous progress during a year that brought so many challenges—both professional and personal—for everyone.

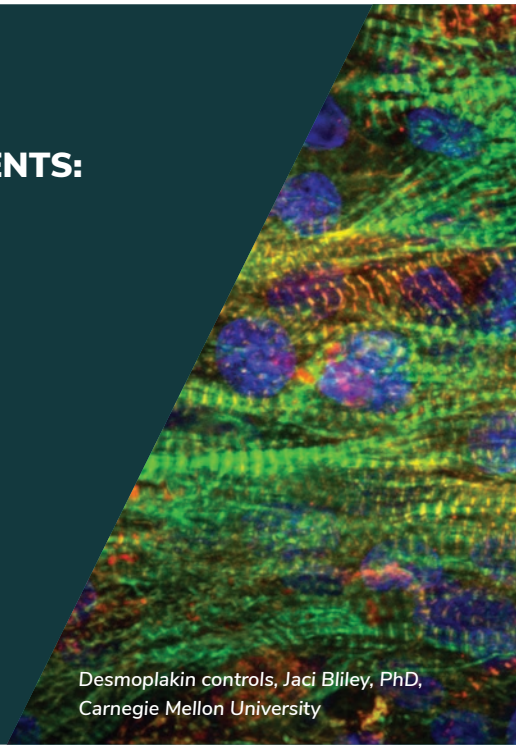
And we're just getting started.

We're looking to the horizon for inspiration while also reflecting on our past—our successes and our learnings—to continually serve our communities better.

In our next year, we will deepen our commitments to single ventricle communities through new programs and initiatives to serve patients and families, grow depth and breadth in our research community, and support collaboration and connection, holistically and sustainably.

SOME EXCITING UPCOMING EVENTS AND ANNOUNCEMENTS:

- **Project Singular launch:** In early 2022, we will launch Project Singular and begin recruiting efforts to build the largest genetic repository of single ventricle patients in the world.
- **Catalyst to Independence Award:** Support for the next generation of scientists means investment in the future of the field. Stay tuned for the launch of our early career fellowship program, offering support for postdocs to transition to new faculty and jumpstart their own labs.
- **Education and collaboration:** Join us for the next iterations of our Speaker Series this Fall, opportunities for professional development at every level, and our first in-person open event: the Single Ventricle Investigator Meeting, coming Fall 2022.



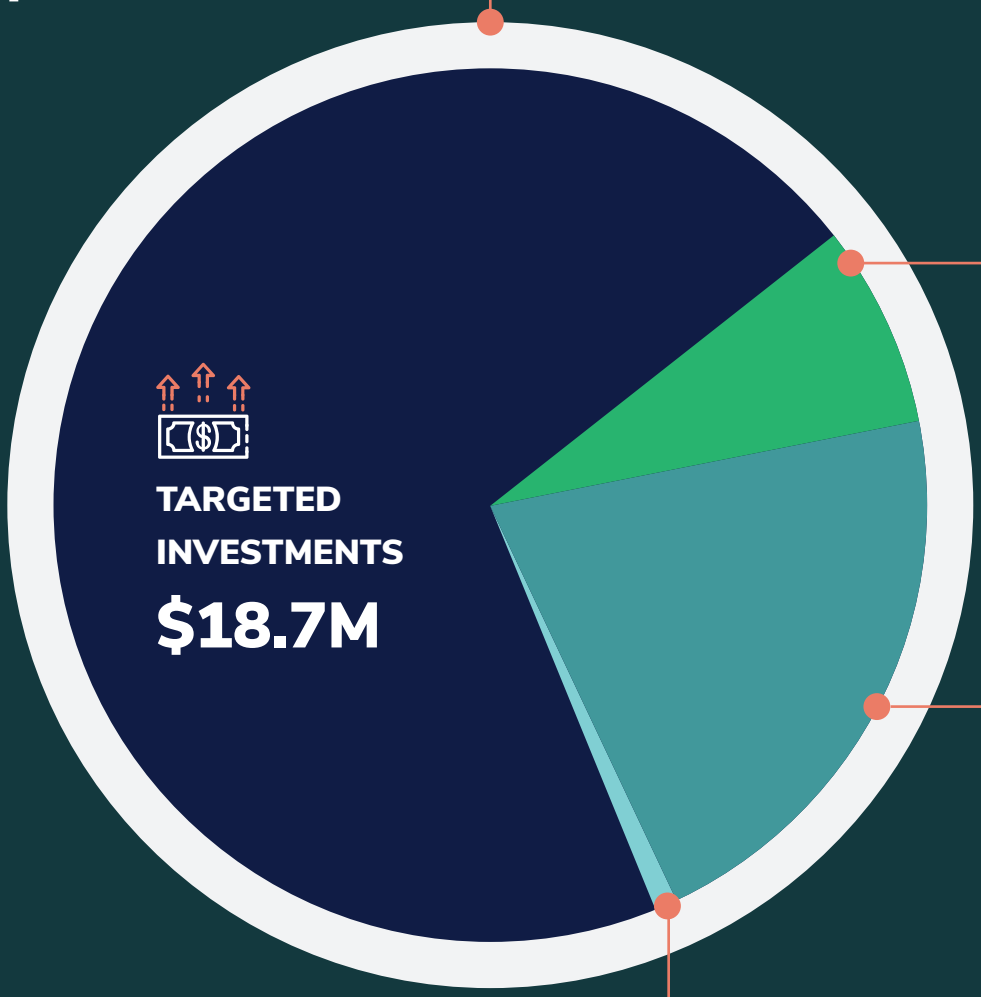
Desmoplakin controls, Jaci Bliley, PhD, Carnegie Mellon University

Impact by the Numbers

In 2020, we committed over **$26.5M in funding** for research and infrastructure development, all focused on our four strategic pillars.

TOTAL INVESTMENTS IN OUR RESEARCH PORTFOLIO

$26.5M



TARGETED INVESTMENTS

$18.7M

SUPPORTING TEAM SCIENCE

$2M

BUILDING FOUNDATIONAL RESOURCES

$5.6M

CREATING COMMUNITY

$250K

These research priorities are guided by our Research Roadmap. In 2020, we focused our annual grant program primarily on the development of biomarkers related to single ventricle outcomes—but we take a balanced approach to ensure we are seeding research and development across our portfolio.

Roadmap Progress: By-the-Numbers

64 STUDIES FUNDED

$23.5M

DATA & ANALYTICS INFRASTRUCTURE
6 studies funded

$3M

ETIOLOGY OF SINGLE VENTRICLE
12 studies funded

$3M

BIOLOGICAL MECHANISMS OF OUTCOMES
20 studies funded

$8M

ADDRESS CLINICAL SEQUELAE
9 studies funded

$5M

DEVELOP FUNCTIONAL CURES
16 studies funded

$4.5M

EVERY ONE OF THESE IMPORTANT INVESTMENTS brings our scientific community one step closer towards finding a functional cure for single ventricle and improving the lives of patients and families.

Our Team

SINGLE VENTRICLE TEAM

ERIN HOFFMANN
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Additional Ventures

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Vice President of Programs

KAITLIN DAVIS, PHD
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Research and Grants

DIANE PICKLES
Program Director,
Project Singular

COURTNEY STEGER, PHD
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“We know we can’t make these discoveries alone. Thank you to our network of research partners, collaborators, and supporters for the work you do.”

ERIN HOFFMANN
PRESIDENT & CO-FOUNDER, ADDITIONAL VENTURES

Background image:
Troponin Staining, Jaci Bliley, PhD, Carnegie Mellon University

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