

IMPACT REPORT 2024

Initiatives and Investments in Single Ventricle Research
July 2023 – December 2024



Avery

Hypoplastic Left Heart Syndrome (HLHS)



James

Double Outlet Right Ventricle (DORV); Ventricular septal defect (VSD) with Transposition of the Great Arteries (TGA)



Dean

Double Inlet Left Ventricle (DILV)

Additional Ventures' mission is to cure single ventricle heart disease through transformative research and strategic investments that revolutionize treatment and care.



Kendra

Hypoplastic Left Heart Syndrome (HLHS); Unbalanced atrioventricular canal



Keeley

Hypoplastic Left Heart Syndrome (HLHS)



Marcia

Hypoplastic Right Heart Syndrome (HRHS)

IMPACT REPORT 2024

From Our Founder

Since day one, Additional Ventures has held a resolute belief: progress — and cures — for single ventricle heart disease aren't just necessary, they're possible.

With this conviction, we set out not only to support the pioneers already working in the field, but to expand the community itself — welcoming researchers and collaborators driven by curiosity, urgency, and optimism.

The research progress of recent years reflects what's possible when science is fueled by collaboration, when gaps are met with swift, strategic action, and when brilliant minds rally around a shared mission.

Just a few examples from this past year illustrate that momentum. Researchers published at least four studies using the FORCE dataset, describing new insights into Fontan patient outcomes. We published The Disproportionate Economic Burden of Complex Congenital Heart Disease, enumerating the financial challenges faced by single ventricle families and the healthcare system more broadly, and underscoring areas where further support and advocacy are needed. We launched SOURCE, our landmark genomics initiative designed to create the most comprehensive clinical and genetic dataset for single ventricle patients and families to date — an effort met with enthusiasm across patient, research, and clinical communities. And we funded 32 new awards, channeling an additional \$26.5M into the field's most promising work.

No single report can capture the full breadth of what we do. But the stories ahead illustrate our purpose: what we've built, who we've built it with, and where we're going next.

We know what's at stake — and we're just getting started.

Sincerely,

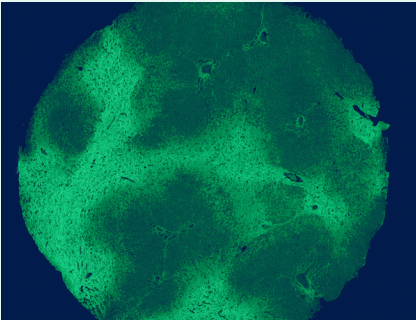


Erin Hoffmann

Executive Chairman and Founder

Our 2024 Programs

Collectively, Additional Ventures’ initiatives comprise essential components of our strategy for curing single ventricle.



Cures Collaborative

A multidisciplinary 9-person team working together to develop a tissue engineered solution that can improve cardiac function and reduce poor outcomes associated with single ventricle heart disease.



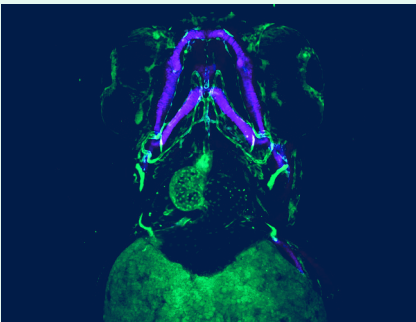
Single Ventricle SOURCE

A first-of-its-kind genomic sequencing study aimed at uncovering the causes of single ventricle heart disease, comorbidities, and sequelae. SOURCE launched in December 2024.



Expansion Award

A one-time \$50,000 award that enables teams to rapidly develop, test, and implement novel, high-risk ideas in the single ventricle space.



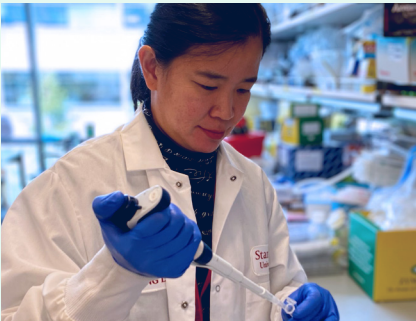
Single Ventricle Research Fund

A 3-year, \$600,000 annual research award program that provides foundational support for single ventricle research. This year, we awarded 14 teams, with a total investment of \$9.25M.



Collaborative Sciences Award

A high-touch, targeted grant program — funded jointly with the American Heart Association — that allows researchers to make significant scientific advancements in the field of single ventricle sequelae. This year, we awarded 5 teams, with a total investment of \$13M.



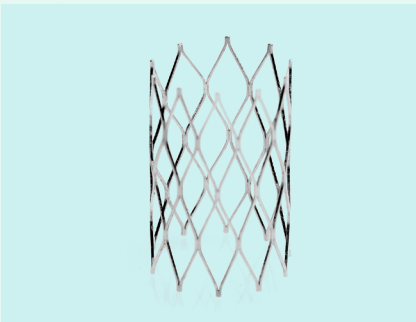
Catalyst to Independence

An annual research award program supporting senior-level postdocs through transition to early career faculty with \$1.2M over a period of up to 6 years. This year, we awarded 2 early career investigators, joining 6 previously-awarded investigators.



Single Ventricle Investigator Meeting (SVIM)

A biennial scientific conference bringing together a multidisciplinary group of established and emerging scientists interested in investigating single ventricle origins, outcomes, care, and cures.

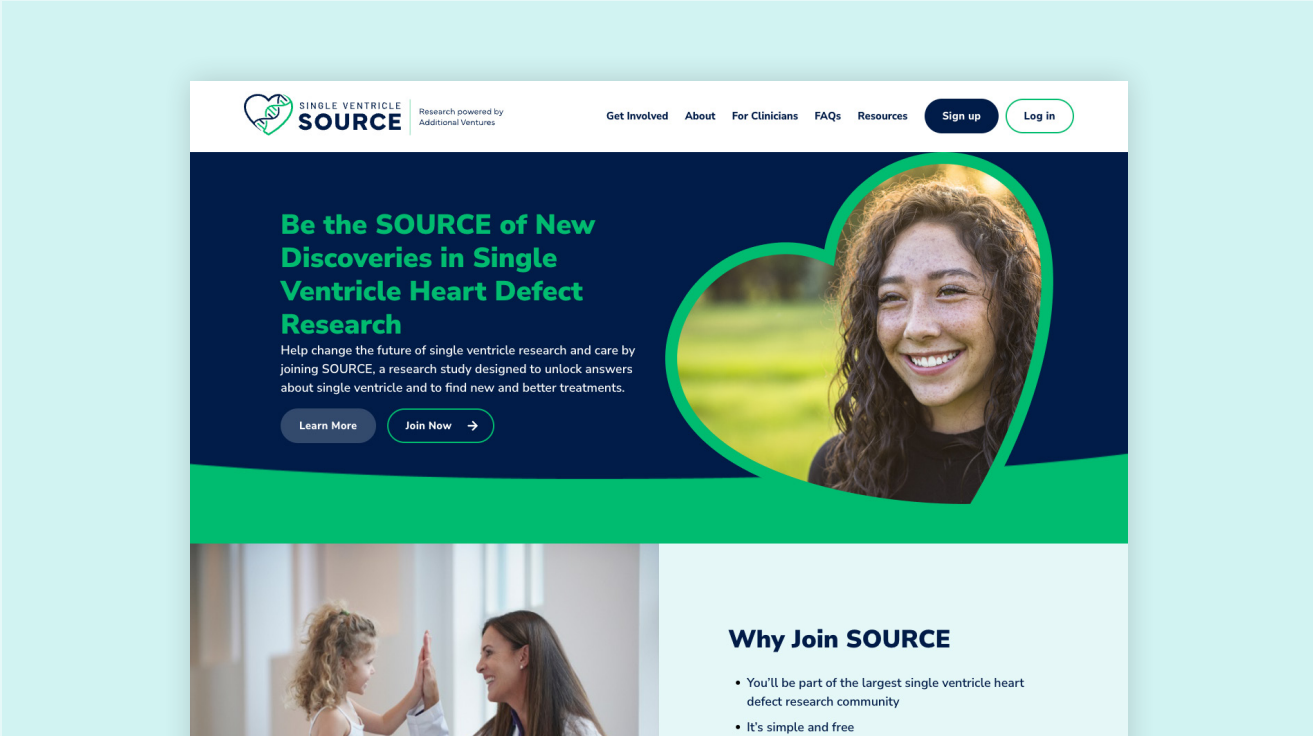


For-Profit Investments

Strategic commercial investments in product-oriented organizations with complementary capabilities, made to advance innovation through multiple pipelines and help life-changing products reach patients.

Single Ventricle SOURCE Launches to Close Data & Research Gaps

In December 2024, we launched one of the most ambitious initiatives in Additional Ventures’ history: **Single Ventricle SOURCE**, a first-of-its-kind, IRB-approved genomic sequencing study aimed at uncovering the causes of single ventricle heart disease and related comorbidities.



With a goal of enrolling at least 10,000 single ventricle patients and family members combined, SOURCE will be the world’s largest genomic and clinical dataset of single ventricle patients and families, bridging a historically unfilled gap in single ventricle science. Key to achieving these enrollment goals was our decision to maximize accessibility by offering multiple enrollment pathways — a direct-to-participant portal and in-clinic enrollment — and integrating samples and data from existing datasets.

With the support of IQVIA, Gencove, Gene by Gene, and Boston Children’s Hospital, we built SOURCE

with participants’ data privacy and researchers’ data utilization as priorities. In order to encourage widespread data use and analysis, we deemed it critical to minimize longstanding barriers to data access and are building a data set that all researchers will be able to access freely and simply.

With this study, Additional Ventures is igniting a new era of discovery poised to redefine how we understand and treat — and ultimately, cure — single ventricle heart disease.





Research powered by Additional Ventures



“

When patients and families, their doctors, researchers, and individuals who are experts in statistics and big data come together with a common purpose of making things better, all sorts of really smart ideas can grow.

Jane Newburger, MD, MPH
Boston Children's Hospital

“

We launched SOURCE, our landmark genomics initiative designed to create the most comprehensive clinical and genetic dataset for single ventricle patients and families to date — an effort met with enthusiasm across patient, research, and clinical communities.”

Erin Hoffman
Executive Chairman and Founder
Additional Ventures



A \$13M Commitment: Transforming Single Ventricle Research & Catalyzing Discovery through Partnership

In a landmark partnership with the American Heart Association (AHA), Additional Ventures launched a \$13 million initiative to ignite bold scientific inquiry into the most pressing challenges facing people with single ventricle heart disease.

The Collaborative Sciences Award (CSA) program was designed not just to fund research, but to accelerate a new era of innovation, powered by community, creativity, and collaboration.

Selected from a highly competitive pool of applicants, five multidisciplinary teams now form a national network united by a shared goal: to disrupt conventional thinking and uncover transformative insights into the complex biology and long-term complications associated with single ventricle physiology.

The CSA encourages high-risk, high-reward science — fueling pioneering approaches and equipping visionary scientists with the support they need to explore uncharted territory. We are creating a research ecosystem defined by trust, transparency, and the collective pursuit of breakthrough knowledge. Together, these exceptional teams are poised to redefine the future of single ventricle care.



The collaboration between Additional Ventures and the American Heart Association serves to enable larger research funding grants, broadens the reach to potential eligible investigators, enhances collaboration between investigators of diverse disciplines, and strengthens our combined voice about the needs of our single ventricle population. Plus, it has been a lot of fun to work together.”



Mariell Jessup, MD, FAHA
Chief Science and Medical Officer
American Heart Association

Image: Immunofluorescence of liver tissue in the Fontan sheep captured by Christopher Breuer’s lab at Nationwide Children’s Hospital

2024 AHA/AV Collaborative Sciences Award Recipients



Elucidation of the Mechanisms Underlying the Development and Progression of Fontan Associated Liver Disease

- Christopher Breuer, MD – Nationwide Children’s Hospital
- John Kelly, MD – Nationwide Children’s Hospital
- David Brigstock, PhD – Nationwide Children’s Hospital
- Mike Davis, PhD – Emory University



PULSE-SVA Network: Personalized Understanding from Linked Simulations & Electrophysiology in Single Ventricle Arrhythmia

- Isabelle Deschênes, PhD – Ohio State University
- Stacey Rentschler, MD, PhD – Washington University in St. Louis
- Patrick Boyle, PhD – University of Washington
- Mingtao Zhao, PhD, DVM – Nationwide Children’s Hospital



Correcting Latent Mechanisms that Underlie Neurodevelopmental Disorders Associated with Congenital Heart Disease

- Casey Gifford, PhD – Stanford University
- Christina Theodoris, MD, PhD – The J. David Gladstone Institutes
- Elizabeth Crouch, MD, PhD – University of California, San Francisco
- Anshul Kundaje, PhD – Stanford University



The DEFEND Trial: Dapagliflozin or Empagliflozin for Fontan Exercise, QOL and Mitochondrial function

- Shelley Miyamoto, MD – University of Colorado
- Sarah Kelly, PsyD – University of Colorado
- Melanie Cree, MD, PhD – University of Colorado (not pictured)
- Roni Jacobsen, MD – University of Colorado



Consequences of Impaired T Cell Homeostasis in Single Ventricle Congenital Heart Disease

- Stephanie Nakano, MD – University of Colorado
- Anastacia Garcia, PhD – University of Colorado
- Jordan Abbott, MD – University of Colorado
- Julie Lang, PhD – University of Colorado

Our Awardees: The Heart of Progress in Single Ventricle Science

At Additional Ventures, we believe the engine of progress is people: brilliant scientists driven by curiosity, compassion, and the audacity to imagine a cure for single ventricle heart disease.

Our awardees are not only breaking scientific ground—they're building a future where innovation thrives, and cures once thought impossible become inevitable.

With each grant, we're investing in more than research. We're investing in momentum, in vision, and in a community of pioneers committed to solving one of the most complex challenges in cardiovascular medicine. Just this year, we funded \$26.5M across 32 new research awards, representing a dynamic mix of emerging and established leaders whose work is pushing boundaries of single ventricle science.

By the Numbers: Real-World Impact

Thanks to the dedication of our awardees, we're proud to share just a few powerful indicators of scientific and translational progress.

To date:

24
novel biomarkers and therapeutic targets identified

\$101M+
in follow-on funding secured by our researchers, amplifying the reach and longevity of their work

120+
peer-reviewed publications, expanding the knowledge base and inspiring further discovery across the field

Image: Endocardial cells (with false coloration) captured by Deepak Srivastava's Lab at the Gladstone Institutes



Lay Teng Ang, PhD (2022 Catalyst to Independence Awardee) has secured a tenure-track faculty position as Assistant Professor in the Stanford Department of Urology and Stem Cell Institute.



Sanjeev S. Ranade, PhD (2022 Catalyst to Independence Awardee) has secured a tenure-track faculty position as Assistant Professor at Sanford Burnham Prebys's Center for Cardiovascular and Muscular Diseases.



- 1 Lay Teng Ang PhD's lab is assembling blood vessels to vascularize 3D engineered heart tissue
- 2 Jian Shu, PhD's lab has found exciting connections between the placenta and heart development
- 3 Liming Pei, PhD's lab is focused on understanding the underlying biology and mechanisms of FALD
- 4 Andrew Cook, PhD's lab is generating high-resolution maps of single ventricle heart defects

SVIM 2024: Building the Future of Single Ventricle Science, Together

The Single Ventricle Investigator Meeting (SVIM) has solidified its place as the premier convening for the global single ventricle research community.



At our biennial gathering, we broke attendance records, forged new partnerships, and ignited bold scientific discourse that will shape the trajectory of discovery for years to come.

Across three dynamic days, SVIM 2024 brought together an unprecedented mix of scientists, clinicians, engineers, and organizations, each united by a singular purpose: to accelerate discovery and unlock new possibilities for individuals living with single ventricle heart disease.

SVIM 2024 was a representation of growth on multiple fronts. Attendance soared by 52% — a testament to the growing energy and momentum within this field — and over 25 leading organizations joined forces with us to infuse the conference with fresh ideas and interdisciplinary perspectives.

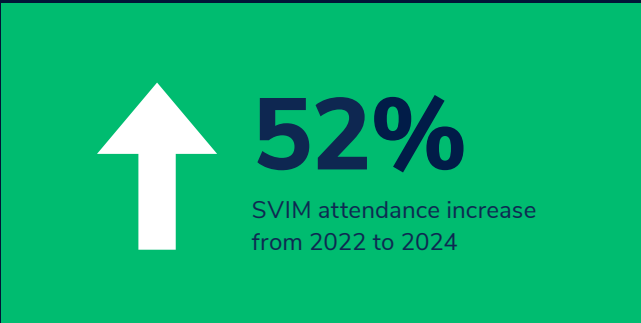
From cutting-edge omics and gene editing, to novel bionic solutions and data-driven discovery, SVIM 2024 showcased science at its most imaginative and impactful.

Highlights included:

- Deep-dive breakout sessions exploring emerging topics like biventricular repair strategies, heart failure definitions, and translational biobanking
- Hands-on Lunch & Learns that sharpened critical career skills from grant writing to data visualization
- Voices of patients and families who ensure that research remains grounded in real-world purpose



“
...This is one of the best conferences I’ve ever been to! The caliber of science is next level...”
Tasha Garcia, PhD



“
I am very impressed by the collegial environment... and how this became [an] open platform for new collaborations and thinking outside the box for a field that has been in need of that catalyst for a long time!”
Daniel Diaz-Gil, MD

JOIN US
FOR SVIM 2026!

Strategic Investments as a Tool for Curing Single Ventricle

Curing single ventricle heart disease demands more than cutting-edge research. It requires bold, strategic investment in the future of patient care. By backing visionary, product-focused companies, we activate new pathways for innovation, helping ensure that promising tools and therapies move swiftly from concept to clinic.

Our investment philosophy centers on alignment: we seek out organizations whose technologies, missions, and mindsets complement our own. Together, we're building a pipeline of solutions that not only revolutionize treatment, but truly transform lives.

A Landmark Moment: FDA Approval of the Minima™ Stent

In 2024, we deepened our strategic investment in Renata Medical, a trailblazing company reimagining cardiovascular tools for the smallest, most vulnerable patients. In August, Renata achieved a historic milestone: FDA approval of the Minima™ stent system — a first-of-its-kind pediatric stent designed to grow with children from infancy through adulthood. Not only does this novel stent address a longstanding gap in pediatric care — it also reduces the need for repeat interventions and improves long-term outcomes.

Our partnership with Renata doesn't stop at one breakthrough. Together, we are advancing a transformative new device: a transcatheter, growable Fontan shunt designed to evolve with the patient's body and reduce the burden of invasive surgery. If successful, this next-generation intervention could redefine what is possible in single ventricle care — offering a less invasive, more adaptable treatment option tailored to the lifelong needs of these complex patients.

Through these types of partnerships, we are building an ecosystem where engineering meets empathy, and strategic capital catalyzes real-world impact.



Renata Medical is honored to partner with those helping children born with congenital heart disease. The approval of the Minima Stent is a huge milestone for our company, achieving the goal of providing the first stent designed and approved for small, growing children that are unfortunately some of the most vulnerable and overlooked patients."

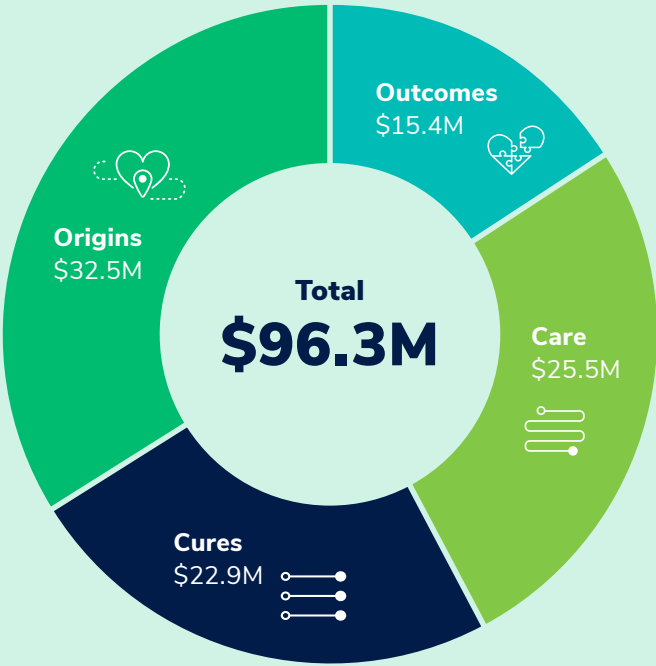


Dustin Armer
Co-founder and Chief Executive Officer
Renata Medical

Our Diversified Approach: Funding that Fuels the Future of Single Ventricle Science

At Additional Ventures, our unwavering commitment to curing single ventricle heart disease is reflected in everything we do — from nurturing a vibrant research community to supporting transformative science and seeding novel collaborations.

But nowhere is our ambition more clearly demonstrated than in our strategic, focused investment in the future of single ventricle research.



Since our founding in 2020, we have committed more than \$96 million to uncovering the fundamental biology, advancing innovative therapies, and improving the lives of those affected by this complex disease.

This diversified approach allows us to take the long view — investing across the entire research continuum and across disciplines — to both respond to emerging insights and proactively steer the field toward the most promising avenues for cures.

Our strategic funding priorities and investments comprise an interconnected ecosystem, where each grant, partnership, and convening strengthens the next. This structure gives us the unique ability to identify what's working now, what's likely to work next, and where bold investment can catalyze breakthroughs. By bridging discovery and delivery, and by empowering the best ideas at every stage of development, we are moving from possibility to inevitability.

“

With nearly \$100M invested since our inception, and a growing network of scientists, clinicians, and innovators aligned around a shared vision, we aren’t just imagining a cure — we are actively building the roadmap to achieve it.”



Elsy – Hypoplastic Left Heart Syndrome (HLHS)

From Our CEO

Our mission — to cure single ventricle heart disease — has never been more urgent, more focused, or more within reach.

We believe that the path to a cure is not linear. It’s built on strategic investment, scientific audacity, and a steadfast commitment to community. Every breakthrough we support, every collaboration we foster, and every patient story we hear reinforces our belief: progress is possible, and it’s happening now.

The milestones we’ve highlighted in this report aren’t endpoints; they are inflection points. Looking ahead to 2025 and beyond, we are entering a phase that demands bolder questions, deeper insight, tighter coordination, and sustained investment. It will take all of us — scientists, clinicians, engineers, patients, advocates, industry, and funders — to move from promising science to transformative solutions.

We are not alone in our work. We are backed by a community defined by its passion, dedication, and shared sense of urgency. With gratitude to our collaborators — past, present and future — we look ahead with clarity and conviction.

Our next steps aren’t tentative. They are resolute. Because with every discovery, data point, and idea cultivated into reality, we are not just imagining a cure. We are creating it.



Kirstie Keller
CEO, Additional Ventures

Additional Ventures Team

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Executive Chairman & Founder

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