

The background of the entire page is a dark blue color with a large, stylized, light blue graphic of a camera lens or shutter mechanism. The graphic is composed of several curved, overlapping segments that create a sense of depth and movement, resembling the blades of a camera shutter.

Leonhardt Ventures

The Engine of Innovation

Our 40th Anniversary Year
2022 Annual Report



Leonhardt Ventures

Annual Report

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Business and History

40 Years of Innovation

Timeline

- Leonhardt Ventures LLC founded in 1982 (formerly HJ Leonhardt & Co.)
- VascuStim developed 1987 (formerly MyoStim Peripheral)
- First muscle stem cell heart repair large animal with Dr. Kao and Dr. Magovern 1988
- World Medical Manufacturing Corp. founded 1988
- StentValve developed 1988
- PolyCath developed 1988
- TALENT stent graft developed 1991
- PENSIL intravascular lung developed 1992
- PRO-CELL stem cell delivery catheter developed 1993
- Radi-Cath electro magnetic delivery catheter developed 1994
- First ever percutaneous repair of aortic aneurysm Australia 1995
- BioPace founded 1999 (first large animals successful with W. King)
- Bioheart, Inc. founded in 1999 (\$76 million valuation IPO 2008)
- MyoCath and MyoCell developed 1999
- Leonhardt Vineyards founded in 1999
- Lucille's American Cafe's 50% acquired in 2000
- First in world muscle stem cell non-surgical repair human heart 2001
- Miami Morays Indoor Football team founded 2004

- Florida Frenzy Indoor Football team founded 2005
- Leonhardt's Launchpads Innovation Incubator and Accelerator founded in 2008
- OrthoStim founded 2008
- Valvublator, Inc. founded 2008
- AortaCell founded 2009
- Wine Country Baseball founded 2009
- Kindheart Lionheart Media & Publishing founded in 2010
- BioLeonhardt founded 2010 (formerly MyoStim Pacers, Inc.)
- CalXelerator founded in 2011
- California Stock Exchange TM founded in 2012
- Cal-X Stars Business Accelerator, Ind. founded in 2013
- Stem Cell Bra founded 2013
- KidneyCell, PancreaCell and LiverCell founded 2014
- DentaCell Accelerator Launched 2014
- TestiStim launched 2014
- RegenaLung founded 2015
- Leonhardt's Launchpads Utah, Inc. founded in 2015
- CerebraCell founded 2015 (spun out DepressiStim, MemoryStim, Brain-N-Hance, SpineStim, AddictiStim, Second Brain).
- ErectiStim by MyoStim ED founded 2015
- OrthodontiCell, Inc. launched 2015
- EyeCell founded 2016
- CancerCell founded 2016
- BladderCell and B-Alive founded 2017
- SkinStim founded 2017
- HairCell founded 2017
- BodStim by BioLeonhardt Whole Body founded 2017
- Second Heart Assist, Inc. founded in 2017 (formerly HePoc and StentPumo 2011)
- First ever placement of true aortic stent based pump in large animal Boston 2017
- InStim inflammation management startup launched 2028
- Leonhardt's Launchpads Brazil founded 2018
- Leonhardt's Launchpads Pittsburgh founded 2019
- First ever placement of true aortic stent pump in human 2019
- Leonhardt's Launchpads Australia founded 2020
- Lionheart Health, Inc. founded 2021

Some of our most exciting milestones achieved included...

OVER 700,000

patients served

OVER 700

patent claims

OVER 50

breakthrough
products developed

**50 PATENT
APPLICATIONS**

prepared since
March 15th, 2017

11 NEW PIONEERING PATENTS

issued by USPTO since May 2020
covering nearly 200 patent claims

603 NEW PATENT CLAIMS

pending at USPTO Now

In addition to our own patents we have licensed in over a **25** pioneering patents with another **350** patent claims.

These including a pioneering patent pending for klotho expressing mesenchymal stem cells.

11 issued U.S. patents for bioelectric cancer treatment and dozens of more patent claims pending.

Pioneering patents for bioelectric blood pressure management.

Pioneering patents and patents pending for anti-aging protein expressions including klotho, NANOG, sirtuins, follistatin and sestrins.

Pioneering issued patent for bioelectric stem cell homing, proliferation and controlled differentiation.

Pioneering issued patent for bioelectric inflammation management.

Pioneering patents issued for bioelectric driven accelerated teeth straightening and stabilization.

OVER \$160 MILLION

in capital raised for portfolio cos
since 1982 founding

OVER \$20 MILLION

raised for current portfolio of startups
and innovations since 2013

Over **35** Organ and Purpose Specific
Applications of our current core IP
Developed since 2008

Leonhardt inventions produce over **\$1.6 billion**
in annual revenues with our acquirers today
many with market leading position

Over **10,000** lab pre-clinical experiments in
developing intellectual property platform

Thousands of patients enrolled in clinical studies



Portfolio, Innovations and Therapies

LIFE SCIENCES

Heart & Cardiovascular Group

Second Heart Assist www.secondheartinc.com

Valvublator www.valvublator.com

BioLeonhardt www.bioleonhardt.com

PressureStim www.pressurstim.com

AortaCell, VascuStim, VibroCell.

Brain Neuroscience Group

Cerebracell www.cerebracell.com

DepressiStim www.depressistim.com

MemoryStim www.memory-stim.com

Second Brain www.secondbrainstim.com

SpineStim www.spine-stim.com

AddictiStim www.addictistim.com



Cosmetic and Personal Care Group

OrthodontiCell www.orthodonticell.com

MyoStim ED with ErectiStim www.erectistim.com

SkinStim www.skin-stim.com

HairCell www.haircellstim.com

Stem Cell Bra www.stemcellbra.com with BreastStim

TestiStim www.testistim.com

KlothoYears www.klothoyears.com

DentaCell Accelerator www.dentacellaccelerator.com
with **ImplantStim** www.implantstim.com

and **BreatheStim** www.breathestim.com with **ArchStim** www.archstim.com

Lionheart Health, Inc. www.lionhearthealthstim.com



Major Organ Regeneration Group

BladderCell www.bladdercell.com with **B-Alive** www.b-alivestim.com

OrthoStim Accelerator www.orthostimaccelerator.com with www.ortho-stim.com

BioLeonhardt Whole Body with BodStim™ www.bodstim.com

InStim www.instimcell.com

KidneyCell www.kidney-cell.com

RegenaLung with CovidStim

LiverCell www.livercellstim.com

PancreaCell

EarCell www.ear-cell.com

EyeCell www.eye-cell.com

Cancer Group

CancerCell www.cancercellinc.com Leonhardt's Launchpads - life science incubator

ACCELERATORS AND INCUBATORS

Leonhardt's Launchpads Brazil

Leonhardt's Launchpads NorCal

Leonhardt's Launchpads Minneapolis

Leonhardt's Launchpads Pittsburgh www.leonhardtpittsburgh.com

Leonhardt's Launchpads Utah, Inc.

Leonhardt's Launchpads Australia PTY

Cal-Impact www.cal-impact.com

DentaCell Accelerator LTP

OrthoStim Accelerator LTP

Leonhardt Food and Beverage

Cal-Impact Social Good Impact Innovation and Startup Launch Accelerator www.cal-impact.com

California Stock Exchange™ Kindheart Lionheart Media & Publishing

www.kindheartlionhearttv.com and www.kindheartionheart.com

CalXelerator www.calxelerator.com 108 day create to great accelerator

Cal-X Stars Business Accelerator, Inc. www.calxstars.com - Longer duration accelerator



2022 Letter to Shareholders

Our Mission – to lead the world in applying our core intellectual property in bioelectronics, biologics and endovascular delivery systems towards organ regeneration and healing and to apply a healthy portion of profits derived into new inventions and research as well as investment in social good impact innovations.

Dear Stakeholders,

In any given month there may be more than 500 team members and support personnel that have a hand in working on our breakthrough product developments and in serving our patients. It is the most joyous part of my position to get out and spend time with these dedicated and valued people. Their determination, tenacity, endurance are resolute and focused on serving patients. They do this in part by developing solutions to healthcare problems that have never been attempted before. They are distinguished to be true pioneers paving the way for better health with first of a kind technology advances. These individuals are committed to contributing something good to the world and it shows in their work and the spirit they bring into our culture. As Leonhardt Ventures LLC has evolved, since our founding in 1982, one thing that has not changed is that we remain committed and highly focused on creating breakthrough innovations that result in benefit for all our stakeholders especially patients around the world.

We are highly focused on applying our core platform technologies at the convergence of bioelectronics and biologics. These are one of a kind patented inventions in bioelectric signaling sequence controlled regenerative and healing protein expressions combined when needed with biologics for organ regeneration and healing. Our goal is to create better patient outcomes than other available choices.



Our team works relentlessly on continuous improvement of our products, organization and people every day. Our Board of Directors are actively engaged in strategic and financial oversight, including tracking our progress on our budgets and long term strategies. Most of all ensuring our portfolio of innovations are adequately funded to be fully developed. I want to thank the Board and our Executive Committees for their guidance, particularly in keeping intact our nimble, adaptable, turn on a dime innovation culture while implementing additional check and balance control measures. A corporate culture that creates many leaders and motivates team members to persevere through daunting obstacles to get our inventions to market where they can help improve and save the lives of millions forward. To help our people stretch their comfort zones to achieve more in less time than they ever dreamed possible.

Top Major Progress Highlights for the Year **2022**

#1 PIONEERING BIOELECTRIC KLOTHO PATENT ISSUED! POTENTIALLY MOST IMPORTANT DISEASE AND PRE-MATURE AGING PREVENTION CIRCULATING PROTEIN EVER DISCOVERED!

Pioneering U.S. patent issued for bioelectric controlled expression of klotho. Over 3400 published papers document that low levels of circulate klotho are associated with accelerated aging and nearly all aging related ailments.

#2 PIONEERING PATENT FILED TO FIGHT BACK DIABETES!

Pioneering U.S. patent based on pre-clinical data filed for combination FABp4 and Klotho bioelectric expression control for fighting back diabetes both Type I and Type II.

#3 PIONEERING KLOTHO EXPRESSING MESENCHYMAL STEM CELL PATENT LICENSED. COULD BE A KEY TOOL IN FIGHTING BACK DISEASE AND AGING!

Exclusive license to pioneering patent for klotho expressing mesenchymal stem cells in combination with any bioelectric therapy.

#4 PIONEERING PATENTS FILED FOR BRAIN RECOVERY INCLUDING BIOELECTRIC CONTROLLED EXPRESSION OF BDNF, SEROTONIN, STEM CELL HOMING, KLOTHO, SIRTUINS, SESTRINS AND GDF10 AND GDF11. CLINICAL TRIALS TO LAUNCH IN 2023.

Pioneering patent application filed for treating multiple brain disorders including memory loss, depression, addiction, stroke and traumatic brain injury based on extensive pre-clinical data from our own labs. A series of Brain Band TM prototypes were developed and tested in 2022 and are now poised to enter clinical trials in 2023 starting with DepressiStim www.depressistim.com and MemoryStim www.memory-stim.com. DepressiStim was selected for the UCI Engineering Capstone program and now has 4 Masters of Engineering UCI students helping with the next generation Brain Band TM development.

#5 2ND BLADDERCELL CLINICAL TRIAL

Our Leonhardt's Launchpads Brazil team led by Dr. Cristiane Carboni led the completion of a 2nd BladderCell clinical study at the University of Lasalle where our founder Howard J. Leonhardt has been honored by being named an official Associate Professor of Innovation, Entrepreneurship and Biomedical Technologies.

#6 PIONEERING PRESSURE-STIM BIOELECTRIC BLOOD PRESSURE CONTROL CLINICAL STUDY LAUNCHED WITH IRB APPROVAL

Our PressureStim team launched a clinical study in Brazil following our multiple issued U.S. patent for bioelectric blood pressure control. This therapy may be a great alternative to costly hypertension drugs that have many side effects. This team also landed a large research grant to help support these on going studies in Brazil.

#7 STEM CELL BRA BREAST-STIM CLINICAL TRIAL COMPLETED

Our Leonhardt's Launchpads Europe team based in Amsterdam, The Netherlands led by Henk Abbink helped led the completion of a 15 patient clinical study for Stem Cell Bra/BreastStim in Spain. Results are set to be presented at upcoming conferences and include 33% of patients had one full cup size increase of breast volume with wearing the bioelectric bra just 1 hour every other day for only 4 weeks. Another 33% had 10% increase in volume and the bottom 33%, the skinniest patients enrolled in the study, did not experience breast volume increase. No adverse effects were reported. This study follows a previous low dose safety clinical study and years of large animal safety studies.

#8 PIONEERING PATENT FILED FOR BIOELECTRIC CONTROLLED EXPRESSION OF SIRTUIN FAMILY OF PROTEINS. ONE OF THE MOST POWERFUL ANTI-AGING AND DISEASE PREVENTION PROTEINS EVER DISCOVERED.

After extensive gathering of pre-clinical data our team filed a pioneering patent covering the bioelectric controlled expression of the sirtuins family of proteins.

#9 FLAGSHIP HEART AND CARDIOVASCULAR PORTFOLIO PRODUCTS ADVANCE FORWARD TO NEXT STAGE OF STUDIES

BioLeonhardt, Valvublator and Second Heart Assist, Inc. all advanced forward their development programs all poised for another round of clinical studies in 2023. BioLeonhardt and Valvublator secured a large credit line from California Medical Innovations Institute/AcuLab in San Diego to complete final pre-clinical large animal studies in March that we hope will lead to clinical studies for total heart and heart valve regeneration later in 2023. Second Heart Assist, Inc. successfully executed on the switch to a full scale cGMP ISO certified high volume manufacturing facility and completed development of a new generation motor controller alarm box. It will be completing in January a new round of large animal studies with the devices produced in the new certified factory at T3 in Atlanta in preparation to launch a cardio-renal syndrome heart failure clinical study in February in North America. All three of these products each have the potential to reach over \$1 billion in annual sales forward when introduced on the market. Valvublator completed development of its 2nd generation product system prototypes that feature klotho expression technology to prevent heart valve re-calcification after de-calcification.

#10 LIONHEART HEALTH, INC. LAUNCHED AS SALES AND DISTRIBUTION COMMERCIALIZATION ARM FOR SELECT LEONHARDT VENTURES LLC PRODUCTS

Lionheart Health, Inc. is recruiting top notch experienced people in marketing, sales, distribution, product launches, influencers, SEO, social media and more to prepare to launch a number of products on the USA market in 2023 including BodStim, SkinStim, HairCell and ErectiStim. The company also has laid out plans to being opening up their own proprietary Lionheart Health Longevity and Wellness MedSpas and franchises that feature Leonhardt Ventures LLC patented technologies. The first one is scheduled to open in 2023 in Porto Alegre, Brazil with the help of Leonhardt's Launchpads Brazil.

#11 CANCERCELL LTP SURPASSED 12 ISSUED U.S. PATENTS FOR BIOELECTRIC CANCER TREATMENT WITH DOZENS OF MORE PATENT CLAIMS PENDING AND IS SET TO LAUNCH CLINICAL TRIALS IN EARLY 2023

CancerCell www.cancercellinc.com believes its bioelectric therapy designed to jam tumor communication, change surface proteins and electrical charge of tumor surfaces to illicit an immune response and starve a tumor of blood supply has the potential to be a great alternative for cancer patients competed to toxic chemo and radiation treatments. Klotho has been demonstrated to have tumor suppression properties and is now a key centerpiece of the CancerCell technology platform.

#12 BODSTIM™ BIOELECTRIC BODY SUIT LAUNCHED ON USA MARKET AND NEW LANDMARK CLINICAL STUDIES LAUNCHING!

Our Lionheart Health, Inc. team working with BioLeonhardt Whole Body successfully launched in the USA market and began filling first orders in 2022 for our BodStim www.bodstim.com bioelectric exercise suit. The product is FDA cleared for augmenting the benefits of exercise with greater muscle building in less time. This is accomplished in part by our proprietary bioelectric signals for controlled the release of circulating klotho from muscle tissue upon stimulation. The BodStim team is launching numerous clinical trials intended to expand labelling indications of use including a planned post heart failure discharge study at Cleveland Clinic the ranked #1 heart hospital in the world.

#13 KLOTHOYEARS CIRCULATING KLOTHO LEVELS TEST LAUNCHED ON USA MARKET

Our Lionheart Health, Inc. in 2022 executing on the BETA test launch of our KlothoYears www.klothoyears.com circulating klotho blood test by KlothoBios LTP working in partnerships with AcuLab in San Diego and MyOnsite Healthcare.

#14 USA SKIN-STIM BIOELECTRIC ALONE SKIN REGENERATION STUDY COMPLETED

Our SkinStim www.skin-stim.com team working with Lionheart Health, Inc. completed in Orange County, California a 3rd clinical study on skin regeneration with high end analyzers to examine changes in wrinkles, inflammation, skin spots, collagen level and elasticity. After years of clinical studies this product is now moving to commercial launch in the USA and other markets.

#15 USA HAIR-CELL BIOELECTRIC ALONE HAIR REGENERATION STUDY LAUNCHED AND FIRST RESULTS ARE IN

Our HairCell www.haircellstim.com team working with Lionheart Health, Inc. completed the first pilot clinical cases with bioelectric stimulation as a stand alone therapy with sophisticated analysis devices and methods. The results were 16.7% increase in hair density with only 2 short treatments a week for 4 weeks. This product now after years of study is moving to commercial launch in the USA and other markets.

#16 3rd EYE-CELL CLINICAL STUDY LAUNCHED IN USA

Our EyeCell www.eye-cell.com team launched its 3rd clinical trial in the USA after receiving IRB approval. Results should be ready by June 2023 for presentation.



Financial Highlights

\$3.7 million invested into our accelerator program Cal-X Stars Business Accelerator, Inc. by investors under 2:1 terms has reached > **\$50 million** in market value.

Valuations have been audit tested 4 times by Morgan Stanley and CARTA validating well our valuation determination methodology.

Featured Portfolio Holdings

Increase in ROI Value Spotlights

- Portfolio startup **BladderCell™ with B-Alive™** has increased **500% in ROI value since 2017**. BladderCell finished their 2nd clinical study in 2022 and is preparing to launch a 3rd and 4th study with longer duration bioelectrics treatments, pelvic stimulation pants and one arm that includes biologics injections for bladder dysfunction recovery.
- Portfolio startup **Second Heart Assist, Inc.** shares have increased **8000% or 80X in ROI value since 2017**. Second Heart Assist, Inc. has surpassed \$16.3 million in capital raised in on the brink of launching the 2nd clinical study.
- Portfolio startup **OrthodontiCell, Inc.** shares have increased **800% in value since 2017** and is on the brink of launching their U.S. Phase II pivotal study which is following a highly successful pilot study where the team demonstrated an ability to help 60% of patients achieve perfectly straight teeth at 3 months and 100% at 6 months. This compares favorably to 18 to 24 months average straightening time for Invisalign™ alone.
- **ErectiStim™** by **MyoStim ED LTP** shares have increased **1500% in ROI value** since 2017. ErectiStim™ has achieved 89% success in treating over 100 patients so far in clinical studies and is preparing to launch on the USA market.

By comparison the S&P 500 has dropped close to 23% in value in 2022 and 2017 through 2022 bull market returns of S&P 500 stand at about 83% over a 7 year hold of stocks.

2022 Top Highlights by Product Groups

Heart & Cardiovascular Group



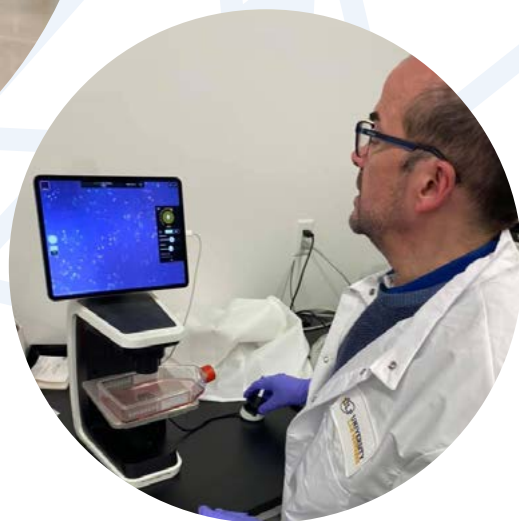
www.bioleonhardt.com launched a series of new pre-clinical studies for its total heart regeneration product development and landed numerous new patents and filed hundreds of new patent claims.



www.secondheartinc.com filed patent applications for multiple improvements and made transition from R&D prototype production to full scale cGMP production. New generation product line includes multiple impellers that open with no cam shat system, a low hemolysis auger shaped impeller made of silicone, a back pressure system to promote more flow into kidneys and bioelectric elements to control kidney and heart recovery promoting protein expressions in combination with circulatory assist support and a combination pulsatile graft in the upper aorta with our impeller stent pump in the lower aorta permitting higher flow at less RPMs with less hemolysis. We also filed multiple patent claims for improvement to our wireless powered Freedom TM chronic implant.



www.valvublator.com finished development of Valvublator II prototypes and began a new round of pre-clinical tests in preparation for first in human studies.



 **PRESSURESTIM**
BIOELECTRIC TREATMENT BLOOD PRESSURE

www.pressurestim.com is currently enrolling in a clinical trial in Brazil and hopes to publish results soon.

 **AortaCell**  **VASCUSTIM**
RESTORING LIMB BLOOD FLOW. SAVING LEGS.

 **VibroCell**

AortaCell, VascuStim and VibroCell all advance forward new patent claims prosecution with the USPTO with a number of new patent claims issued in 2022 and more pending.

NeuroScience Brain Group



DepressiStim - www.depressistim.com completed numerous pre-clinical studies and filed numerous new patents claims in preparation of launching clinical studies this coming quarter. Patent filings included bioelectric controlled expression of BDNF, GDF10, GDF11, serotonin and other brain related proteins and hormones. DepressiStim is preparing now a pre-IDE filing with the FDA. DepressiStim was selected for UCI Engineering Capstone program with 4 Masters in Engineering students assigned to the project.



TremorStim - www.tremorstim.com is preparing to launch a multi-center clinical trial for its combination device therapy for essential tremor in 2023. A full clinical protocol has been designed and is being reviewed before submission to IRBs for clearance.



SpineStim - www.spine-stim.com is preparing for a 2nd clinical study with longer duration treatment in partnership with BodStim our bioelectric body suit startup.



CerebraCell, Brain-N-Hance, AddictiStim, MemoryStim and Second Brain all advanced forward patent filings and pre-clinical data gathering in preparation for clinical trials. Second Brain filed patent claims on bioelectric controlled expression of serotonin production.



Cosmetic and Personal Care Group

SkinStim, **HairCell**, **ErectiStim** and **BodStim** are launching on the USA market in 1Q 2023 with the help of Lionheart Health, Inc.



SkinStim™ - www.skin-stim.com completed additional successful clinical cases in 2022 and filed numerous new patent claims on top of the multiple USPTO issued patent claims already received over the past 24 months. The product is launching on the USA market in 1Q 2023. We believe this is the only product that combines bioelectric controlled release of COL17A1, klotho, follistatin, COL1, COL3 and tropoelastin for better skin health.



HairCell™ - www.haircellstim.com completed additional successful clinical cases in 2022 and filed numerous new patent claims on top of the multiple USPTO issued patent claims already received. The product is launching on the USA market in 1Q 2023. Clinical studies demonstrated 16.7% improvement in hair density with only 2 short duration stimulation treatments a week for 4 weeks.



ErectiStim™ by MyoStim ED - www.erecstistim.com - after years of clinical studies since 2017 in hundreds of patients demonstrating > 80% success rate and no adverse events the product is now launching on the USA market in 1Q 2023. We believe this is the only male sexual health product that addresses new blood vessel growth and muscle plus nerve regeneration in combination.



BodStim™ by BioLeonhardt Whole Body - www.bodstim.com - is launching on the USA market 1Q 2023. We have demonstrated in years of pre-clinical and clinical studies and ability to increase release of klotho and follistatin in tissues and cells.

Major Organ Regeneration Group



EyeCell - www.eye-cell.com started enrollment in our 3rd clinical study in the USA.



BladderCell - www.bladdercell.com with B-Alive www.b-alivestim.com completed their 2nd clinical study and is preparing to enroll in a 3rd study with longer duration treatments. The team landed numerous new patents claims in 2021 and 2022 and has filed dozens or new patent claims which are pending.



KidneyCell - www.kidney-cell.com is preparing to enroll in their 3rd clinical study this time with our new signals and longer duration treatments.



Stem Cell Bra - www.stemcellbra.com completed its 2nd clinical study this time with stimulation 1 hour every other day for 4 weeks. 33.3% of treated patients achieve one full cup size improvement in breast volume, 33.3% achieved 10% increase in breast volume and 33.3, the most thin patients, did not achieve increase in breast volume with bioelectric stimulation alone. Stem Cell Bra is planning longer duration and higher intensity treatment clinical studies in 2023 as well as a study including biologics injections and fat grafting.



Cancer Group



CancerCell - www.cancercellinc.com surpassed 11 issued U.S. patents for bioelectric cancer treatment in 2022 and has dozens of additional patent claims pending. The team is preparing to enroll in its first bioelectric cancer tumor suppression study working in partnership with BodStim™ www.bodstim.com in early 2023 in Brazil.





Incubators and Accelerators



Leonhardt's Launchpads - R&D lab access based incubator program founded in 2008. Based in Irvine, CA at University Lab Partners Beall UCI Cove Applied Innovation Center. Branches for expanded R&D partnerships in Australia, Minneapolis, Pittsburgh, Utah, The Netherlands and Brazil. Founded in 2008 in California. Since 2017 operations have been managed by partner Cal-X Stars Business Accelerator, Inc.



CalXelerator- www.calxelerator.com - 108 day create to great mentorship based life sciences and social good impact accelerator program. Founded in 2011 in California.



Cal-X Stars Business Accelerator, Inc. - www.calxstars.com - Long duration innovation and startup launch accelerator now focused on technologies at the convergence of bioelectrics, biologics and endovascular systems. Startups or innovations graduate at 5 years or upon completion of first in human studies. Business model is accelerator gets 9% non-dilutive seed stage equity in exchange for supporting startup or innovation through first in human studies with multiple forms of support. Accelerator also has pre-emptive right to purchase up to 20% ownership right up to graduation. Founded in 2013 in California .



DentaCell Accelerator LTP - www.dentacellaccelerator.com - Long duration sub- accelerator focused on dental related innovations including those for orthodontists, periodontists and endodontists.



OrthoStim Accelerator LTP - www.orthostimaccelerator.com - Long duration sub-accelerator focused on orthopedic related innovations.



Cal-Impact - www.cal-impact.com - Social good impact innovation and startup launch accelerator. Founded in 2013.



Advancing our
commitment to be a
leader in innovation
for 4 decades

In 1982 the year of our founding, we declared a bold ambition: to become a global Innovation leader in healthcare technology. Today 40 years later our team remains committed to developing one of a kind innovations that can improve longevity and wellness. Inventions that can transform healthcare for the better.

In 1987 working with Dr. Robert O. Becker, late author of the book Body Electric, as a valued advisor we launched our first bioelectric stimulation product. That led to a landmark publication in 1999 in Circulation working with Dr. Shinichi Kanno.

In 1988 we introduced StentValve one of the first systems to place heart valves with a catheter based system instead of surgery. That led to issued patent claims in the 1990s. They, the so called experts of that time, told us in 1988 the idea would never work. Today more heart valves are replaced with catheter systems than open chest surgery and the percutaneous heart valve industry is valued at over \$100 billion.

In 1991 we developed the first percutaneous stent graft system, the TALENT stent graft. It was initially rejected by the experts. Today that device has the world leading market share for repair of aortic aneurysms without surgery.

In 2001 we led a team that competed the first first ever non-surgical repair of a human heart with muscle stem cells.

In 2008 we led the one and only U.S. based biotech IPO in the USA that year. That same year we founded Leonhardt's Launchpads, an innovation incubator in California, to explore if everything we learned in over 2.5 decades of research on heart regeneration, limb salvage and endovascular delivery systems could be applied to other organs.

Since 2008 more than 35 applications have been developed supported by our incubator accelerator ecosystem. 4 of those are moving to market launch in 1Q 2023 after years of studies to validate protein expression control, safety and efficacy.

1. **SkinStim™** www.skin-stim.com for skin regeneration.
2. **ErectiStim™** www.erectistim.com for male sexual health.
3. **HairCell™** www.haircellstim.com for hair regeneration.
4. **BodStim™** www.bodstim.com for augmenting the benefits of exercise.

In 2019 our portfolio company Second Heart Assist, Inc. completed the first in human cases with a true aortic stent based circulatory assist pump.

An innovation culture that produces a robust pipeline with deep investments in R&D

Our team believes in rapid prototyping and continuous improvement. We encourage bold innovation. Experimentation is the life blood of our organization.

The Leonhardt Ventures pipeline includes over 35 applications of its core organ regeneration and healing technologies >> <https://leonhardtventures.com/development-pipeline>

Over 75% of the \$20 million we have raised for current portfolio of startups and innovations and has gone into R&D or supporting R&D.

ADVANCING THE MISSION

We're certainly proud of our record of saving and improving hundreds of thousands of lives over our history led by unique breakthrough innovations. Our research team must be recognized with distinction for the hundreds of pioneering patent claims we have landed. Developing products that the world never knew before with capabilities never demonstrated before. However, the job is not done. Too many people with failing organs are not brought back to a full quality of life or their lives are lost with existing technology choices. Cancer patients continue to suffer with the harsh toxic side effects of chemo and radiation treatments. The healthcare system and society needs to get more engaged in promoting longevity and wellness before serious chronic disease becomes debilitating.

Our goal in simple terms is to regenerate human organs and full bodies the way they were built in the first place with living cells, biologics and precise bioelectric signaling instructions. To help people keep their own organs instead of getting a steel, cow, pig, plastic or cadaver implant.

These past years we have laid the foundation to seize this opportunity. The incredible opportunity to lead the human race into a healthier future. Our determination to see this noble vision through is demonstrated in the hard work our team members put in every day. We are grateful to all that have joined us in this journey. We could not be more excited about our future and the future of all of mankind.

Howard J. Leonhardt

Executive Chairman

& Chief Executive Officer

Leonhardt Ventures LLC



Our Breakthrough Therapies

and Disease States to Be Treated

Heart & Cardiovascular Group

<https://leonhardtventures.com/heart-and-cardiovascular/>

1. Circulatory assist support cardio-renal syndrome.
2. High Risk PCI
3. Total heart regeneration.
4. Heart valve regeneration and calcification prevention.
5. Bioelectric blood pressure control.
6. Accelerated wound healing critical limb ischemia. Diabetic ulcers.
7. Limb salvage.
8. Prevention of blood clots.
9. Aorta regeneration - aortic aneurysm treatment.
10. Biologic pacemaker - electrical abnormalities heart.

Brain NeuroScience Group

<https://leonhardtventures.com/brain/>

1. Depression recovery.
2. Memory improvement.
3. Addiction treatment.
4. Stroke recovery.
5. Traumatic brain injury recovery.
6. Cognitive function improvement.
7. Gut microbiota health improvement - immune system and brain mood.
8. Spinal injury recovery.
9. Essential tremor.

Cosmetic & Personal Care

<https://leonhardtventures.com/cosmetic-and-personal-care/>

1. Skin regeneration.
2. Hair regeneration.
3. Breast volume augmentation.
4. Sexual health.
5. Accelerated teeth straightening.
6. Testosterone management.
7. Dental implant accelerated healing.
8. Better breathing - sleep apnea.
9. Biological age testing - klotho and more.
10. Accelerated dental procedure healing.

Major Organ Regeneration

<https://leonhardtventures.com/major-organ-regeneration/>

1. Vision recovery.
2. Diabetes - pancreas recovery.
3. Joint recovery - knees, hands, shoulders etc.
4. Liver regeneration.
5. Kidney regeneration.
6. Hearing recovery.
7. Bladder function recovery.
8. Whole body regeneration.
9. Muscle atrophy.
10. Chronic inflammation recovery.
11. Lung regeneration.
12. Covid 19 recovery.
13. Viral infection treatment.

Cancer

<https://leonhardtventures.com/cancer-treatment/>

1. Breast cancer.
2. Brain cancer.
3. Colon cancer.
4. Esophageal cancer.
5. Multiple myeloma cancer.
6. Skin cancer.
7. Cervical cancer.
8. Pancreatic cancer.
9. Liver cancer.

