

**2010  
ANNUAL  
REPORT**



**MISSION OF THE  
ST. LOUIS ARCH ANGELS**

OUR MISSION IS TO PROVIDE  
OPPORTUNITIES FOR OUR  
MEMBERS TO OBTAIN  
OUTSTANDING FINANCIAL  
RETURNS BY INVESTING IN  
EARLY-STAGE COMPANIES WITH  
HIGH GROWTH POTENTIAL IN  
THE ST. LOUIS REGION AND  
HELPING THEM TO ACHIEVE  
MARKET LEADERSHIP.

## *From the Chairman*



Despite the continued sluggishness of the economy and its impact on the overall risk appetite of investors, in 2010, the St. Louis Arch Angels network increased the number of investments made compared to 2009. Now in our sixth year, we have grown to include 47 members, fielded pitches from close to 600 start-up companies and made investments approaching a total of \$23 million in 24 companies.

This past year, we began to see the positive effects of investors, academic institutions, growth associations and incubators all working together. It's reflected in the quality of the applications we're seeing from the St. Louis market. We also are seeing some common threads within the many companies we are funding: very professional presentations, high-quality business plans, solid prototypes and substance behind the presentations. But we would always like to see even more quality applications.

The greatest challenge consistently proves to be the lack of a proof of concept fund and a seed fund to nurture entrepreneurial ventures to the point that they make sense for angel investors. Entrepreneurs' typical path to success follows a ladder approach, utilizing resources such as St. Louis SourceLink, tapping the mentoring services of organizations such as Innovate St. Louis, the Center for Emerging Technologies and the St. Louis County Incubators. They need to attract proof of concept funds and seed funding before seeking Angel investments and ultimately venture funding. Missing any critical rung in the early stages makes it hard for start-ups to leap to the angel investor step. Support from the State of Missouri to stimulate investment in start-up companies would be another key factor for them to grow and thrive. Growing our own investor network as the economy rebounds also will help to ensure that we can fulfill our potential.

Looking ahead to 2011-2012, the Arch Angels remain optimistic that during this timeframe, many of the missing pieces can be supplied. In the meantime, we invite you to review our latest Annual Report, which details the recent progress we, along with the companies we have invested in, have made.

Sincerely,

A handwritten signature in black ink, appearing to read "Gilbert Bickel". The signature is fluid and cursive, written over a white background.

Gilbert Bickel  
Chairman

## ABOUT THE ST. LOUIS ARCH ANGELS

Established in January 2005, the St. Louis Arch Angels is an independent, not-for-profit 501c(6) corporation. The network was organized with the support of the St. Louis Regional Chamber and Growth Association and the Nidus Center for Scientific Enterprise. The Arch Angels are a part of the region's seed to later stage equity capital continuum and target an investment range of \$250,000 to \$1,000,000, which is generally underserved by institutional venture capital firms. Because of this, our network is an important addition to the region's capacity to finance innovation emerging from entrepreneurs, universities and technology incubators.

Our members are all accredited investors from the St. Louis region. They have significant experience in a variety of fields as entrepreneurs, CEOs, venture capitalists and business leaders who have founded, funded and built companies. We mentor and coach the entrepreneurs we invest in, serving on their boards, providing contacts and assisting them with team building, strategic planning and fundraising.

Members do not invest in a pooled fund, but rather commit to invest a minimum of \$50,000 a year directly in startup companies with other members of the network. Members always invest under the same terms and conditions. The network's activities are guided by its bylaws and rules of membership.

A network of private investors, the St. Louis Arch Angels is governed by a board of directors composed of the following officers:

Chairman: Gilbert Bickel

President: Dr. Robert J. Calcaterra

Secretary: Thomas M. Walsh

Treasurer: William C. Rusnack



## ABOUT ANGEL INVESTING

THE ST. LOUIS ARCH ANGELS  
BENEFIT ENTREPRENEURS  
THROUGH EXPOSURE TO A  
LARGE SET OF POTENTIAL  
INVESTORS AND A STRUCTURED  
PROCESS THAT FACILITATES A  
RELATIVELY QUICK INVESTMENT  
DECISION. ANGEL INVESTING  
REPRESENTS A SIGNIFICANTLY  
LARGER AND GROWING PORTION  
OF EARLY-STAGE CAPITAL  
AVAILABLE TO STARTUP  
COMPANIES.

## LIST OF COMPANIES FUNDED

### AISLE411

aisle411 is the first-to-market mobile shopping application that allows consumers to find and map product locations in retail stores, providing users with digital coupons, product information and social gaming rewards that connect them with friends on social networks. Users can think of the application as "Google Maps inside the store for products, with social gaming rewards." In 2010, aisle411 launched its iPhone app, and in 2011, it will launch an Android and Blackberry app. aisle411 is generating revenues from major brands and is now in 1,000 locations across the country with plans to grow to 5,000 or more locations by the end of 2011. aisle411 is the future of mobile in retail.

[www.aisle411.com](http://www.aisle411.com)



*Arch Angels Investment: \$310,000*

### AKERMIN

Akermin's core technology is a unique methodology to protect and enable robust enzyme performance in harsh industrial environments. The company's focus is to develop an economical enzyme-driven system to capture greenhouse gas in large industrial processes, such as flue gas from power plants. Akermin's primary goal in 2011 is to build, test and optimize bench scale prototypes to establish systems design and confirm economic advantage. Akermin will also continue the development of its biofuel cell prototype and testing to establish final design for the military in 2011.

[www.akermin.com](http://www.akermin.com)



*Arch Angels Investment: \$2,750,000*

### APPISTRY

The Appistry CloudIQ Platform applies cloud architectures to large-scale data storage and processing challenges. CloudIQ enables "computational storage," which unifies applications and data, eliminating the gap that traditionally divides the two. By offering a new level of scalability, elasticity and reliability for data-intensive applications, Appistry allows enterprises to quickly turn raw data into actionable intelligence in a way that is faster, better and cheaper than ever before.



Appistry's customers include FedEx, government intelligence agencies, State Street Bank, GeoEye and Northrop Grumman, among others.

[www.appistry.com](http://www.appistry.com)

*Arch Angels Investment: \$1,950,000*

### CARDIALEN

CardiaLen is developing a low-energy implantable atrial cardioverter for pain-free cardioversion of atrial fibrillation (AF). The company will commercialize these devices to address unmet needs in AF therapy, improve outcomes and reduce stroke and heart failure risk. Pain-free atrial cardioverters will add a new segment to the \$12B global market for cardiovascular implantable devices. This device will add a new option for a significant number of drug refractory and persistent AF patients unsuited to catheter ablation. Ablation has proven to be ineffective for a high percentage of patients. Physicians, patients and insurers will enjoy shorter procedures, favorable reimbursement and lower costs.



CardiaLen successfully completed acute dog studies in 2010, and in fall 2011 expects to select its first in-man site and begin human studies.

[www.cardialen.com](http://www.cardialen.com)

*Arch Angels Investment: \$475,000*

## CLEARENT

Clearent is a payment processor whose proprietary technology and responsive support enables financial institutions, sales agents and merchants to maximize the value of their merchant services program. Clearent's intuitive, web-based systems are simple to use and provide at-a-glance business intelligence not available from other providers. The company has consistently grown in excess of 100 percent per year and now processes over \$1 billion in card volume annually.

[www.clearent.com](http://www.clearent.com)



*Arch Angels Investment: \$1,000,000*

## COGNO

Cogno is a multimedia children's brand that inspires kids ages 7-13 to think critically and imaginatively in science and math. Cogno's brand position has been described as "Star Wars" meets the "Magic School Bus." Bill Nye The Science Guy® wrote a foreword for the Cogno novel series, and the business was featured in The Wall Street Journal. After winning 25 national product awards, the company is pursuing IP licensing in television, books and virtual word licensing.

The company continues to grow its internationally syndicated puzzlers for classrooms, now reaching over 450,000 children weekly.

[www.cogno.com](http://www.cogno.com)



*Arch Angels Investment: \$240,000*

## DIVERGENCE

Divergence, an agricultural biotechnology company, was acquired by Monsanto in February 2011 with the discovery of new classes of fungicidal chemistry.

[www.divergence.com](http://www.divergence.com)



*Arch Angels Investment: \$127,500*

## EDUNN BIOTECHNOLOGY, INC.

Edunn Biotechnology, Inc., is a drug development company, incorporated as a Delaware corporation, operating in St. Louis. Edunn's EDN-OL1 drug is designed to treat Alzheimer's disease, and its second drug, EDN-OL202, is designed to treat traumatic brain injury.

Edunn won an NIH – Rapid Access to Interventional Development project award that will utilize NIH contract resources to complete manufacturing and toxicology required for EDN-OL1 to go into a Clinical Phase 1 trial. NIH-RAID usually spends \$1.5 – \$2.5 million per project and does not provide funds to Edunn. The company's 2011 goals include negotiation of the first award letter ever issued by RAID and adding its project to the RAID website. Edunn will prepare regulatory documents with the preclinical NIH data and will complete a pre-IND meeting with the FDA. The company will need to provide storage of clinical supplies and will continue fundraising, including with potential investors outside of Missouri.

[www.edunn.com](http://www.edunn.com)



Edunn Biotechnology, Inc.

*Arch Angels Investment: \$405,000*



■ "THE ST. LOUIS ARCH ANGELS ORGANIZATION CONTINUES TO BE AN EXTREMELY IMPORTANT SOURCE OF CAPITAL FOR EARLY-STAGE INNOVATIVE COMPANIES IN THE ST. LOUIS REGION. THEY INVEST ACROSS A BROAD RANGE OF TECHNOLOGY AND RETAIL SECTORS. IN 2010 BIOGENERATOR CO-INVESTED IN SEVERAL COMPANIES WITH THE ARCH ANGELS; THESE FUNDING PARTNERSHIPS ENABLED THOSE COMPANIES TO TARGET CRITICAL PROOF-OF-CONCEPT MILESTONES."

ERIC GULVE  
PRESIDENT  
BIOGENERATOR

## ENDOSTIM

EndoStim, Inc. is a medical device company developing a novel treatment for severe gastroesophageal reflux disease, or GERD. EndoStim's proprietary technology uses electrical stimulation to restore physiological function to the esophagus. The company has completed its acute studies and is currently set to gain European CE Mark of approval at the end of 2011. Approximately 12 million people in the U.S. suffer from severe GERD and lack an effective treatment. EndoStim was founded in 2009 in St. Louis, Mo.  
[www.endostim.com](http://www.endostim.com)



*Arch Angels Investment: \$610,131*

## GALERA

Galera Therapeutics, LLC is developing agents to prevent oral mucositis, a severe side effect of radiation therapy and chemotherapy. The agents not only address a significant unmet need in prevention of oral mucositis and other side effects, but also have direct anti-cancer activity. The market opportunity for these agents is greater than \$1B. The company has selected its lead clinical candidate and will be running Phase 1b/2a clinical trials in 2011 to establish human proof of concept in head and neck cancer patients undergoing radiation therapy.  
[www.galeratx.com](http://www.galeratx.com)



*Arch Angels Investment: \$250,000*

## GLOBAL VELOCITY

Global Velocity (GV) develops advanced technology to protect valuable digital assets. GV's products protect data in motion, including confidential and personal data such as health records, financial records, credit cards, social security numbers and any other proprietary data. GV's first commercial product, the GV-2010, implements three integrated cybersecurity applications – data loss prevention, application control and pattern recognition – in one extremely high speed device.



**globalvelocity**  
Next generation networking solutions

Global Velocity has received considerable attention in light of the continuing rise of cybercrime and the WikiLeaks controversy. The company was named a 2010 Security Innovation Network 20 Company, 2010 SC Magazine Security Innovator, 2011 CTOvision Disruptive IT List Company and 2011 MissionLink Company.  
[www.globalvelocity.com](http://www.globalvelocity.com)

*Arch Angels Investment: \$511,200*

## GRIDLOGIX

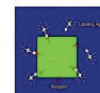
In 2009, Gridlogix was acquired by Johnson Controls, a global diversified technology and industrial leader serving customers in more than 150 countries.  
[www.johnsoncontrols.com](http://www.johnsoncontrols.com)



*Arch Angels Investment: \$200,000*

## IVDIAGNOSTICS

IVDiagnostics is a biomedical technology company focused on molecular diagnostics and imaging of blood borne diseases.



**IVDiagnostics**  
"The Future is Non-Invasive Diagnosis"

IVDiagnostics has completed a preclinical study on breast and colon cancer patients utilizing its IVD CTC assay, which provides physicians with a way to monitor metastatic cancer patients during and post therapy to determine the effectiveness or ineffectiveness of therapy. The company's platform has been enhanced to permit the isolation and eradication of CTCs (Circulating Tumor Cells) in vivo. A Series A funding round is anticipated in early 2011 as plans continue for the start of FDA trials later in 2011.

[www.ivdiagnostics.com](http://www.ivdiagnostics.com)

*Arch Angels Investment: \$48,000*

## LANGLEARNER

LangLearner produces the world's highest-rated and most downloaded applications for language learning and foreign communication. These applications include multimedia flashcards, games, translators, and dictionaries. The company's latest offering provides cutting-edge HD broadcasting to mobile phones, with several applications for remote teaching, collaboration and campus security. LangLearner is quickly reaching a critical mass of users, which will make 2011 a breakthrough year.



*Arch Angels Investment: \$50,000*

## LORI COULTER

Lori Coulter developed the TrueMeasure line of apparel. Rooted in technology and fashion, Coulter's line features wearable swimwear that flatters the figure, fits and boosts self-esteem. Coulter utilizes the TrueMeasure fit system, a process that employs light and camera-based technology; the [TC]2 3D Body Scanner, a proprietary ordering and fulfillment system, and automated CAD technology. The scanner measures the entire human body in less than 12 seconds and produces a true-to-scale 3D body model within a minute that is more accurate and consistent than measurements taken by a trained professional. The technology-based approach to fashion is an innovation in the retail industry with automated customization and rapid turnaround times.

**Lori Coulter**  
made-to-order swimwear

Lori Coulter Made-to-Order Swimwear launched at select Macy's locations in 2007 and launched a custom wholesale business targeting resorts, pageants and branded products in 2008.

*Arch Angels Investment: \$360,000*

## MEDIA CONVERGENCE GROUP, INC. (NEWSY.COM)

Media Convergence Group, Inc., is developing multiple businesses and revenue streams generated from Newsy, a converged, digital newsroom that monitors, synthesizes and presents world news coverage. Although access to news sources is abundant, most consumers consider the news media to be biased. The consumer lacks a convenient and coherent way to comprehend, synthesize and gain understanding.



In 2010, the company made several big strides, including launching apps for the iPad and the Blackberry. Newsy is now published to seven platforms and has increased production from 75 news stories per month to 325 news stories per month.

The company's progress has resulted in 4+ (out of 5) star ratings for Newsy apps across all platforms. In 2011, the company expects to see substantial revenue growth. Revenue will continue to be generated via paid advertising and content syndication, and custom content will generate a new revenue stream.

[www.newsy.com](http://www.newsy.com)

*Arch Angels Investment: \$175,000*



AS OF DECEMBER 31,  
2010, THE ST. LOUIS  
ARCH ANGELS NETWORK  
HAS:

- 47 MEMBERS
- FUNDED 24 COMPANIES
- INVESTED OVER  
\$22.9 MILLION

## PULSE THERAPEUTICS

Pulse Therapeutics is developing a medical device that will significantly increase the efficacy of clot busting drugs for the ER-based IV treatment of stroke. In 2010, Pulse concluded pre-clinical studies in animal models, which demonstrated magnetic iron particles, when controlled by a compact external magnet, accelerates blood diffusion and allows a clot-busting drug to reach a clot more quickly and at higher concentrations, resulting in significantly faster reprofusion compared to standard IV delivery. Pulse will provide a relatively inexpensive proprietary magnet and low-cost injectable magnetic particles to ER physicians which will require little operator training. Since Pulse's technology is administered in the ER, hospitals will likely be able to recognize greater profits per procedure.

[www.pulsetherapeutics.com](http://www.pulsetherapeutics.com)



*Arch Angels Investment: \$75,000*

## SEQUOIA SCIENCES

Sequoia Sciences is a pharmaceutical company commercializing new medicines to treat bacterial infections. Programs consist of small molecules targeting the lung infections of cystic fibrosis patients and MRSA infections, and vaccines for the treatment of recurrent urinary tract infections (UTI). Sequoia also has an unparalleled collection of structurally diverse natural product compounds isolated from plants collected by the Missouri Botanical Garden.



In 2010, Sequoia completed most of the pre-IND work necessary to start clinical trials in 2011 on its UTI compound. Phase I of the clinical trial will be conducted in Florida and will include an early look at efficacy.

Sequoia also signed a licensing deal with Amgen that should result in significant revenues over the next several years.

[www.sequoiasciences.com](http://www.sequoiasciences.com)

*Arch Angels Investment: \$6,385,000*

## SOMARK INNOVATIONS, INC.

SOMARK's goal is to improve life sciences research processes with an advanced lab-animal identification system. A more reliable and more humane ID system can provide higher quality preclinical data that can translate into safer treatments and a shorter development period. SOMARK wants to help researchers create safer, cheaper and more effective treatments. In 2010, the company secured more capital, completed successful customer pilots, commenced manufacturing, secured purchase orders and hired its first sales representatives. In 2011, SOMARK will initiate shipment of its first product, the Labstamp System.

[www.somarkinnovations.com](http://www.somarkinnovations.com)



*Arch Angels Investment: \$561,060*



## TERAVISTA SYSTEMS



TeraVista Systems provides corporations with a unique toolset of technologies that streamline their environmental and energy practices, thereby saving time and money. Its patent-pending CarbonTrax software is designed to automate the verification, validation and aggregation of carbon credits for all aggregation companies and financial institutions. Only 10 percent of current credits are being spot-validated, but CarbonTrax solves this problem through remote sensing technologies that allow for 90 percent validation.

[www.tera-vista.com](http://www.tera-vista.com)

*Arch Angels Investment: \$50,000*



## TRAXXSSON



Traxxsson is developing new blood tests for diagnosing and tracking the course of cancer and psychiatric diseases. Mammograms and PSA tests often wrongly indicate the presence of cancer, so Traxxsson's CancSure™ Verification tests are intended to confirm if cancer is present, without subjecting patients to painful biopsies. Additionally, the company is developing its own CancSure™ Screening blood test to find most cancers and identify their bodily location. Because there are no commercial blood tests to diagnose psychiatric diseases, Traxxsson is also developing a blood test that can identify 70 percent of the patients that have schizophrenia. In addition to diagnosis, this test may determine the effectiveness of treatment, and assist in the development of new psychiatric drugs.

*Arch Angels Investment: \$50,000*

## U.S. SPINE



In 2010, U.S. Spine was acquired by Amedica Corporation (AC), a spinal and orthopedic implant and instrument company focused on unique silicon nitride (SiN) ceramic technologies.

[www.amediacorp.com](http://www.amediacorp.com)

*Arch Angels Investment: \$5,900,000*

Cervimark ceased operations in 2009

GameRail ceased operations in 2008



## FUNDING OPPORTUNITIES

Before seeking funding through the St. Louis Arch Angels, entrepreneurs are encouraged to gain a greater understanding of who we are, how we operate, what we look for in potential investments and our expectations for return on investment.

We receive many business plan submissions each month. Our funding process involves a thorough screening of each opportunity and results in approximately two companies per month being selected to present to our members for funding consideration.

## INVESTMENT CRITERIA

Those seeking funds must make sure that they meet our investment criteria and that they are fully prepared with a complete business plan and presentation. We evaluate a company based on its management team, market opportunity, growth potential and other important factors, including:

*Use of proceeds* - Funds must be used to accelerate a company's achievement of key milestones that increase the company's value.

*Competitive advantage* - The company must have some proprietary features that distinguish it from potential competitors or provide barriers to entry that prevent other companies from capturing its customers with a similar offering.

*Fit* - One of the benefits of working with the St. Louis Arch Angels is the active coaching and contact network. There must be a fit between members of our group and the company seeking funding.

*Technology* - We prefer to invest in first-of-a-kind ideas, rather than incremental enhancements to common products and services. The concept behind the technology must be proven and verifiable.

*Exit strategy* - A clearly articulated exit strategy is very important.

### ANGEL INVESTORS TYPICALLY:

- INVEST BETWEEN \$25,000 AND \$250,000 PER TRANSACTION INDIVIDUALLY AND FROM \$250,000 TO \$1,000,000 AS A GROUP.
- INVEST IN ONE TO FOUR TRANSACTIONS PER YEAR.
- ARE PATIENT, WITH AN AVERAGE HOLDING PERIOD OF THREE TO EIGHT YEARS.
- SEEK RETURNS IN THE RANGE OF 30 TIMES THEIR INVESTMENT DUE TO THE HIGH RISK OF ANGEL INVESTING.

## APPLICATION PROCESS

We are eager to hear from companies that are seeking funding to help take them to the next level. Additional details about the Arch Angels' investment criteria and funding process are available online at [www.stlouisarchangels.com](http://www.stlouisarchangels.com).

## BECOMING A MEMBER

Membership in the St. Louis Arch Angels is extended to individuals who share our vision and will actively contribute to our process. Our unique network of private investors includes many entrepreneurs who have founded and built their own companies and understand the unique challenges faced by entrepreneurs. Our goal is to grow the membership with individuals who are willing to invest both their dollars and their expertise.

If you are interested in learning more about joining the Arch Angels, please call Christine Walsh at 314-444-1151.

## CONTACT INFORMATION

Christine Walsh  
Administrator  
St. Louis Arch Angels  
One Metropolitan Square  
Suite 1300  
St. Louis, MO 63102  
314-444-1151  
[cwalsh@stlrcga.org](mailto:cwalsh@stlrcga.org)



TO LEARN MORE ABOUT  
THE ST. LOUIS ARCH  
ANGELS:

- VISIT US ONLINE AT:  
[STLOUISARCHANGELS.COM](http://STLOUISARCHANGELS.COM)
- EMAIL:  
[CWALSH@STLRCGA.ORG](mailto:CWALSH@STLRCGA.ORG)
- CALL:  
314-444-1151



ST. LOUIS ARCH ANGELS  
ONE METROPOLITAN SQUARE, SUITE 1300  
ST. LOUIS, MO 63102

[WWW.STLOUISARCHANGELS.COM](http://WWW.STLOUISARCHANGELS.COM)