



2011
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



While the challenging economic conditions have had a significant impact on angel and venture capital funding over the past few years, there are positive signs that investments in early-stage companies may be on the rise. Within our own network, in 2011, the St. Louis Arch Angels provided almost \$3 million in funding to 11 startups, the largest group that we have ever funded in a single year. This growth can be attributed, in part, to the increasing number of high-quality business plans and professional presentations we are seeing. With 47 members, we have now invested more than \$26 million in 28 companies, after having more than 700 applicants over our seven-year history.

2011 saw an increase in angel investing and entrepreneurship activity across the board, with groups like Arch Grants, StartUp St. Louis, BioSTL, Capital Innovators and the various incubators stepping up to support and promote entrepreneurship in our region. Our city's entrepreneurial spirit was further fueled last summer when *Forbes* magazine ranked St. Louis as one of the best cities to start a business, with St. Louis coming in at 23 out of 200 cities.

While this renewal of activity and interest bodes well for entrepreneurs in our region, it is important to note that we still face many of the challenges that have hindered investment in the past. Chief among these is the lack of a proof of concept fund and a seed fund to help nurture entrepreneurial ventures along so that they are better prepared for seeking angel investments. For us, the increasing activity in the entrepreneurial community makes it imperative that we continue to grow as an organization, attracting more members so we have more dollars to invest to help advance the ideas that are being generated here. We must also step up our efforts to promote the entrepreneurial opportunities we're investing in and highlight their successes, so that we can continue to breed success.

As we look to 2012-2013, the Arch Angels will continue to work to foster cooperation and partnership among those active in the entrepreneurial arena and to ensure that everyone – investors and entrepreneurs alike – are moving in the same direction. In the meantime, we invite you to review our latest Annual Report and see for yourself the emerging companies that represent an increasingly robust entrepreneurial community here in St. Louis.

Sincerely,

A handwritten signature in black ink that reads "Gil Bickel". The signature is written in a cursive, flowing style.

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. Users think of the application as “Google Maps inside the store for products.” In 2010, aisle411 launched its iPhone app, and in 2011, also launched an application in the Android market. aisle411 is generating revenues from major brands and strategic partners and is now in 2,500 locations across the country, with new contracts in place to grow to 10,000 locations by the end of 2012. aisle411 is the future of mobile in retail.

www.aisle411.com



Arch Angels Investment: \$584,536

AKERMIN

Akermin's core technology is a unique methodology to protect and enable robust enzyme performance in harsh industrial environments using proprietary polymers. The company's focus is to develop the lowest cost, most energy-efficient system for carbon dioxide (CO2) capture and separation. Akermin's objectives for 2012 include engineering studies to validate technology and cost advantages, and field pilot demonstrations to show advantage at the industrial scale. Akermin will also work on its next generation polymer technologies.

www.akermin.com

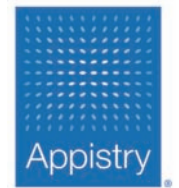


Arch Angels Investment: \$2,750,000

APPISTRY

Appistry solves the world's most challenging, data-intensive problems. For researchers in life sciences, Appistry's Omics pipeline service generates cost-effective and high-quality results for the analysis of next-generation sequencing data. For a wide range of industries, Appistry solutions enable customers to transform complex analytics pipelines into actionable intelligence. The company's platform supports data-intensive applications for leading life sciences research institutions, including Stanford University School of Medicine, The University of California-Davis, Children's Hospital of Philadelphia, The Jackson Laboratory, The University of Colorado-Boulder and Emory Winship Cancer Institute. Appistry's extended customer list includes FedEx, State Street and Northrop Grumman.

www.appistry.com



Arch Angels Investment: \$2,300,000

CAPITAL INNOVATORS

Capital Innovators provides micro-seed capital investments in companies that are developing information technologies. The company is dedicated to fostering very early-stage technology innovation and growth. Through its 12-week Accelerator Program, Capital Innovators offers mentorship, operational assistance, management training and a variety of value-added, no-charge services to its portfolio companies to help develop the resources, infrastructure, business relationships and executive management team necessary for success. Mentors include executives, professional service providers and entrepreneurs with experience in product development, sales/marketing, operations and finance.

www.capitalinnovators.com



Arch Angels Investment: \$375,000

CARDIALEN

CardiaLen has developed a novel low-energy, pain-free therapy to treat tachyarrhythmias. The company aims to restore sinus rhythm to the 2.2 million patients suffering from Atrial Fibrillation (AF) in the U.S. Drugs and ablation haven't effectively treated AF, resulting in a large unmet need. CardiaLen therapy restores sinus rhythm without expensive and time-consuming hospital visits or physician interaction. The goal is to create a new segment in the \$10 billion cardiac management market. CardiaLen is focused on commercializing an AF therapy device and researching the applicability of therapy in ventricular arrhythmias.



CardiaLen completed acute animal studies in 2010, chronic animal studies in 2011 and was published in *Circulation Journal* in 2011. The next step is preparing for acute human trials.

www.cardialen.com

Arch Angels Investment: \$475,000

CLEARENT, LLC

Clearent is a payment processor that was built to be different. The company combines leading-edge technology with a passion for customer service to help customers maximize the value of their merchant services program. Clearent provides sales agents, financial institutions and merchants with benefits not available from other providers, such as next-day funding with a late cut-off time and graphical, web-based reporting. The company has consistently grown in excess of 100 percent per year and now processes over \$2 billion in annual card volume.



www.clearent.com

Arch Angels Investment: \$1,100,000

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*. The company has been recognized with 25 national product awards for its work. In 2011, the company paid all of its bank and vendor debt and published eBook versions of its novels.



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

www.cogno.com

Arch Angels Investment: \$240,000

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 a National Institute of Health (NIH) – Rapid Access to Interventional Development project award that will utilize NIH contract resources. In 2011, Agilent was contracted to develop the manufacture of EDN-OL1, under guidance of a joint project team: NIH, Agilent, and Edunn. In 2012, the material will be safety tested by NIH contractors, and thereafter to manufacture clinical supplies for a Phase I clinical trial in Alzheimer's patients. Edunn continues fundraising, including outside the U.S.



Edunn Biotechnology, Inc.

www.edunn.com

Arch Angels Investment: \$405,000



■ "THE ST. LOUIS ARCH ANGELS NETWORK PROVIDES VITAL SUPPORT TO OUR REGION'S STARTUPS, HELPING TO CREATE THE NEXT GENERATION OF COMPANIES AND JOBS, AND FUEL PROSPERITY IN THE REGION. WE VALUE THE ROLE OF THE ARCH ANGELS AS WE CONTINUE OUR WORK TO MARKEDLY ENHANCE ENTREPRENEURSHIP AND INNOVATION IN THE ST. LOUIS REGION."

DR. WILLIAM PECK,
FORMER DEAN OF
THE WASHINGTON
UNIVERSITY SCHOOL
OF MEDICINE AND
CHAIR OF INNOVATE
ST. LOUIS

ENDOSTIM, INC.

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 a European CE Mark of approval in early 2012. 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



Arch Angels Investment: \$610,131

GALERA THERAPEUTICS, LLC

Galera Therapeutics, LLC is developing agents to prevent mucositis, a set of severe side effects of radiation therapy and chemotherapy. The agents not only address a significant unmet need in the prevention of mucositis and other side effects, but also have direct anti-cancer activity. The market opportunity for these agents is greater than \$1 billion. In 2011, Galera demonstrated that these agents may also prevent and treat pulmonary fibrosis and other fibrotic diseases. The company also secured lead investors for Series A financing, and upon closing this in 2012, will be running Phase 1b/2a clinical studies to establish human proof of concept in head and neck cancer patients undergoing chemoradiation therapy.
www.galeratx.com



Arch Angels Investment: \$800,000

GLOBAL VELOCITY

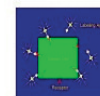
The Global Velocity (GV) high-speed network appliance and outbound content compliance application is a combination of innovative high-performance hardware and a highly effective set of applications designed to assist organizations in identifying the location of their sensitive data and controlling the flow of sensitive data across trust boundaries or through network control points. GV has recently been awarded several US Federal contracts. These efforts are critical to national security and represent opportunities for long-term growth. GV received meaningful recognition in 2011, having been named to Mission-Link, earning recognition as a Red Herring North American 100 Winner and finishing as a Finalist among Forbes America's Most Promising Companies.
www.globalvelocity.com



Arch Angels Investment: \$579,219

IVDIAGNOSTICS

IVDiagnostics is a biomedical technology company focused on molecular diagnostics and imaging of blood-borne diseases. During 2011, IVDiagnostics completed a preclinical study on metastatic cancer patients, utilizing its IVD CTC assay, which provides clinicians with a way to monitor cancer patients during and post therapy to determine effectiveness or ineffectiveness of therapy. The company was named the "Revolutionary Technology Company of the Year" by the regional Small Business Development Center and granted the Chanute Award by the Northwest Indiana Society of Innovators.



IVDiagnostics
"The Future is Non-Invasive Diagnosis"

A Series A Preferred round will be initiated in January 2012 with funds to be used for pilot and pivotal FDA on breast and non-small cell lung cancer.
www.ivdiagnostics.com

Arch Angels Investment: \$68,000

KATALYST SURGICAL, LLC

Katalyst Surgical is an ophthalmic surgical instrument designer and manufacturer that is based in Chesterfield, Mo. Katalyst was very successful in 2011, raising more than double the amount of capital funds than originally planned. The company also received a \$500,000 five-year term loan from the Missouri Technology Corp.



Katalyst's 2011 revenues exceeded projections by 10 percent, and operating losses were 12 percent lower than projected. The company is in the process of doubling its facility space. A sister company, Kogent Surgical, LLC was also formed last year and will focus on neurosurgery products. Katalyst Surgical is currently the majority member in Kogent.

www.katalystsurgical.com

Arch Angels Investment: \$123,000

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.

www.langlearner.com



Arch Angels Investment: \$50,000

LORI COULTER

Lori Coulter developed the TrueMeasure line of apparel. Rooted in technology and fashion, Coulter's line features swimwear utilizing the TrueMeasure fit system. This process employs light and camera-based technology, a proprietary ordering and fulfillment system known as the [TC]2 3D Body Scanner 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 is sold at select Macy's locations, and the company is now also working with Cintas Corporation, Soft Surroundings, Wynn and Encore Las Vegas, The Cosmopolitan Hotel & Casino, MGM Mirage and the Fontainebleau Miami Beach, among others.

www.loricoulter.com

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 2011, the company generated substantial visibility and revenue. Newsy now reaches tens of millions of viewers per month and continues to receive 4+ out of 5 star ratings across all major mobile platforms. The decision to headquarter the company in Columbia, Mo., in partnership with the Missouri School of Journalism and the Reynolds Journalism Institute, has proven to be a good one as Newsy continues to attract the best and the brightest and has tripled in size.

www.newsy.com

Arch Angels Investment: \$175,000



AS OF DECEMBER 31,
2011, THE ST. LOUIS
ARCH ANGELS NETWORK
HAS:

- 47 MEMBERS
- FUNDED 28 COMPANIES
- INVESTED OVER
\$26 MILLION

NAWGAN

Nawgan is an innovative alertness beverage scientifically formulated to enhance concentration and focus using natural ingredients. The proprietary formula was developed by Dr. Rob Paul, a professor of clinical neuropsychology at the University of Missouri. The company has successfully expanded distribution in the St. Louis region to include all Walgreens and most major grocery outlets. In 2012, Nawgan will expand into all Walgreens in Florida, Arizona, metropolitan Atlanta and selected cities in Southern California. The line is already distributed nationally in The Vitamin Shoppe.

www.nawgan.com



Arch Angels Investment: \$173,000

PULSE THERAPEUTICS

Pulse Therapeutics is developing a medical device which the company believes will significantly increase the efficacy of clot-dissolving drugs for ER-based treatment of ischemic stroke. In animal models, Pulse has demonstrated that magnetic iron particles, when controlled by a compact external magnet, accelerate blood diffusion, allowing the drug to reach the clot more quickly and at higher concentrations. As a result, reperfusion is faster utilizing the Pulse therapy as compared to the drug alone. Pulse's product consists of a relatively inexpensive proprietary magnet system and injectable magnetic particles. Therapy will be delivered in the ER and will require relatively little operator training. Pulse anticipates commencing first-in-human clinical trials in Australia in the first half of 2012.

www.pulsetherapeutics.com



Arch Angels Investment: \$575,000

SEQUOIA SCIENCES

Sequoia Sciences is a pharmaceutical company commercializing new medicines to treat bacterial infections. Programs consist of small molecules targeting MRSA infections, the lung infections of cystic fibrosis patients 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 2011, Sequoia completed the pre-IND work necessary to start clinical trials on its UTI compound in 2012. Phase I of the clinical trial will consist of 64 women, some with severe chronic UTI infections.

www.sequoiasciences.com



Arch Angels Investment: \$6,630,000

SOMARK INNOVATIONS, INC.

Based in San Diego, Calif., Somark Innovations is improving the quality and efficiencies of scientific research by setting a new standard for laboratory mouse identification. With its advanced technology and automation, Somark's Labstamp System easily applies a readable and durable ID that improves lab processes, is more humane and enables timely, reliable and less costly study results. In 2011, the company commercially launched the Labstamp System, expanded its sales and marketing resources and began distributing through life-science specialty distributors in the U.S. and internationally. In 2012, the company will focus on further international expansion, increasing sales revenues and scaling up its manufacturing and product development resources.

www.somarkinnovations.com



Arch Angels Investment: \$561,060

TRAXSSON

Traxsson has completed preliminary validation of its proprietary test group for cancer screening. The test pre-screens for cancer, and if the pre-screen is positive, it can identify five different types of cancer when present. This screen detects nearly 50 percent of the most common cancers, including forms of cancer for which no simple diagnostic test is currently available.

The logo for Traxsson, featuring the word "Traxsson" in a bold, blue, sans-serif font.

Traxsson also has shown in preliminary work that its test for prostate cancer can indicate which patients require treatment. Almost 60 percent of prostate cancer patients need no treatment, but existing tests cannot reliably determine which patients those are. The company is laying the groundwork for clinical validation of its screening tests and expects to have the tests commercially available for clinical use early in 2013.

www.traxsson.com

Arch Angels Investment: \$75,000



VENITI

VENITI is a medical device company strategically focused on the management and treatment of venous insufficiency. The company is anchored by three novel and disruptive technologies that serve as the foundation for success in the growing venous disease space. Unique in the marketplace, VENITI will meet the increasing needs and growing population of patients with venous disease.

The logo for Veniti, featuring a stylized "V" icon followed by the word "VENITI" in a bold, blue, sans-serif font.

www.venitimedical.com

Arch Angels Investment: \$220,000

Update on other companies in which the Arch Angels Network has invested:

Cervimark ceased operations in 2009
Divergence was acquired by Monsanto in 2011
GameRail ceased operations in 2008
Gridlogix was acquired by Johnson Controls in 2009
TeraVista Systems ceased operations in 2011
U.S. Spine was acquired by Amedica Corporation in 2010

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.

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

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TO LEARN MORE ABOUT
THE ST. LOUIS ARCH
ANGELS:

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STLOUISARCHANGELS.COM
- EMAIL:
CWALSH@STLRCGA.ORG
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314-444-1151



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