



GREATER ST. LOUIS 2004  
Venture Capital Report  
June 2005

PRODUCED BY  
THE ST. LOUIS CAPITAL ALLIANCE



THE ST. LOUIS CAPITAL ALLIANCE 2005  
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**THE ST. LOUIS CAPITAL ALLIANCE** was formed by the St. Louis Regional Chamber and Growth Association's Technology Gateway Council in 2005 to help develop a vibrant venture capital environment in the St. Louis region through:

- Raising the St. Louis venture capital profile locally, nationally and globally
- Leveraging St. Louis's financial resources
- Supporting programs and infrastructure that generate compelling investment opportunities
- Encouraging collaboration among organizations supporting the growth of the St. Louis venture capital community
- Gaining public support of venture capital by working with government leaders
- Providing networking opportunities across the St. Louis financial community
- Increasing the awareness and involvement of senior St. Louis financial personnel in St. Louis venture capital matters

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Access to venture capital is a key component to creating a successful entrepreneurial technology industry in a region. Without venture capital access, companies cannot attract funding to grow. Without access to venture capital, new ideas that could evolve into companies go elsewhere, promising early-stage companies are forced to move or close down due to a lack of funding, company growth is slowed due to financing delays, and companies lack the funds to reach critical milestones. To that end, the St. Louis business and civic leadership has undertaken a concerted effort to stimulate venture capital investment in the region. This Annual Venture Capital Report is designed to benchmark and track venture capital activity in our region over time. As documented in this report, St. Louis has made significant progress over 2004 and into 2005 toward achieving a critical mass of talent, innovation, and capital necessary for a vibrant venture capital environment in the St. Louis region. Highlights included:

- Stereotaxis' \$48 million initial public offering led by Goldman, Sachs & Co., with Bear, Stearns & Co. Inc., Deutsche Bank Securities Inc. and A.G. Edwards & Sons Inc. as co-managers.
- The \$81.5 million funding of Vectis, a fund-of-funds, with a strong St. Louis focus.
- Oakwood Medical Venture's raising of \$43 million and the anticipated final closing of Prolog Ventures' \$50 million second fund.
- \$120 million of venture investment in nineteen St. Louis companies during 2004.
- Since 2000, over \$800 million of venture capital has been invested in St. Louis companies.
- Triathlon Medical Venture's establishment of an office in St. Louis following the closing of its \$96 million offering.
- Arch Development's new presence in St. Louis.
- Continued development of the St. Louis facility infrastructure as CORTEX broke ground on a 165,000-square-foot multi-tenant laboratory in central St. Louis.
- Hosting of BIO MidAmerica and InvestMidwest venture capital forums. There is clear deal-flow in St. Louis; for example, of the 60 life sciences selected by the BIO screening process to present, 21 were from St. Louis.
- The launch of Arch Angels, a new St. Louis-based angel network.

Progress is clearly being made and the foundation for further venture capital activity in St. Louis continues to strengthen.

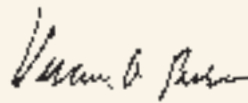
In order to build upon and accelerate this venture capital momentum, The St. Louis Capital Alliance was formed in early 2005 by the Technology Gateway Council of the St. Louis Regional Chamber and Growth Association (RCGA). RCGA is the regional chamber of commerce and economic development organization for the 16-county, bi-state region. RCGA established the Technology Gateway Council in 1998 to address challenges facing capital formation, entrepreneurship and business development of the St. Louis region's high tech companies

This dimension of the region's economic development effort is bringing together representatives of the St. Louis venture capital, finance, corporate, pension, academic and entrepreneurial communities, in order to leverage our collective strengths and resources to attract more venture capital investment to St. Louis.

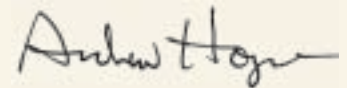
A number of individuals contributed to this report, including: Bryan Muehlberger (Pfizer), Mark Stoneman (Armstrong Teasdale), Michelle Murray (Prolog Ventures), Carter Williams, Mark Lewis (Two Rivers Advisors), Bryan Bezold and Monica Conners (RCGA), Tom Melzer (Rivervest Ventures), Greg Johnson (Prolog Ventures), Joe Schlafy (Stifel, Nicolaus & Co.), James O'Donnell (Bush/O'Donnell) and Brendan Johnson (Bryan Cave). Special thanks to Bob Coy of the RCGA for spearheading this project and to *St. Louis Commerce Magazine* for their design and publication of this Annual Venture Capital Report.

The Alliance has a number of plans for the upcoming year. Please feel free to contact Bob Coy, Senior Vice President for Entrepreneurial Development, St. Louis RCGA, at (314) 444-1130, rcoy@stlrcga.org, or any member of the Managing Committee to discuss ideas and your participation.

Sincerely,



William Peck, MD  
Chairman  
RCGA Technology  
Gateway Council



Andrew T. Hoyne  
Partner  
Armstrong Teasdale LLP  
Chairman  
St. Louis Capital Alliance

## ST. LOUIS PEOPLE

- Population: 2.7 Million
- Percent of U.S. Population within one day's drive: 33%
- Percent of population between the ages of 20 and 34: 20%
- Number of engineers, architects, scientists and computer professionals: 67,490 or 5.3% of workforce which is above the U.S. average.
- Number of persons employed in healthcare: 105,600 or 7% of workforce



- Over \$3.0 billion has been invested in the revitalization of the City of St. Louis in the past four years. The new Busch stadium will be completed in 2006, and downtown revitalization projects include new lofts and housing, rehabbed historic buildings and new shopping and entertainment districts such as Washington Ave.

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# STATE OF THE GREATER ST. LOUIS REGION'S Venture Capital Industry 2004 Annual Report

*The science that has emerged from both Washington University and Saint Louis University is absolutely remarkable. The venture capital community here in St. Louis reminds me of Boston in the 1970s, in that it's comparatively small now; but St. Louis has all of the raw materials to become a great region for venture capital investment.*

PETER BROOKE,  
Chairman and Founder of Brooke Private Equity Advisors and  
Founder, Boston-based Advent International Corporation and TA Associate

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2004 was a year of continued progress toward achieving a critical mass of talent, innovation and capital necessary for a vibrant venture capital environment in the St. Louis region. Two established venture capital funds and a new fund-of-funds raised close to \$200 million; two out-of-town funds established a St. Louis presence; venture capitalists invested over \$120 million in nineteen companies; the region enjoyed a \$48 million venture-backed IPO; a new angel investor network was organized; and a number of strategic alliances were established between venture-backed and large technology companies. These developments, on top of the over \$816 million of venture capital invested in technology firms in the St. Louis region since 2000, are establishing the St. Louis region as a center of innovation in the Midwest that is attracting the attention of venture capital firms throughout the region, the United States and Europe.

## 2004 VENTURE CAPITAL INVESTMENT ACTIVITY

Venture capital firms invested \$119 million in 19 regional companies in 2004. The investments were concentrated in two industry segments that reflect the indigenous strength of the St. Louis region—biotechnology/medical devices (ten firms) and information technologies (eight firms), which includes computers, software, semiconductors and telecommunications. Venture capital funds from California, Colorado, Florida, Illinois, Indiana, Massachusetts, Missouri and Texas, as well as internationally from Canada and the Netherlands, participated in these financings. There also were a number of noteworthy angel investments in regional biotechnology and IT companies that should provide new opportunities for venture capital firms in 2005.

COMPANY	AMOUNT (M\$) <sup>1</sup>	INDUSTRY
Metaphore Pharmaceuticals <sup>2</sup>	\$ 40.2	Biotechnology
AGEIA Technologies Inc.	\$ 21.8	Semiconductors
Stereotaxis Inc.	\$ 16.0	Medical devices and equipment
MetaMatrix <sup>3</sup>	\$ 12.0	Data integration software
Centerre Healthcare Corporation	\$ 5.0	Healthcare services
Divergence	\$ 4.0	BioTechnology
ISTO Technologies	\$ 3.5	Tissue Engineering
Appistry Inc. (fka Tsunami Research, Inc.)	\$ 3.0	Application fabric software
Quick Study Radiology	\$ 2.3	Health care IT/services
New Century Packaging	\$ 2.0	Industrial/energy
Everest Biomedical Instruments	\$ 2.0	Medical device
Vibe Solutions Group	\$ 2.0	Video communications software
Singulex	\$ 1.4	Medical device
NetLogic	\$ 1.1	Telecommunications
Xspedius Holding Corporation	\$ 1.0	Telecommunications
T3 (Transaction Transport Technologies)	\$ 1.0	Payment processing
Exegy	\$ 1.0	High speed data search
APT Therapeutics	\$ 0.3	Drug discovery
Kereos	\$ 0.1	Drug delivery
<b>Total</b>	<b>\$119.7</b>	

Source: DowJones Venture Source; PriceWaterhouseCoopers MoneyTree; St. Louis venture capital industry sources.

### INITIAL PUBLIC OFFERINGS (IPO)

In August, 2004, Stereotaxis Inc., the developer of an advanced cardiology instrument control system for use in a hospital's interventional surgical suite for the treatment of coronary artery disease and arrhythmias, closed a \$48 million initial public offering.<sup>4</sup>

The Stereotaxis system is designed to allow physicians to more effectively navigate proprietary catheters, guidewires and stent delivery devices through the blood vessels

and chambers of the heart to target sites and then to effect treatment.

Stereotaxis' technical and entrepreneurial roots go back to the late 1980s at the University of Virginia Medical School, where two professors, Matthew Howard and Sean Grady, did their initial work on magnetic navigation, in partnership with Rogers Ritter, a physicist experienced in magnetic levitation and steering. In 1990, Menlo Park, California-based Sanderling Ventures and

<sup>1</sup> If a company received both institutional venture capital and angel capital in 2004, the total amount invested includes both the institutional and angel capital.

<sup>2</sup> Metaphore was founded by Garland Marshall, Ph.D., a Professor at Washington University School of Medicine, with technology licensed from Monsanto and developed by a team led by Denis Forster, Ph.D. Dr. Forster left Monsanto to become the first CEO of Metaphore. While CEO, he raised \$20 million in the A and B rounds organized by a syndicate led by Stifel, Nicolaus & Company Inc. Metaphore has raised \$100 million to date. The company's headquarters is now in New Jersey and its research operations remain in St. Louis.

<sup>3</sup> MetaMatrix was founded in St. Louis. Its CEO and a small sales force are in New York; 85 percent of the employees are in St. Louis.

<sup>4</sup> This history of Stereotaxis was provided by Greg Johnson, Ph.D., managing director, Prolog Ventures. Dr. Johnson was a general partner at Gateway Ventures and played the lead role in organizing local investors in the Series B round that brought Stereotaxis to St. Louis.

## ST. LOUIS PEOPLE

- Higher education student enrollment: 167,498
- 2<sup>nd</sup> Best University for Post Doctorates: Washington University in St. Louis



- 3<sup>rd</sup> Best Medical School in the Nation: Washington University in St. Louis
- Number of area graduates or faculty to receive Nobel Prize: 22
- Saint Louis University is the oldest institution of higher education west of the Mississippi.
- St. Louis engineers played a significant role in the "Race to Space." The Mercury and Gemini space capsules that carried Alan Shepard and John Glenn were both designed and manufactured in St. Louis.

## ST. LOUIS FACTS

- 18<sup>th</sup> largest city in the U.S.
- 4<sup>th</sup> largest city in the Midwest
- The Gateway Arch, at 630 feet, is the tallest man-made national monument, standing twice as tall as the Statue of Liberty.
- Home of one of the top culinary “little Italy” neighborhoods in the country, “The Hill” is the boyhood home of some of America’s baseball legends including Yogi Berra, Joe Garagiola and Jack Buck.
- Of the top 20 largest U.S. metropolitan areas, St. Louis ranks as the 4<sup>th</sup> best MSA for home ownership.



- Forest Park is one of the largest urban parks in the U.S., home to the nation’s largest outdoor theater, The Muny, and the nationally acclaimed St. Louis Zoo. At 1,371 acres, Forest Park is 500 acres larger than New York City’s Central Park.

an angel investor took an interest in the project and provided the first seed capital. The company moved to California.

In late 1994, Stereotaxis, with only two employees, relocated from California to an office at Barnes Jewish Hospital in St. Louis to work with Dr. Ralph Dacey, chief of neurosurgery at the Washington University School of Medicine, who was an early supporter of magnetic navigation. The move was facilitated by a \$5 million Series B financing organized by Gateway Associates, a St. Louis-based venture capital firm. Other participants in the financing were Sanderling Ventures and Alafi Capital, both California-based, and St. Louis-based Emerson, Barnes Jewish Hospital and Oakwood Medical Investors.

Stereotaxis raised an additional \$12 million in Series C financing in 1998. New St. Louis-based investors were A.G. Edwards, Advantage Capital, and BOME Investors. In addition, the financing attracted regional funds such as C.I.D. Equity Partners of Indianapolis and Greystone/Portage Ventures of Chicago. St. Louis-based Prolog Ventures also participated in later rounds. About this time, Stereotaxis relocated from Barnes Jewish Hospital to larger quarters in the Center for Emerging Technologies, a technology business incubator located close to the Hospital and the campus of Washington University’s School of Medicine.

Altogether, Stereotaxis raised \$130 million of equity prior to its August 2004 IPO. Much of the later capital came from funds located outside the Midwest, such as Advent International and Ampersand Ventures of Boston and E.G.S. Capital of New York, as well as strategic investments from Siemens and J&J Ventures.

Today, Stereotaxis’ U.S. customers include Barnes Jewish Hospital, Central Baptist Hospital (Lexington, KY), and Massachusetts General Hospital. International customers

include St. George Hospital (Hamburg) and Thorax Hospital (Rotterdam).

In 2004, Stereotaxis announced that it will be moving its headquarters from the Center for Emerging Technologies to a new 165,000-square-foot building being constructed near the Washington University School of Medicine by CORTEX, a regional initiative to establish additional life sciences companies in St. Louis.

The success of Stereotaxis demonstrates that significant new life science companies can be built in the St. Louis region. Key factors were the technology and senior management, both of which were imported, and \$12 million of critical early-stage financing during 1995-98, much of which was provided by St. Louis firms.

### STRATEGIC ALLIANCES

2004 also included establishment of a number of strategic alliances between venture capital-backed and established technology companies. These arrangements provide important validation of a startup company’s technology, as well as research support, other funding and collaborative technology development. A sampling of these alliances includes:

- **Kereos Inc.**, which develops targeted therapeutics and molecular imaging agents that detect and attack cancer and cardiovascular disease earlier and more specifically than previously possible, announced strategic partnership agreements with Bristol-Myers Squibb Medical Imaging and Dow Chemical in 2004. Kereos, which also has a long-standing relationship with Philips Molecular Imaging Group, was selected as one of the “Fierce 15” of the top emerging biotechnology companies for 2004 by FierceBiotech, an internationally-recognized publication for the biotech industry.

- **Divergence Inc.**, a world leader in the application of genomics to parasitic and infectious disease in agriculture, announced a collaborative relationship with St. Louis-based Monsanto to develop nematode-resistant soybeans. As part of the collaboration, Monsanto will gain exclusive rights to Divergence's existing technology in this area and provide funding for ongoing research. Divergence will also receive milestone payments based on research and development success, and royalties once products reach the marketplace.
- **Chlorogen Inc.**, which uses a patented chloroplast technology to manufacture plant-made drugs and vaccines for the treatment and prevention of human diseases, signed a joint development and supply agreement with St. Louis-based Sigma-Aldrich Fine Chemicals. This collaboration is expected to produce the first commercial products from chloroplast transformation technology. Sigma-Aldrich will fund an undisclosed portion of Chlorogen's efforts to produce four specific proteins in tobacco plants. The proteins will be sold to the reagent and cell culture markets and have pre-identified applications as active pharmaceutical ingredients.

#### NEW FUNDS ESTABLISHED IN 2004

Thirteen venture capital funds with over \$925 million of capital under management are headquartered in St. Louis, with over \$400 million of venture capital raised by St. Louis-based venture capital firms since 2000. Reflecting the opportunities in the region, a fund-of-funds was established and two venture capital firms raised new funds. In addition, two venture capital firms headquartered outside the region established a presence in St. Louis.

**Vectis Life Sciences Fund I**, an \$81.5 million fund-of-funds established to help provide funding for the area's plant and biomedical sciences, closed in January 2005. Vectis will

make investments in life science venture capital funds with ties to Greater St. Louis and Missouri. To date, Vectis has invested in St. Louis-based Prolog II and Oakwood Medical Investors IV, as well as Advent Health Care Life Sciences, CMEA Ventures IV, HealthPoint Partnership, Accuitive Medical Venture Partners I, and Prospect Venture Partners III. The non-St. Louis-based funds have agreed to actively consider investment opportunities and syndications in St. Louis. Vectis is part of a strategy to build the region's life science industry by attracting the attention of venture capital firms on the East and West coasts to the excellent investment opportunities in St. Louis. Investors in the fund include The Danforth Foundation, the James S. McDonnell Foundation, Washington University, Missouri Foundation for Health, Ameren Master Retirement Trust, University of Missouri System pension fund, Barnes-Jewish Foundation, Sheet Metal Workers' Local 36 pension fund, and McCarthy Building Companies.

**Prolog Ventures**, a venture capital firm specializing in life sciences and related information technologies, closed its first fund in 2001 and had the final closing of its second fund, Prolog II, a \$66 million fund, in June 2005.

*The region surrounding St. Louis is ranked among the highest in terms of NIH funding (a good proxy for the quality of this technology), yet it ranks among the lowest in venture funding. We see this as a unique opportunity.*

BRIAN CLEVINGER,  
Managing Director, Prolog Ventures

**Oakwood Medical Investors**, a life science venture capital fund based in the region, closed Oakwood Medical Investors IV in 2004 at \$43 million.

**Triathlon Medical Ventures**, a Cincinnati-based biomedical fund with \$96 million under management, opened its doors in St. Louis in 2004 so it could be near the region's life science opportunities.

## ST. LOUIS FACTS

- The largest mosaic collection in the world graces the halls of the Cathedral Basilica of St. Louis, with over 41,000 pieces of glass.
- Grant's Farm, the former homestead of Ulysses S. Grant, is the only house still standing that was built and occupied by a U.S. president.



- The Missouri Botanical Garden is among the top three botanical gardens in the world.
- The St. Louis area offers more than 50 hiking, biking and walking trails. A 200 square mile nature, conservation and recreation area is being formed around the confluence of the Missouri and Mississippi Rivers.
- St. Louis is the birthplace of many famous writers including T.S. Eliot, Maya Angelou, William Gass, Tennessee Williams, Eugene Field, Jonathon Franzen.

## ST. LOUIS BUSINESS

- Working population: 1.44 million
- Fortune 500 headquarters: nine
- Fortune 1000 company headquarters: 21



- Number of hotel rooms within one mile of America's Center, the St. Louis Convention Center: 7,600
- Total retail sales: \$30.89 billion, of which 10% is attributable to visitor expenditures

*St. Louis stood out in our view by having world-class biomedical research, sophisticated early-stage venture capitalists locally with whom we could co-invest, two life science incubators and a life sciences seed fund, BioGenerator. All this makes St. Louis a compelling location to create and grow new life science businesses.*

JOHN RICE,  
Managing Director,  
Triathlon Medical Ventures.

**Arch Development Partners**, a \$4 million seed stage life sciences fund based in Chicago, established a presence in the St. Louis region to tap into early stage opportunities spinning out of the region's research institutions.

*Arch is excited about the St. Louis opportunity, because it offers a nearly unique Midwestern combination of great science and technology supported both nationally and locally, a sophisticated management pool, and a civic commitment to creating a successful entrepreneurial environment.*

TOM CHURCHWELL,  
Managing Partner,  
Arch Development Partners

### ST. LOUIS ANGEL INVESTORS EMERGE

In addition to traditional venture capitalists, angel investors are taking heed of the investment opportunities in St. Louis. Aptly named, the St. Louis Arch Angels' mission is to provide opportunities for members to obtain financial returns by investing in early-stage companies with high growth potential in the St. Louis region, and accelerate them to market leadership. Organized in late 2004, the network was launched in the first quarter of 2005 and is expected to grow to 50 members in the first year. Each member has agreed to invest a minimum of \$50,000 per year in start-up companies. Equally important, the members have agreed to contribute in other ways, including helping to source deals, perform due diligence, serve on boards of directors and provide mentoring assistance to start-up companies. The investment range of the network is expected

to be \$200,000 to \$2 million per company. Angel-backed companies are expected to be an important source of deal flow for venture capital firms.

### ENGINES OF INNOVATION

The life science focus of many of the region's venture capital firms reflects the depth of the region's research and corporate base and an organized business and civic leadership focused on developing the region's life science industry. The region has significant IT and advanced manufacturing assets as well. Key sources of innovation, talent and entrepreneurial support can be found throughout the St. Louis region, and include:

- Saint Louis University and Washington University and their schools of medicine are significant sources of technological innovation and talent.
- Washington University's School of Medicine was ranked second in the country in NIH awards in 2003. Since 1927, 21 Nobel Laureates have been associated with Washington University. In 2004, Washington University launched a program with financial support from the Kauffman Foundation to make entrepreneurship education available across campus and transform the way entrepreneurship is viewed, taught and experienced.
- The Danforth Plant Science Center, one the largest independent research institutes in the world dedicated to plant genomics, and the Missouri Botanical Garden, one of the world's premier botanical research institutes, are both significant magnets for talent and innovation in the region.
- Corporations such as Monsanto, Sigma-Aldrich, Pfizer, Nestlé Purina, Centocor and Tyco Healthcare/Mallinckrodt generate technology and talent that enrich the ecosystem for regional life science companies. Advanced manufacturing and IT companies such as Boeing, whose defense division is

headquartered in the region, Emerson and SBC also are important sources of technology, management and technical talent.

- The region is now home to 30 early stage life science companies that together have raised over \$310 million. Evidence of the strength of these companies was reflected at BIO's Mid America Venture Forum, which was held in St. Louis in 2004. Sixty life science firms from across the Midwest were selected through rigorous review process to present their business plans to the venture capital community, twenty-one of which were from Greater St. Louis.
- The annual Missouri-based InvestMidwest Venture Capital Forum, which is recognized as one of the Midwest's premier venture capital events, has helped participating firms raise over \$200 million from private equity investors.
- The region has two world-class life science incubators—the Nidus Center for Scientific Enterprise, located on the Monsanto corporate headquarters campus near the Danforth Plant Science Center, and the Center for Emerging Technologies, located in close proximity to Washington and Saint Louis University Schools of Medicine. Technology Entrepreneur Center (TEC), a new IT incubator, recently opened to serve the needs of startup firms in this industry cluster.

*St. Louis has made more progress in the implementation of its plant and life sciences strategy than any region of the country and is well on the road to becoming the leading center for the plant sciences and a major center for the life sciences.*

WALT PLOSILA,  
Vice President, Technology Partnership Practice, Battelle Memorial Institute, 2004

### BUILDING BUSINESSES IN THE ST. LOUIS REGION

With twenty-one Fortune 1000 companies, over \$1 billion of venture capital under man-

agement, and a strong and growing university and corporate technology base, the region has the talent, technology and capital for venture capital-backed enterprises to emerge and thrive.

While much of the region's focus since 2000 has been on building the financial, physical, and social infrastructure to capitalize on its significant base of plant and biomedical assets, attractive investment opportunities are emerging in other industries, including information technology, advanced manufacturing, and even retail, where St. Louis-based Build-a-Bear Workshop had an initial public offering in 2004.

As Stereotaxis and similar examples demonstrate, the region can attract technology and talent who recognize a promising environment for building businesses. Top executive and scientific talent from the East and West coasts, who are often unfamiliar with St. Louis, are surprised by the lifestyle amenities they find here, including a world class symphony, zoo, science center, botanical garden; first class art and history museums; a full range of neighborhood options—urban, older inner-ring suburbs, suburban, and rural; excellent air service and central location for executives who must travel to all regions of the country; professional baseball, football and hockey; excellent public and private schools; an impressive base of scientific and technological talent; an attractive cost of living; and a business, education and civic leadership dedicated to continually improving the environment for innovation and entrepreneurship.

As venture capital legend Peter Brooke has noted, St. Louis has all the ingredients to become a region for great venture capital investment, and is positioning itself well for 2005 and beyond. Beyond his good words, Brooke also closed an \$81.5 million life sciences fund-of-funds in St. Louis in 2004.

## ST. LOUIS BUSINESS

- Percent of households with income of \$100,000 or more: 14%
- Average household income: \$59,209
- Total household income: \$84.4 billion



- Annual number of visitors: 16.7 million
- Top 20 U.S. location for Plant and Life Sciences; Top 10 U.S. location for Logistics and Distribution, Home to world's largest brewer, Anheuser-Busch.
- Top three largest St. Louis employment categories:
  1. Transportation/Utilities
  2. Education/Health Care
  3. Business & Professional Services

## ST. LOUIS FIRSTS

- First U.S. Kindergarten (Founded by Susan Blow, 1873)
- First U.S. brewer to use pasteurization (Anheuser-Busch, early 1870's)
- First steel truss bridge (Eads Bridge, 1874)
- First American city to host an Olympic Games. (1904)
- First ice-cream cone (World's Fair, 1904)



- First president to fly in a plane (Teddy Roosevelt at Kinloch Field, 1910)
- First non-stop transcontinental flight (Charles Lindbergh, 1927)
- First Skyscraper (Louis Sullivan's Wainwright Building, 1927)
- First successful lung removal surgery (Barnes Hospital, 1933)
- First U.S. spacecraft to carry man to space was designed and built in St. Louis (Project Mercury, McDonnell, 1959)

## ST. LOUIS-BASED VENTURE CAPITAL FUNDS – 2004

FUND MANAGER	VENTURE FUND	CAPITAL UNDER MANAGEMENT	YEAR FORMED
Advantage Capital Partners	Advantage Capital Partners St. Louis	\$ 56.5	1992
Ascension Health Ventures LLC	Ascension Health Ventures Fund I	\$ 125.0	2001
Bush O'Donnell Capital		\$ 75.0	2003
BioGenerator		\$ 5.8	2003
Community Investment Partners	Community Investment Partners V, L.P.	\$ 6.5	1990
Gateway Associates	Gateway I-III, BOME I-III	\$ 180.0	1984
Oakwood Medical Investors	Oakwood Healthcare Investors IV	\$ 77.0	1997
Prolog Ventures	Prolog Capital I - II	\$ 85.0	2001
RiverVest Venture Partners	RiverVest Venture Fund I, L.P.	\$ 89.0	2000
Capital for Business Inc.		\$ 100.0	1959
Stifel, Nicolaus & Company Inc.	Stifel CAPCO Funds	\$ 30.0	1997
<b>Total</b>		<b>\$ 829.8</b>	

## ST. LOUIS-BASED FUND-OF-FUNDS

A.G. Edwards Capital Inc.	A.G. Edwards Private Equity Partners	\$ 228.0	1999
Vectis Fund	Vectis Life Sciences Fund I	\$ 81.5	2004
<b>Total</b>		<b>\$ 309.5</b>	

## VENTURE CAPITAL FIRMS WITH ST. LOUIS BRANCH OFFICES

Triathlon Medical Ventures (Cincinatti)	Triathlon Medical Ventures Fund I	\$ 96.0	2004
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## VENTURE CAPITAL INVESTED IN ST. LOUIS REGION

YEAR	TOTAL (\$M)
2000	\$ 423.9
2001	\$ 124.1
2002	\$ 72.8
2003	\$ 93.2
2004	\$ 119.7
<b>Total</b>	<b>\$ 833.7</b>

## LOCATION OF U.S. AND EUROPEAN VENTURE CAPITAL FUNDS INVESTING IN THE ST. LOUIS REGION IN 2004

FUND MANAGER	HEADQUARTERS LOCATION
Advantage Capital	Missouri
Advent Partners	United Kingdom
Alafi Capital Company	California
Apex Venture Partners	Illinois
Ascension Health Ventures LLC	Missouri
BA Venture Partners	California
Baird Venture Partners	Illinois
Boeing Co & Consolidated Subsidiaries	Illinois
Capital for Business Inc.	Missouri
CID Equity Partners	Indiana
Gateway Associates L.P.	Missouri
ComVentures	California
Fletcher Spaght Investors	Massachusetts
Granite Global Ventures	California
Health Care Ventures	Massachusetts
HF Management	Indiana
Highland Capital	Massachusetts
HIG Capital Management	Florida
Life Science Partners BV	Netherlands
MDS Capital	Canada
Merrill Lynch Ventures	New York
Mi3 Venture Partners	Massachusetts
Pacesetter Capital Group	Texas
Pacific Venture Group	California
Portage Venture Partners	Illinois
Prolog Ventures LLC	Missouri
River Cities Capital Funds	Ohio
RiverVest Venture Partners	Missouri
Schroder Ventures Life Sciences	Massachusetts
Southeastern Technology Fund	Alabama
Sterling Partners	Illinois

## ST. LOUIS FIRSTS

- First U.S. spacecraft to carry man to walk in space was designed and built in St. Louis (Project Gemini, McDonnell, 1965)
- First PET scanner (Mallinckrodt Institute, 1980)
- First genetically modified plant cell (Monsanto, 1982)



- First inductee to the Rock and Roll Hall of Fame, St. Louisan Chuck Berry (Rock and Roll Hall of Fame, 1986)
- First successful human lung transplant (Barnes Hospital, 1987)
- First U.S. field trials of plants with biotech traits (Monsanto, 1987)
- First successful nerve transplant surgery (Barnes Hospital, 1993)

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## SUMMARY OF COMPANIES RECEIVING Venture Capital IN 2004



**Ageia Technologies** develops technology to enhance interactive media playback. The company develops chips for processing three dimensional visual data for applications such as computer simulation, gaming, and security. Its product—PhysX — is a physics semiconductor chip that can enable realistic videogame graphics like crumpling fenders in car crashes, exploding buildings with tons of debris and a wall of lava that flows like the real thing. Ageia employs 100 people.

**Appistry** (FKA Tsunami Research) has created a software-based environment providing “fault tolerance” to software applications. Appistry Enterprise Application Fabric (“Appistry EAF”) allows applications to be deployed with absolute dependability without requiring premium hardware. Appistry EAF applications are written using a simplified development model, are scalable to hundreds of processors and are extremely simple to operate. Appistry is selling its product in the telecommunications, financial services and government sectors, and employs 25 people.

**APT Therapeutics** is a developer of development stage biotech software and drug discovery technologies. The company maintains a strategic focus on small molecule drug optimization (via strategic alliances) while building infrastructure to develop proprietary therapeutic proteins.

**Centerre Healthcare** is a provider of inpatient rehabilitation services in partnership with general acute care hospitals using either a joint venture or hospital-within-a-hospital platform. The company enables hospitals to develop or continue to offer high quality inpatient rehabilitation services that meet their patient and physician needs, while minimizing their operational and reimbursement risk. Centerre employs 100 people.

**Divergence**, a world leader in the application of genomics to agriculture and infectious disease, discovers and develops proprietary products for the safe and effective control of parasitic diseases. Plant parasitic nematodes are the largest unsolved pest problem in agricultural chemistry. Despite billions of dollars in annual crop damage, current means of control are limited and environmentally damaging. Parasitic nematodes also pose major health risks to humans and animals, and resistance to current drugs is increasingly a problem in livestock infections. Breakthroughs at Divergence are demonstrating that comparative and functional genomics can revolutionize the future of parasite control in plants, animals and humans.

**Everest Biomedical Instruments** develops neurological and brain-state assessment devices. The products consist of low cost handheld monitors and a recurring revenue stream of disposable sensors. The initial product monitors depth of anesthesia. The company is developing a family of handheld brain-state assessment devices capable of turning those data into clinically relevant information that objectively detect critical conditions of the brain at the bedside or at the first point of care. It’s current product—Snap II—combines electroencephalograph and auditory evoked potentials in a portable, hand-held, battery-operated anesthesia monitoring device enabling the anesthesiologist to know what is happening in the entire brain while the patient is under anesthesia. Everest employs 20 people.

**Exegy** integrates search-optimized data storage systems, data mining and business intelligence appliances, greatly accelerating knowledge mining in a data mart environment. Exegy’s technology is especially powerful over very large—multi-hundred



of Terabytes or more—data stores such as those utilized by financial services and U.S. intelligence agencies.

**Isto Technologies** is a developer of engineered tissues and chemical compounds for the repair or regeneration of human tissue that has been injured or destroyed by trauma or disease. The company's technology is being developed to grow human cartilage tissue from chondrocytes derived from human donors. This laboratory-grown cartilage is intended for surgical implantation to repair or replace injured or diseased cartilage in the knee or other joints. Its product—Neocartilage—is an in vitro cultured cartilage graft that is intended for use in patients with early cartilage damage. With early intervention, Neocartilage will help prevent the development of osteoarthritis. Isto employs 25 people.

**Kereos** is a developer of targeted therapeutics and molecular imaging agents that detect and attack cancer and cardiovascular earlier and more specifically than previously possible, and was selected as one of the "Fierce 15" of the top emerging biotechnology companies for 2004 by *FierceBiotech*, an internationally-recognized publication for the biotech industry.

**Metaphore Pharmaceuticals** is a developer of drugs to prevent and treat inflammatory and autoimmune diseases and disorders, and pain. The company develops small molecule compounds that mimic the activity of human enzymes. Its lead compounds mimic the function of superoxide dismutase, a beneficial enzyme that serves a protective role in the body by removing superoxide, a toxic free radical that can damage cells and tissues. The company currently focuses its clinical development efforts in the areas of pain, rheumatoid arthritis, and inflammatory disorders, and employs 35 people.

**MetaMatrix** is a provider of enterprise information integration and enterprise metadata management solutions. The company's solution acts as a virtual database to

unify and deliver information on demand, across the entire enterprise. The technology is for model-driven integration components for Service Oriented Architectures. The company enables organizations to turn their distributed, disparate, and often cryptic data into a powerful, comprehensive, and accessible information utility. MetaMatrix employs 70 people; its customers include Merrill Lynch, U.S. and foreign government, SAP and other Global 1000 companies.

**NetLogic** is a provider of communications services. The company delivers high-speed Internet, local, and long distance services, web hosting services, and inter-city private line services. The company is currently focusing operations in the Midwest United States, employs eight people, and has about 500 customers, including UPS, Bobcat, RF/Max, Radioshack, and SSM Healthcare.

**Quick Study Radiology** is a provider of integrated digital image and management solutions. The company's HIPAA compliant components in PACS, image and report storage and distribution, scheduling, and billing improve workflow and collections for hospitals, imaging centers, and radiology professionals. Quick Study employs 26 people and its target customers include hospitals under 300 beds, initially focused in the Midwest.

**Stereotaxis** is a developer of an advanced cardiology instrument control system for use in a hospital's interventional surgical suite for the treatment of coronary artery disease and arrhythmias. The Stereotaxis System is designed to allow physicians to more effectively navigate proprietary catheters, guidewires and stent delivery devices, through the blood vessels and chambers of the heart to treatment sites and then to effect treatment. This is achieved using computer-controlled, externally applied magnetic fields that precisely and directly govern the motion of the working tip of the catheter, guidewire or stent delivery device. The company's Niobe System is a magnetic navigation system that digitally navigates



the catheter and guide wire based devices along the paths of the heart and cardiovascular. NAVIGANT Advanced User Interface—An integrated information and control center that consolidates the key information sources used by interventional cardiologists and electrophysiologists and allows these physicians to provide instrument control directions to precisely govern the motion of the working tip of disposable interventional devices. CARDIODRIVE Automated Catheter Advancer—The CARDIODRIVE automated catheter advancer is used to advance and retract the catheter in the patient's heart while the NIOBE magnets precisely steer the working tip of the device.

The company's domestic customers include Barnes Jewish Hospital (St. Louis), Central Baptist (Lexington, KY), Massachusetts General Hospital, Providence (Waco, Texas), Trinity Mother Francis, University of Oklahoma, University of Iowa, and Rush Presbyterian. International customers include St. George (Hamburg) and Thorax (Rotterdam).

Stereotaxis employs 121 people.

**Singulex** is a provider of ultrasensitive instrumentation, assays, and related reagents for infectious disease, blood screening, and biodefense. The company provides an instrument that differentiates and counts individual molecules, cells, and microspheres, in solution. The company's instrument enables the user to count thousands of particles in a single test, simultaneously differentiating multiple molecular species of proteins and nucleic acids. It is capable of detecting nucleic acid hybridization at the single-molecule level. The technology works in complex and dirty samples such as serum or environmental samples. Unlike PCR, it requires no amplification. The company has demonstrated its sensitivity is 100 times greater than a commercial TSH test and 30 times more sensitive than a commercial PSA test. Singulex employs nine people.

**Transaction Transport Technologies (T3)** allows "brick and mortar" merchants to cycle customer credit and debit card transactions faster and/or cheaper through the use of broadband technology. The T3 technology also allows the greater flexibility in sourcing credit and debit card transaction processing relative to the dominant prevailing technologies, which is a material cost to many merchants. The company has established its core operations around a server hosting/maintenance arrangement with AT&T that includes the provision of highly scalable, very low cost customer facing bandwidth, and high-speed direct connections into the major credit and debit card processing companies. T3 is beginning the roll-out of its service to the market and has already sold the service to 526 merchant locations.

**Xspedius Communications** is a provider of integrated communications services to small to medium-sized enterprises in the southern United States. The company offers integrated voice and data/Internet services to residential customers and small and medium-sized businesses, and offers Internet service through SDSL and T1's. The company delivers a comprehensive suite of services, including local and long distance voice, data, and dedicated Internet access services, in 46 facilities-based markets located in 20 states and the District of Columbia. The company owns, operates, and manages metropolitan fiber optic networks with significant transmission capacity that cover more than 3,500 route miles and allow the company to manage its own voice and data traffic. Xspedius employs 950 people.

**Vibe Solutions Group** offers a state-of-the-art video communications platform that is both robust and modular. Partners can choose from the entire Vibe Communications Platform, or select one of the application modules for deployment. Vibe's products include Vibe Video Phone, Vibe Video Mail, Vibe Video Mail Pro, Vibe Media Share, and Vibe Platform. Its customers include Comcast, Charter, Road Runner and Fidelity. ■



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