

Missouri's Advantages for the Animal Health Industry



PROPERTY TAX INDEX RANKING



TAX FOUNDATION, 2013

Missouri is right for your biomedical project. Here are the top five reasons why...

- Missouri has the right business environment for bioscience companies to thrive.
- Missouri's state of the art research centers and incubator facilities, along with ample funding resources, help bring discoveries from laboratory to market. (more on page 3 — click here)
- Missouri has a first-rate workforce in the bioscience industry. (page 11)
- Missouri's top-ranked educational institutions draw unparalleled talent. (page 11)
- Missouri can get your product to market faster and cheaper. (page 13)

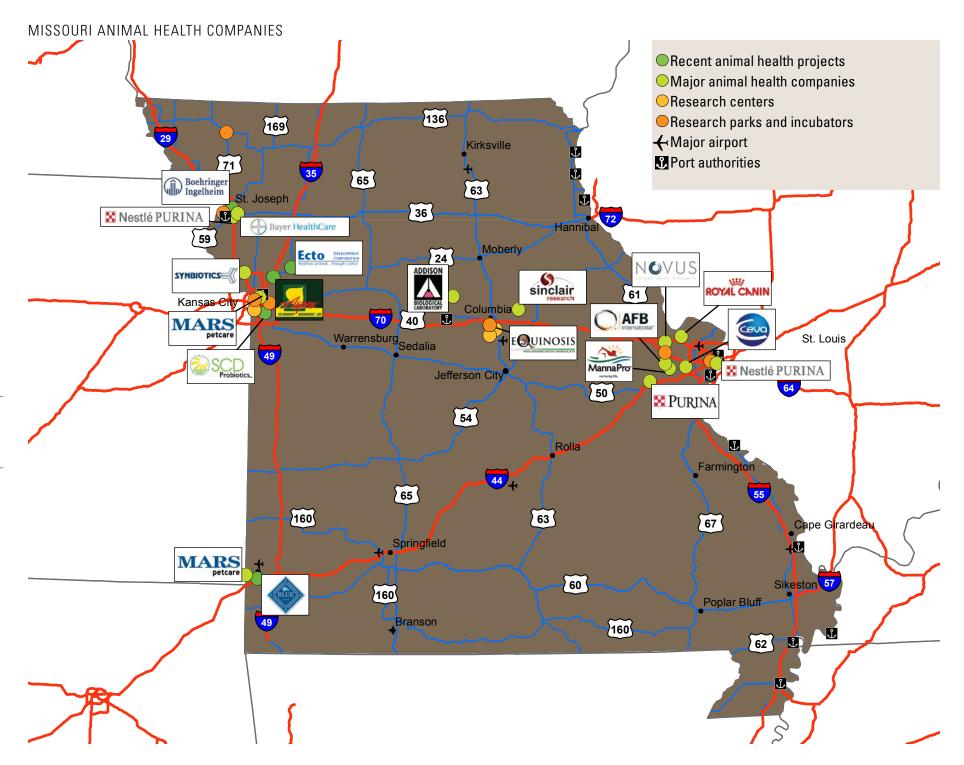
Business Environment: Missouri is in the top 10 states of the U.S. for pro-business rankings

■ A top 10 state for low taxes including property tax, corporate income tax, and unemployment insurance tax indices (*Tax Foundation, 2013*)

- A top 10 pro-business state for the third year in a row (Pollina Corporate Real Estate, 2012)
- A top 10 state for economic competitiveness (American Legislative Exchange Council, 2012)
- A top 10 state for low business energy costs (Small Business and Entrepreneurship Council, 2012)
- A top 10 location for research—the Kansas City region is fifth per capita in clinical trials conducted (Missouri Biotechnology Association)

"Missouri's commitment to scientific advancement and its exceptional workforce have helped make the state the top destination for animal health facility development. In addition to being home to some of the most prestigious veterinary medical training programs and animal health companies—including Monsanto and Boehringer Ingelheim Vetmedica—in the world, Missouri boasts a low-cost business climate, easy access to investors, and facilities devoted to animal health research and commercialization across the state."

—Governor Jeremiah W. "Jay" Nixon







Missouri's state of the art research centers and incubator facilities, along with ample funding resources, help bring discoveries from laboratory to market.

Recent Projects

2012:

- Blue Buffalo (Joplin) one of the country's largest independent pet-food companies, recently broke ground on a new manufacturing and distribution center, an investment expected to create up to 150 new local manufacturing jobs. (more)
- Boehringer Ingelheim Vetmedica Inc. (St. Joseph) announced plans to expand two operations in St. Joseph. The projects will involve the construction of a 260,000-square-foot warehouse and an expansion of Boehringer's manufacturing facility, and create over 100 jobs combined by 2015. (more)
- Ecto Development Corp (HQ Kansas City) a company providing chemical and pesticide formulation, registration and research services for pharmaceutical and animal health companies, announced an expansion of its headquarters

only six months after relocating to Blue Springs. The company expects its new projects will require an additional 30–35 employees at its partner plant in Pleasant Hill. (more)

2011:

- Aspen Veterinary Resources (Liberty) announced an expansion of its Liberty distribution center by almost 35,000 square feet, investing \$1.8 million and creating 10 new jobs.
- SCD Probiotics (Kansas City), a producer of probiotics for animal health, recently announced a \$9.1 million expansion project, adding up to 62 new jobs. SCD's probiotics are also used in nutritional supplements, cleaning supplies, lawn and garden products, and pet products. (more)

Missouri's Major Animal Health Companies

Addison Biological Laboratory (HQ Fayette) is a manufacturer and marketer of veterinary technologies. For over a third of a century, J. Bruce Addison, president and founder, has been recognized as a leader in veterinary diagnostics and herd specific bacterin production. (more)

- AFB International, Inc. (HQ St. Charles) produces and markets pet food products, including biscuits, treats, and snacks. (more)
- Bayer Healthcare (St. Joseph) formerly Teva Animal Health, is involved in research, development, and manufacturing of veterinary pharmaceutical products for the worldwide animal health community. (more)
- Boehringer Ingelheim Vetmedica (HQ St. Joseph) develops and markets a broad range of products and technologies worldwide for horses, cattle, swine, and companion animals. (more)
- Ceva Animal Health, Inc. (St. Louis) sells veterinary pharmaceutical products for companion and production animals. The company markets its products in the United States, Canada, and internationally. In 2007, Missouri-based Butler Sales Associates was acquired by Ceva Sante Animale S.A. and became Ceva Animal Health, Inc. (more)
- Equinosis (Columbia) developed the Lameness Locator®, a system that enables a veterinarian to objectively identify lameness in horses. The Locator is the culmination of almost 20 years of research on gait analysis at the University of Missouri's Colleges of Veterinary Medicine and Engineering. (more)
- Manna Pro (HQ St. Louis) manufactures and distributes animal feeds for various species of livestock, poultry, and pets. The company also provides nutritional feed supplements and healthcare products for performance horses, cattle, rabbits, goats, poultry, and swine. (more)
- Mars Petcare U.S. (Kansas City and Joplin) is one of the fastest growing pet food manufacturers in the United States, manufacturing under the Pedigree, Whiskas, and Sheba brands. In 2009, Mars Petcare relocated its R&D operation to a production facility in Kansas City. (more)
- Nestlé-Purina PetCare Company (HQ St. Louis) became the pet food division of Swiss-based Nestlé after a 2001 merger between the Nestlé's Friskies PetCare Company and the American Ralston Purina Company. Nestle-Purina Petcare's brands include Alpo, Beneful, Fancy Feast, and Beggin' Strips. The

- company also has a Global R&D facility in St. Joseph. In 2012, the company invested \$15 million in the construction of a new training facility at its headquarters campus to allow more of its 17,500 employees around the globe to receive training. (more)
- Novus International (HQ St. Louis) is a leading developer of animal health and nutrition programs for the poultry, pork, beef, dairy, aquaculture, and companion animal industries. Novus recently expanded into their new LEED Platinum headquarters in Missouri. (more)
- Purina Mills (HQ St. Louis) develops, manufactures, and distributes animal nutrition products and feeds for producers and pet owners. It offers feed for horses, rabbits, goats, poultry, cattle, and outdoor/wildlife animals. (more)
- Royal Canin (HQ St. Charles) produces health nutrition products for dogs and cats, as well as dry cat and dog food. The company also has a plant in Rolla, Missouri. (more)
- Sinclair Research Center (Columbia) is a biomedical research facility offering a full range of preclinical research services to the animal and human health industries. (more)
- Synbiotics Corporation (HQ Kansas City) is a leading developer, manufacturer, and marketer of veterinary diagnostics and services for veterinary practices, reference laboratories, and animal breeders world-wide. (more)



Research Parks and Incubators: Missouri's facilities support companies in bringing their discoveries from the laboratory to the market

- Bio-Research and Development Growth (BRDG) Park (St. Louis) is adjacent to the Donald Danforth Plant Science Center and houses a variety of tenants in the bioscience industry, including Nidus Investment Partners and Novus International. (more)
- Center for Innovation and Entrepreneurship at Northwest Missouri State University (Maryville) is a service-oriented business incubator connecting industry and academics which offers state-of-the-art research facilities, a commercial analytical lab, and tailored support for business acceleration. (more)
- Christopher S. Bond Science and Technology Incubator (St. Joseph) is home to the Institute for Industrial and Applied Life Sciences, which offers training and wet lab space. The 25,000 square feet incubator is operated in conjunction with Missouri Western University. (more)

- Helix Center (St. Louis) is a new small business incubator providing startups in plant and life sciences affordable office and laboratory space, access to expertise, and facilities near the Donald Danforth Plant Science Center and the Bio-Research and Development Growth (BRDG) Park. (more)
- Independence Regional Ennovation Center (Independence) provides a turnkey facility for wet and dry lab needs along with general office space in a collaborative environment. (more)

University of Missouri:

- Discovery Ridge (Columbia) leverages the University of Missouri's resources in agriculture, health, veterinary medicine, bioengineering, nutrition, biology, and environmental services. (more)
- Life Science Business Incubator at Monsanto Place (Columbia) is home to more than 20 companies in biomedicine, animal health, food, agriculture, energy, and information technology. Animal health companies at the incubator include Equinosis, Animal Health Specialties and Pet-Screen. (more)

- Missouri Research Park (St. Charles) is a 130-acre high-tech research facility, with 15 tenant companies employing more than 2,000. (more)
- UMKC Innovation Center (Kansas City) partners with the university and the community to spark entrepreneurial efforts within our region and across the country. Specializing in technology commercialization, the UMKC Innovation Center delivers just-in-time education, counseling and access to resources to aspiring and existing business owners. (more)

Animal Health Research Centers

- IDEXX Research Animal Diagnostic Laboratory (RADIL) (Columbia) is located on the campus of the University of Missouri. The laboratory is one of the two largest research animal diagnostic laboratories in the U.S. and the largest at an academic institution. (more)
- MRIGIobal (Kansas City), known formerly as the Midwest Research Institute, has earned international recognition for its health research services supporting the pharmaceutical, biotechnology, veterinary, and agrochemical industries. (more)

University of Missouri:

- Christopher S. Bond Life Sciences Center (Columbia) is a state-of-the-art facility focused on increasing food production and quality, improving human and animal health, and enhancing environmental quality. (more)
- National Swine Resources and Research Center (Columbia) was established in 2003 to develop the infrastructure to ensure that biomedical investigators across a variety of disciplines have access to critically needed swine models of human health and disease. The NSRRC will also serve as a central resource for reagents, creation of new genetically modified swine, and information and training related to use of swine models in biomedical research. The center was the first to clone a pig in 1989 and first to sequence the DNA of a pig in 2006. In 2007, the center also became first to reproduce a pig using in vitro fertilization. (more)





Missouri Venture Capital Funds and Resources: Supporting and growing biomedical companies

- Advantage Capital Partners (St. Louis) provides equity and debt capital, along with value-added counsel, to operating businesses with a potential for excellent investor returns and significant community impact. (more)
- BioGenerator (St. Louis) is a privately funded, not-for-profit organization that works with researchers, inventors, and entrepreneurs to build successful, sustainable life science companies. The BioGenerator provides assistance—including pre-seed and seed investments, access to no-cost shared labs and equipment, and management support—at the earliest stages of company formation. (more)
- BioSTL (evolved from the Coalition for Plant and Life Sciences) announced in 2011 a \$30 million commitment over five years, from Washington University in St. Louis, BJC HealthCare, and the St. Louis Life Sciences Project for the purposes of bioscience company creation and economic growth. These funds will increase the region's capacity to support entrepreneurs and launch BioSTL itself, the next step in a 10-year-old regional effort to increase economic activity in the medical and plant biosciences. A majority

of these new funds will be dedicated to pre-seed and seed investments and associated support for newly created enterprises. (more)

- Bush O'Donnell Capital Partners (St. Louis) invests in companies that have recurring annual revenues of \$5 million or more. (more)
- Capital for Business, Inc. (CFB) (St. Louis) targets leading companies in attractive niche markets that share the following characteristics: significant and defensible market positions, differentiated products and services, scalable business platforms, and consistent financial performance. CFB targets investments arising from management buyouts, leveraged buyouts, recapitalizations, corporate divestitures, growth financings, and going-private transactions. (more)
- CC Capital Advisors (Kansas City) is an independent investment banking firm providing services to middle-market companies, both public and private. Services include consultation of mergers and acquisitions, capital sourcing, and corporate financial and strategic planning. (more)

- Nidus Partners (St. Louis) is a unique collaboration between experienced entrepreneurs and strategic corporations for the purpose of identifying and commercializing technologies in the energy market. The partnership provides seed funding, entrepreneurial experience, and market input to advance early technology toward commercialization. (more)
- Oakwood Medical Investors (St. Louis) is a life sciences venture capital fund that invests in development-stage medical device, biopharmaceutical, and healthcare service companies. (more)
- Prolog Ventures (St. Louis) specializes in early-stage life science and animal health companies. (more)
- RiverVest Venture Partners (St. Louis) invests in medical device and biopharmaceutical companies, as well as later-stage life science businesses. (more)
- Stifel, Nicolaus & Company, Inc. (St. Louis) is a co-general partner of Vectis II, a national life sciences venture capital and private equity fund, co-headquartered in St. Louis and in Boston with its partner, Brooke Private Equity Advisors. (more)
- Thompson Street Capital Partners (St. Louis) is a private equity firm that invests in profitable middle-market companies headquartered in North America. (more)
- Tradebot Ventures (Kansas City) invests in technology-based companies located in the Kansas City region. (more)
- Triathlon Medical Ventures (St. Louis) is a Midwest-based venture capital firm that invests exclusively in the life sciences, providing equity capital to early and expansion-stage human healthcare companies. (more)

Angel Networks

■ Arch Angels (St. Louis) is a part of the region's seed to later-stage equity capital continuum, targeting an investment range generally underserved by institutional venture capital firms. (more)

- Billiken Angels (St. Louis) provides capital to firms in all industries and at all stages, not just start-ups. To be considered, a company must be in the St. Louis region, or the company must owned by current or former Saint Louis University students, faculty, or staff, or use intellectual property licensed from Saint Louis University. (more)
- Centennial Investors Angel Investor Network (Columbia) is a network of accredited investors devoted to funding technology-based start-ups and early-stage companies. (more)
- Show-Me Angels (Lee's Summit) is a membership organization of accredited investors committed to early-stage companies in the Kansas City region. (more)
- Springfield Angel Network (Springfield) is a nonprofit corporation introducing start-up and existing entrepreneurs from southwest Missouri (although not exclusively) to individuals capable of investing financially. (more)

State Funding Resources

• Missouri Technology Corporation (MTC) was established by the Missouri Legislature in 1994 as a private not-for-profit charged with attracting research funding and technology companies to Missouri. MTC has various funding and grant programs aimed at growing the state's bioscience sector, including the Missouri IDEA (Innovation, Development, and Entrepreneurship Advancement) Funds. The IDEA Funds support the transfer of science and technology into job creation and provide financing to eligible businesses through four stages of growth: pre-seed capital-stage financing, seed capital-stage financing, venture capital-stage financing, and expansionstage debt. (more) ■ Life Sciences Research Trust Fund was established in 2007 to enhance and transform research into commercial life science technology. The fund's focuses include agriculture, animal science, plant science, medical devices, biomaterials, and composite research. The trust fund also supports nanotechnology related to drug development and delivery, diagnostics, clinical imaging, and information technology for human health.

Investment Capital Conferences

- Animal Health Investment Forum is held annually in the Kansas City region and generates investment for early-stage animal health-related companies located all over the world. The 2012 forum featured 13 early-state animal health companies from as far away as Austrailia. (more)
- Invest Midwest facilitates investment in the region's top life science, technology and alternative energy companies. This annual conference has consistently drawn more than 300 attendees and has helped generate more than \$1 billion in investment capital over the past thirteen years. (more)
- Missouri Technology Expo (Columbia) provides a forum for researchers, entrepreneurs, investors and business development professionals to interact. The expo brings together ready-to-license technology from institutions across the state, leading state speakers, and a pitch competition with prizes. (more)

WORKFORCE BY STATE Iowa Nebraska 1,663,592 1,005,455 Illinois 6,565,504 Kansas Missouri Kentucky 1,505,043 3,046,302 2,067,527 Tennessee 3,132,742 Oklahoma Arkansas 1,770,822 1,369,853

BLS, QUARTERLY CENSUS OF EMPLOYMENT AND WAGES, 2011

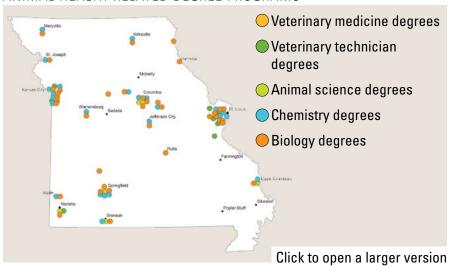
Missouri has a first-rate workforce in the bioscience industry.

■ The Bioscience Industry in Missouri is comprised of nearly 3,500 companies employing over 51,000 Missourians (U.S. Bureau of Labor Statistics, 2012).

Missouri's top-ranked educational institutions draw unparalleled talent.

- 40 Missouri colleges and universities offer bachelor's degrees or higher in Biological or Biomedical Sciences.
- 86.8 percent of Missouri's population has attained a high school diploma or higher, exceeding the national average of 85.4 percent (American Community Survey, 5-year estimates, 2007-2011).
- Over one million Missourians hold a Bachelor's degree or higher (American Community Survey, 5-year estimates, 2007-2011).
- In 2011, 96,953 post-secondary degrees/certificates were awarded in the state. Of those, 41,648 were bachelor's degrees, 20,679 were master's degrees and 4,656 were doctorates.

ANIMAL HEALTH-RELATED DEGREE PROGRAMS



Missouri Schools

- Missouri is home to one of the top veterinary schools in the U.S. at the University of Missouri. The University is one of only a few universities in the United States with schools of medicine, agriculture, and veterinary medicine on one campus. (more)
- The Metropolitan Community College (MCC) offers an animal health program, one of a only a few such programs in the Midwest. The college's existing two-year degree program in veterinary technology prepares students to assist veterinarians with animal nursing care, lab diagnostics, anesthesia, surgery, dentistry, radiology, and more. MCC is also one of only six institutions in the U.S. to offer at NAVTA-approved Veterinary Assistant program. (more)

OCCUPATIONS AND WAGES

Occupation code	Occupation title	Missouri median hourly wage	U.S. median hourly wage
00-0000	All Occupations	\$14.99	\$16.57
19-0000	Life, Physical, and Social Science Occupations	\$24.46	\$28.52
19-1011	Animal Scientists	\$38.90	\$29.44
19-1022	Microbiologists	\$37.35	\$31.36
19-1023	Zoologists and Wildlife Biologists	\$22.23	\$27.60
19-1029	Biological Scientists, All Other	\$31.74	\$34.03
19-4021	Biological Technicians	\$17.90	\$18.98
29-1131	Veterinarians	\$35.62	\$39.86
29-2056	Veterinary Technologists and Technicians	\$14.29	\$14.49

SOURCE: BLS, OCCUPATIONAL EMPLOYMENT AND WAGE ESTIMATES, MAY 2011

DEGREES GRANTED IN MISSOURI IN 2011

	Associate's degree	Bachelor's degree			Total
Animal Sciences	0	124	10	6	140
Biology	0	1,533	158	22	1,713
Chemistry	0	272	51	42	365
Veterinary Medicine	0	0	0	69	69
Veterinary Biomedical and Clinical	0	0	8	8	16
Veterinary/Animal Health Technology/Technician	234	0	0	0	234
Total	234	1,929	227	147	2,537

SOURCE: NATIONAL CENTER FOR EDUCATION STATISTICS, 2011



Missouri can get your product to market faster and cheaper.

Airports

- Missouri travelers can reach most cities in the United States and Canada in less than three hours by air.
- The airport system in Missouri consists of 130 public airports, with two providing international service: Lambert-St. Louis International and Kansas City International.
- Springfield, Branson, Joplin, Columbia, Cape Girardeau, Kirksville and Waynesville (Fort Leonard Wood) also have commercial service.

Foreign Trade Zones

- Missouri has foreign trade zones in Kansas City, Saint Louis, and Springfield.
- The FTZ at Lambert-St. Louis International Airport was recently expanded to include all of St. Louis City and St. Louis County under the Alternative Site Framework.

■ The KCI Intermodal BusinessCentre includes 8,000 acres of multi-use land for development on the airfield designated FTZ and enhanced enterprise zone.

Rail

- Missouri provides efficient, low-cost shipping across the country via all Class I carriers: Burlington Northern Santa Fe (BNSF), Kansas City Southern (KCS), Norfolk Southern (NS), Union Pacific (UP), CSX, Canadian National Railway (CN), and Canadian Pacific (CP). It is one of the few states that can provide access to both east and west coasts.
- Missouri is ranked in the top ten for U.S. railroad mileage with 4,019 miles (Association of American Railroads, 2010).
- Missouri is ranked fourth in tons and third in rail carloads carried by state (Association of American Railroads).

■ The 1,340 acre CenterPoint KCS Intermodal center includes a thousand acre industrial park located directly adjacent to the new Kansas City Southern Intermodal Facility. With infrastructure in place, these sites are shovel-ready for facilities up to one million square feet. KCS will offer direct rail service to CIC-KC from the natural deepwater port of Lazaro Cardenas, Mexico.

- Missouri has 14 strategically located public port authorities (Missouri Port Authorities).
- Nearly 4,500 acres are available for development adjacent to Missouri's port authorities.

Roads

- Missouri has the sixth largest public road and highway system in the nation with 33,667 miles (Federal Highway Administration, 2009).
- Major interstates include I-64, I-44, I-70, I-55, I-35, I-29, and the newly designated I-49, which connects Kansas City to Joplin.
- I-70, which bisects Missouri, is over 2,000 miles long and passes through 10 states.
- Interstates 29 and 35 are located within the NAFTA corridor, providing easy access to Canada and Mexico.
- Missouri ranked in the top 10 states for Federal highway funding in 2011, with \$1.11 billion (State Rankings, Federal Highway Administration, 2010).
- There are more than 110,000 commercial trailers registered in Missouri (Bureau of Transportation Statistics, 2011).

Waterways

- Missouri is ranked tenth for inland waterway mileage (1,000 miles), moving an average of \$4.1 billion in cargo annually.
- Twenty-nine industrial centers, with a combined population of 90 million, can be reached from St. Louis by barge. St. Louis is the northern-most point on the Mississippi river that normally remains ice-free and open throughout the year. The city is also the location of the southernmost lock and dam on the Mississippi (Missouri Port Authorities).

The Missouri Partnership is a public-private, nonprofit focused on recruiting new business to the state. To find out how Missouri Partnership can assist at any stage of your project, contact us by:

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