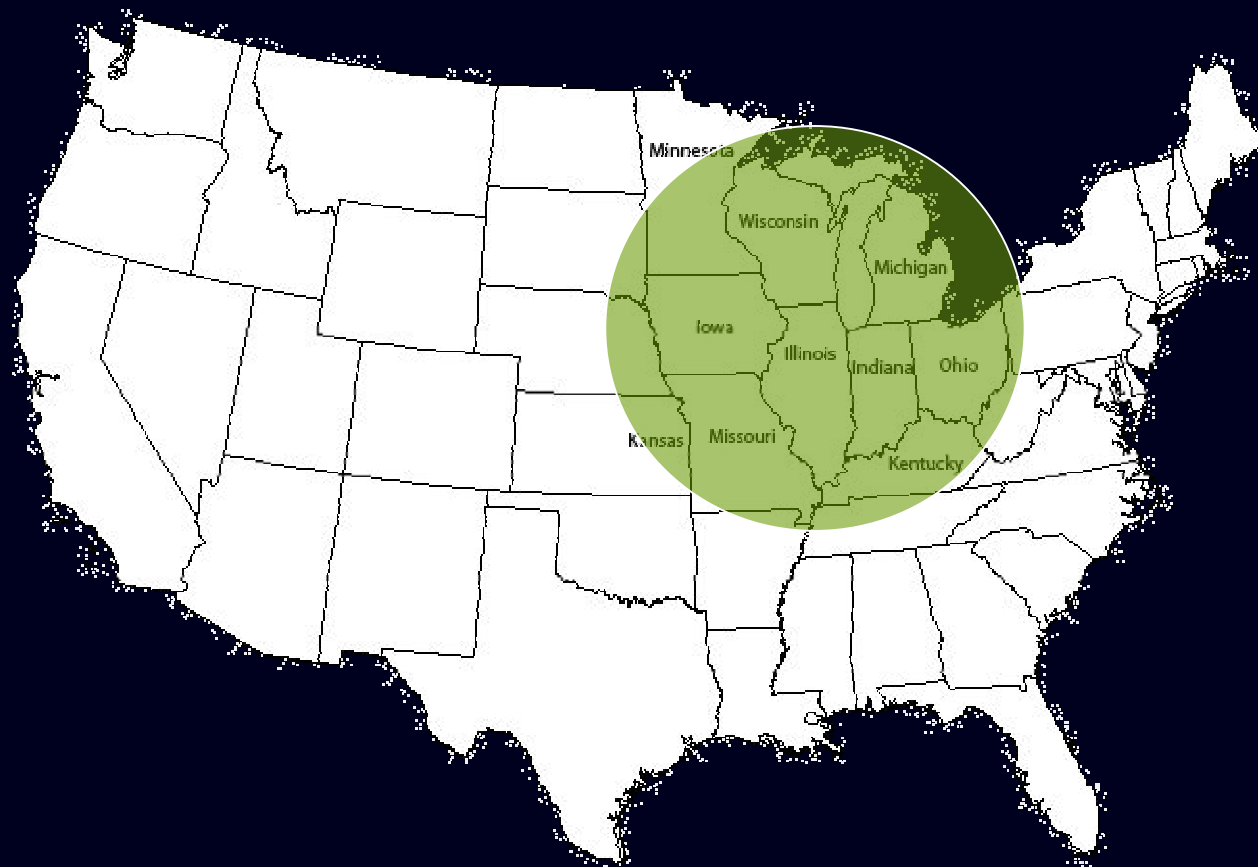


# MIDWEST HEALTH CARE VENTURE REPORT



2008

# SPONSORS



The [Mid-America Healthcare Investors Network \(MHIN\)](#) is a not-for-profit association of more than 48 venture capital firms from 14 states, with more than \$2 billion under management. MHIN focuses on life science investment opportunities in the Mid-America Region. These life science opportunities include companies involved in biotechnology, medical devices, bioinformatics, healthcare information technology, and healthcare services.



[BioEnterprise](#) is a business formation, recruitment, and acceleration initiative designed to grow health care companies and commercialize bioscience technologies. Based in Cleveland, BioEnterprise's founders and partners are Cleveland Clinic, University Hospitals, Case Western Reserve University, Summa Health System, and BioInnovation Institute in Akron. Since launching in 2002, BioEnterprise and its partners have accelerated over 70 companies that have attracted \$820 million in capital.

# HIGHLIGHTS

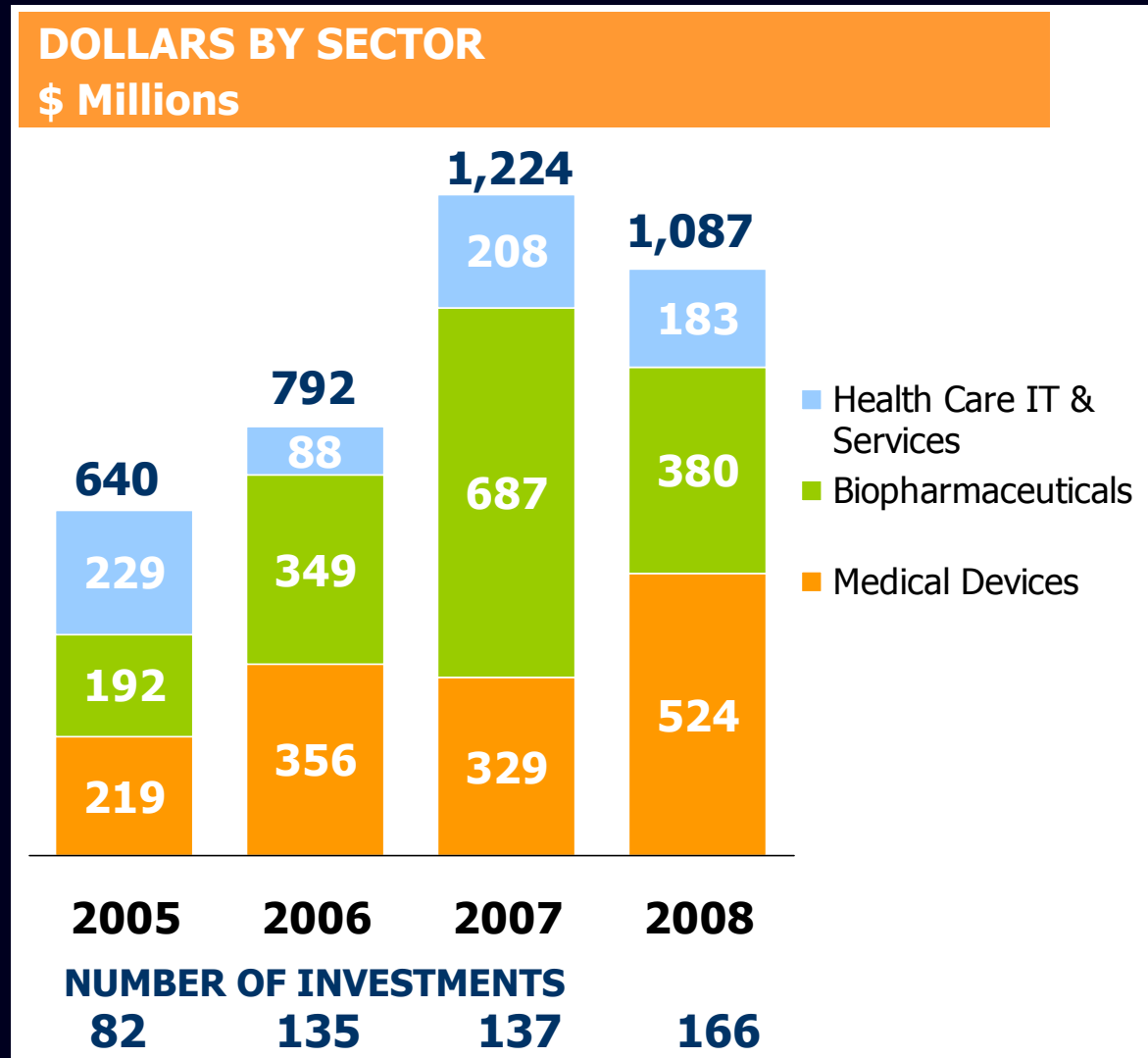
- Over \$1 Billion in annual health care venture investment across more than 130 companies, ranking 3<sup>rd</sup> among regions
- Numerous exits in all health care sectors
- Home to leading industry players and talent
- Over \$4.5 Billion in annual NIH research at world-class institutions
- Major state initiatives with billions of dollars to develop biomedical sector

# VENTURE INVESTMENT

>\$1 Billion in annual health care venture investments

Over 130 new investments each year

Across all health care investment sectors



Source: Midwest Health Care Venture Investment Report by BioEnterprise compiled from Venture Wire, Private Equity Week, Venture Source, SEC Filings, company press releases, [www.biospace.com](http://www.biospace.com), Midwest regional business publications, and Midwest bioscience organizations and institutions

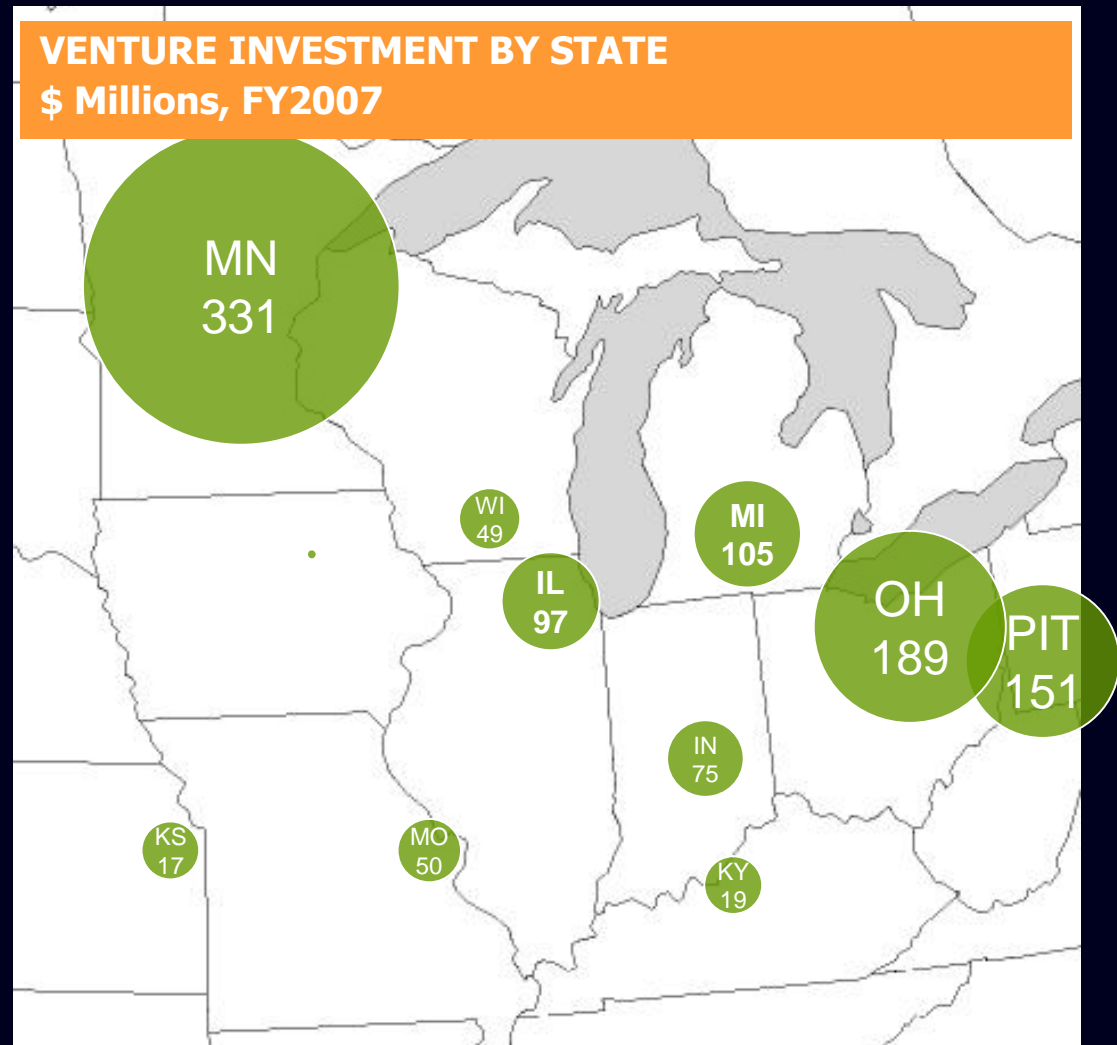
# LARGEST DEALS BY SUBSECTOR

Company	Region	\$ Mns	Investors
<b>Biopharmaceuticals</b>			
Precision Therapeutics	Pittsburgh	43	Adams Capital Management, Birchmere Ventures, Draper Triangle Ventures, Longitude Capital Management, Quaker BioVentures, TVM Capital
Sagent Pharmaceuticals	Chicago	30	Vivo Ventures
Infacare Pharmaceutical	Pittsburgh	28	Atlas Venture, FirstMark Capital, HealthCare Ventures, Individual Investors, Longitude Capital Management
CoLucid Pharmaceuticals	Indianapolis	25	Care Capital, Domain Associates, Pappas Ventures, Pearl Street Capital Group, Triathlon Medical Ventures
Esperion Therapeutics, Inc	Detroit/Ann Arbor	23	Aisling Capital, Alta Partners, Arboretum Ventures, Domain Associates
<b>Medical Devices</b>			
CVRx	Minneapolis	84	Frazier Healthcare Ventures, InterWest Partners, Johnson & Johnson Development, New Enterprise Associates, Sightline Partners, Thomas Weisel Healthcare Venture Partners
Proto Labs	Minneapolis	52	North Bridge Growth Equity
Celleration	Minneapolis	25	Venture Investors, Heron Capital, CID Capital, AAVIN Equity Partners, Baird Venture Partners, New Science Ventures, Triathlon Medical Ventures, Upper Lake Growth Capital
ViewRay	Cleveland	25	OrbiMed Advisors, Fidelity Biosciences, Aisling Capital, Kearny Venture
superDimension	Minneapolis	22	Pitango Venture Capital, CIBC, Medica Venture Partners, MI-3, OrbiMed, Oxford, Pfizer Venture Investments
<b>Health Care IT &amp; Services</b>			
PartsSource	Cleveland	50	Polaris Ventures Partners, Primus Capital
ProCure Treatment Centers	Indianapolis	35	McClendon Venture Company
Initiate Systems	Chicago	26	Paladin Capital Group
Immunetrics	Pittsburgh	13	Launchcyte, Undisclosed Investor

# GEOGRAPHY OF INVESTMENT

Investment across  
Midwest

Significant  
concentrations in  
Minnesota,  
Cleveland-Pittsburgh  
(Tech Belt), and  
Chicago/Wisconsin



# VENTURE DATA BY STATE

State	2008		2007		2006		2005	
	\$ Millions	# of Cos.	\$ Millions	# of Cos.	\$ Millions	# of Cos.	\$ Millions	# of Cos.
Illinois	97.3	13	125.5	7	101.6	12	39.2	7
Indiana	75.4	7	135.6	10	37.2	8	23.1	4
Iowa	4.0	1	-	-	-	-	-	-
Kansas	16.9	9	56.6	6	-	-	-	-
Kentucky	19.2	6	32.0	4	51.4	4	19.3	2
Michigan	105.0	12	56.2	5	135.5	11	52.9	8
Minnesota	330.9	23	296.1	25	233.9	22	151.0	18
Missouri	50.2	11	69.6	7	39.2	10	71.9	9
Ohio	189.1	43	295.5	44	113.9	39	185.4	18
Western Pennsylvania	150.7	33	101.4	17	54.4	22	58.3	10
Wisconsin	48.5	8	56.2	12	25.2	7	39.3	6
<b>Total</b>	<b>1,087.1</b>	<b>166</b>	<b>1,224.7</b>	<b>137</b>	<b>792.3</b>	<b>135</b>	<b>640.4</b>	<b>82</b>

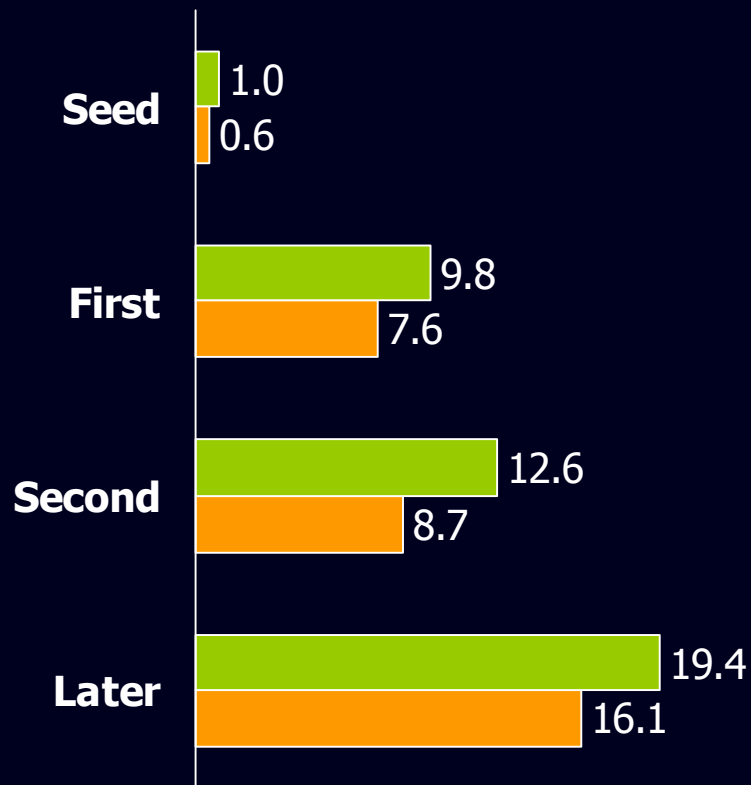
# VENTURE DATA BY REGION

Region	2008		2007		2006	
	\$ Millions	# of Cos.	\$ Millions	# of Cos.	\$ Millions	# of Cos.
Chicago	97.3	13	125.5	7	101.6	12
Indianapolis	73.0	6	113.6	8	18.4	6
West Lafayette	2.5	1	22.0	2	18.8	2
Iowa	4.0	1	-	-	-	-
Lexington, KY	4.5	1	0.9	1	40.0	1
Louisville, KY	13.4	3	6.2	2	11.4	3
Detroit-Ann Arbor	89.0	8	56.2	5	98.3	8
SW Michigan	16.0	2	-	-	6.7	2
Minneapolis	289.9	20	296.1	25	233.9	22
St. Louis	47.2	10	57.6	6	20.2	9
Kansas City*	19.9	10	68.6	7	19.0	1
Cincinnati*	19.2	2	64.6	10	13.6	4
Cleveland	163.5	31	241.8	28	87.9	23
Columbus	6.4	10	14.2	7	12.4	12
Pittsburgh	150.7	33	101.4	17	54.4	22
Wisconsin	48.5	8	56.2	12	25.2	7
<b>Total</b>	<b>1,087.1</b>	<b>166</b>	<b>1,224.7</b>	<b>137</b>	<b>792.3</b>	<b>135</b>

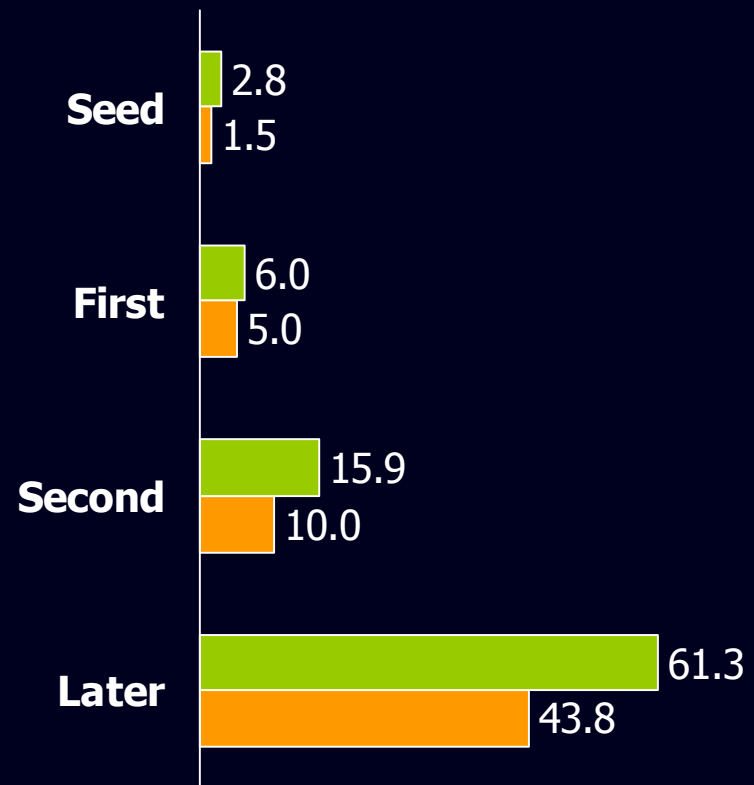
# INVESTMENT COMPARISON



**MEDIAN INVESTMENT**  
\$ Millions



**MEDIAN PRE-MONEY VALUATION**  
\$ Millions



# COMPANIES RECEIVING INVESTMENT

## MEDICAL DEVICES

AbbeyMoor Medical	eScreen	Regear Life Sciences
Accord Biomaterials	Freedom Meditech	Separation Design Group
Accuri Cytometers	Future Path Medical	Simbionix
Aethon	Glucose Sensing Tech	Spineology
ALung Technologies	Great Lakes	superDimension
Applied Computational Technologies	Harbinger Medical	Symbios Medical Products
Axiomed Spine	Hemosphere	Syncro Medical
Blacktown NC	Intellect Medical	Tactile Systems Tech.
BlueBelt Technologies	ISTO Technologies	Thermal Therapeutics
BrainScope	KC BioMediX	ThermedX
Cardiac Concepts	Lutonix	Tissue Regeneration Systems
Cardio1Scan	m2m Imaging	Torax Medical
CardioInsight	MDG Medical	Transoma Medical
Cardiovascular Systems	Minimally Inv. Devices	Tursiop Technologies
CarMell	Myocor	VasoLux MicroSystems
Cartesia Dx	NanoStatics	Veran Medical Tech.
Celleration	Nephron	Vertebration
CerviLenz	Nerites	ViewRay
Circadiance	Neurolutions	Vision Optimization
Clear Catheter Systems	NeuWave Medical	Wright Therapy Products
ClearCount Medical	OrthoData	Zyga Technology
CleveX	OrthoHelix	
Closys	Parent Plus	
CoAxia	Peritec	
Cohera Medical	Pioneer Surgical Technology	
Compact Particle Accel.	PixelEXX	
CVRx	PrevaHealth	
DiraMed	Proto Labs	
Entellus Medical	Pulse Needlefree Systems	

## BIOPHARMACEUTICALS

AcelleRx Therapeutics	Immunogenetix Therapeutics
Akebia Therapeutics	Intranasal Therapeutics
AnalizaDx	Invasc Therapeutics
ApoImmune	Kereos
Applied Isotope	Knopp Neurosciences
Asoyia	Lipella Pharmaceuticals
AssureRX	Maderia
Biomed Research & Tech.	Mithridion
Cell Targeting	Mork Process
Collectar	NanoBio
Cellular Dynamics Intl.	Neoprobe
Chromatin	NephRx
Clarus Therapeutics	Nerites
Cognition Therapeutics	Neurotherapeutics Pharma
CoLucid Pharmaceuticals	Ohmx
Copernicus Therapeutics	Potentia Pharmaceuticals
CrossCheck Compliance	Precision Therapeutics
CS-Keys	ProNAi Therapeutics
Divergence	QuadraSpec
Edenspace	RedPath Integrated Pathology
EraGen Biosciences	RhinoCyte
Esperion Therapeutics	Rubicon Genomics
Evogen	Sagent Pharmaceuticals
FAST Diagnostics	SanoGene
GenTel Biosciences	Singulex
HandyLab	SteadySleepRx
HepGen	Tolera Therapeutics
iCyt Mission Technology	VasoGenix
	Ventria

## SW & SERVICES

Advanced ICU Care
Almedtrac
Axiom
Brainstage
Brainwashed
Caliber Technologies
Chronic Health Metrics
Critical Signal Technologies
Eris Medical Technologies
Health Monitoring Systems
Healthsense
Immunetrics
Informed
Initiate Systems
invivodata
Lead Horse
Millennium Pharmacy Systems
mPay Gateway
MyriadHealth
Neuronetrix
NineSigma
NXThera
Optamin Medical Services
PartsSource
Predictive Physiology and Medicine
ProCure Treatment Centers
Strategic Medicine
Treatment Online
within3

# NOTABLE EXITS

## MEDICAL DEVICES



*IPO*



*Medtronic*



*Fresenius*



*Integra*



*IPO*

## BIOPHARMACEUTICALS



*WuXi*



*Roche*



*IPO*



*Roche*



*Quintiles*

## SOFTWARE & SERVICES



*Elekta*



*Johnson & Johnson*



*McKesson*



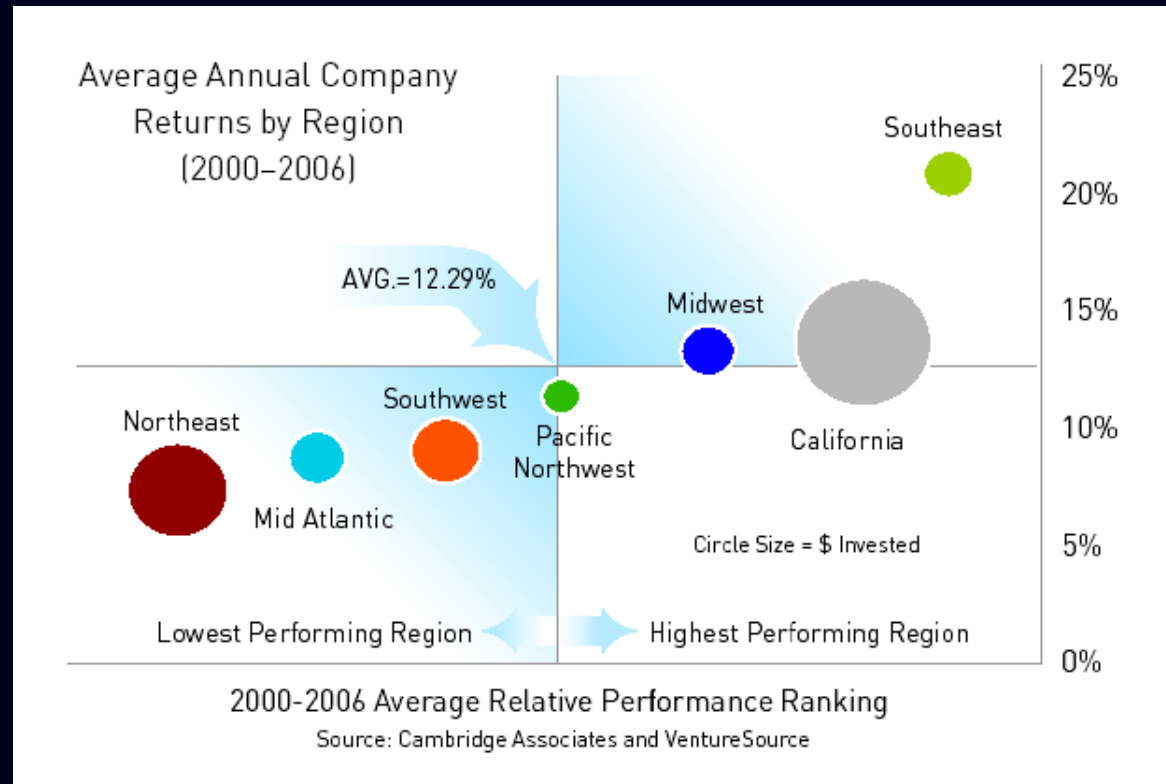
*Universal American*



*Walgreen*

# RETURNS ON MIDWEST INVESTMENTS

Returns from Midwest venture-backed companies (all sectors) are above the national average, ranking third highest in the nation



## Methodology

Chrysalis Ventures conducted an in-depth analysis of venture industry data. Using both Cambridge Associates and VentureSource databases, the firm analyzed data on every venture-backed company in the country for which returns information was available— many thousands of data points in all.

# INDUSTRY

Leading companies  
in all sectors

>300,000 employed  
in biomedical  
industry

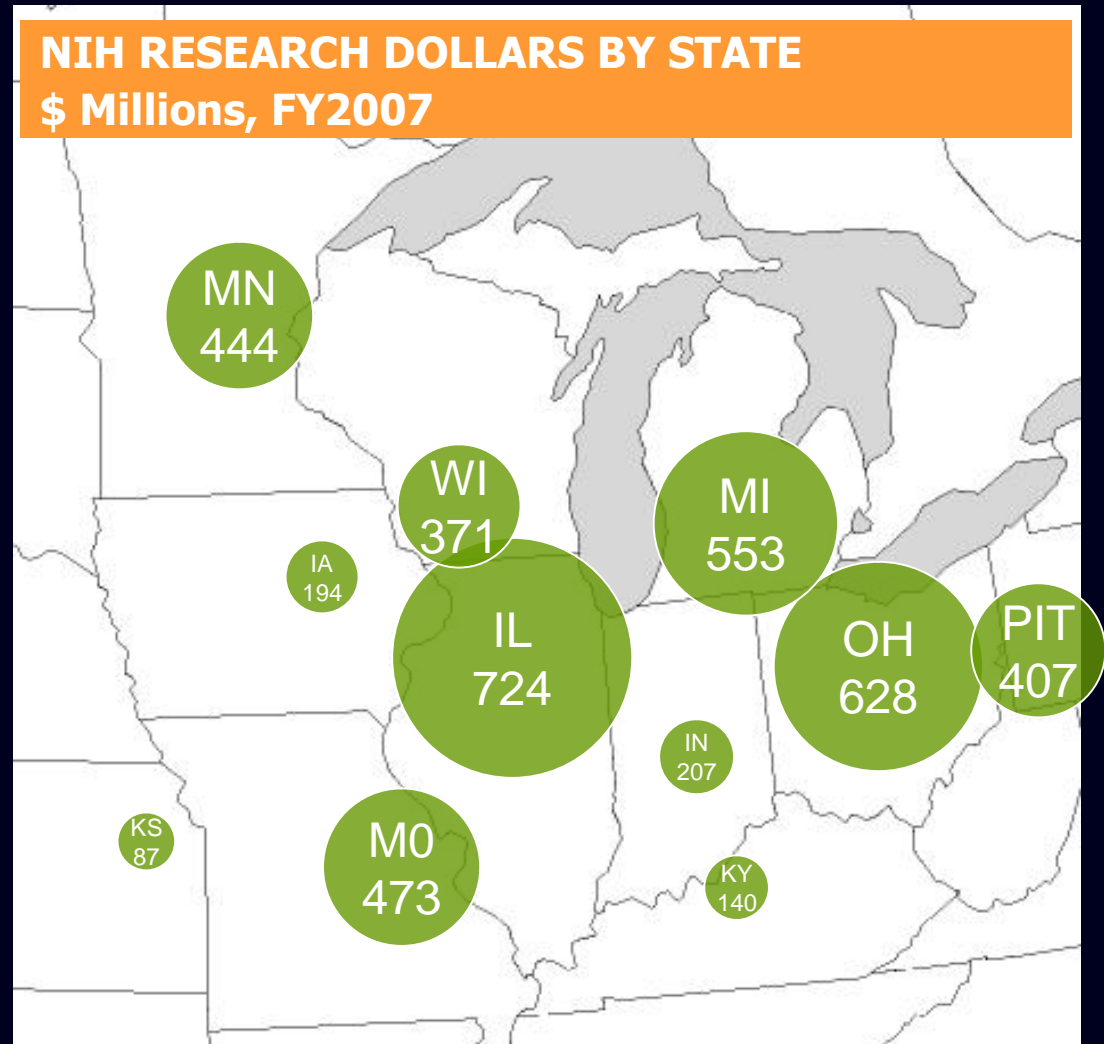
Over 38,000 annual  
graduates in  
bioscience fields  
(26% of US total)



# RESEARCH

\$4.5 Billion in Total NIH Research (21%)

\$9.9 Billion in Total University Research (19%)



# TECHNOLOGY TRANSFER

Professional  
technology transfer  
capabilities

22% of Total U.S.  
Licensing Revenues,  
Total of \$265 Million

16% of Total U.S.  
Patents

124 Startups  
Launched in 2006

State	Institution	License Income (\$ Mns)	2006 Startups	Research (\$ Mns)
<b>Iowa</b>	Iowa	16.9	4	346
	Iowa State	7.2	3	248
<b>Illinois</b>	Illinois	10.2	9	808
	Chicago	8.9	2	391
	Southern Illinois	0.3	1	43
<b>Indiana</b>	Indiana	6.7	2	381
	Purdue	3.8	14	389
<b>Kansas</b>	Kansas State	1.3	0	98
	Kansas	0.2	0	132
<b>Kentucky</b>	Kentucky	0.9	4	184
	Louisville	0.1	3	148
<b>Michigan</b>	Michigan	20.4	9	797
	Michigan State	4.2	4	358
	Wayne State	4.0	2	221
	Michigan Tech	0.5	2	44
<b>Minnesota</b>	Minnesota	56.2	3	595
	Mayo Foundation	25.9	9	448
<b>Missouri</b>	Washington--St. Louis	11.6	2	520
	Missouri	2.4	2	332
<b>Ohio</b>	Case Western Reserve	10.8	4	291
	Cleveland Clinic	6.2	3	197
	Cincinnati Children's	3.1	3	125
	Akron	1.9	3	54
	Ohio State	1.0	5	652
	Cincinnati	0.5	2	149
	Toledo	0.3	2	48
	Dayton	0.1	1	71
<b>W. Pennsylvania</b>	Pittsburgh	10.2	5	602
	Carnegie Mellon	6.0	12	243
<b>Wisconsin</b>	Wisconsin	42.4	7	832
	Medical College of Wisconsin	0.5	2	104

Source: AUTM FY2006 Licensing Activity Survey; MRUN

# STATE BIOMEDICAL INITIATIVES

- Ohio
  - \$2.3 Billion, 10-Year Third Frontier and Building Ohio Jobs Funds, 40% for Biosciences
  - Translational Research, Capital Formation, and Company Growth
  - >\$300 Million for Capital Formation Programs
- Michigan
  - \$2 Billion, 10-Year 21<sup>st</sup> Century Jobs Fund, 25% for Biosciences
- Kansas
  - \$580 Million, 15-Year Kansas Bioscience Authority
- Pennsylvania
  - \$550 Million Jonas Salk Fund
- Indiana
  - \$75 Million 21<sup>st</sup> Century Fund

# STATE VENTURE DEVELOPMENT FUNDS

Midwest states have made significant dollars available to attract and develop venture capital firms

Fund of funds programs invest in seed through growth stage venture firms

State and Programs	\$ Mns
• Indiana	228
– Indiana Future Fund	
– Indiana Investment Fund	
• Iowa	100
– Iowa Fund of Funds	
• Illinois	75
– Technology Development Account	
• Ohio	>300
– Ohio Venture Capital Authority	
– Ohio-Midwest Fund	
– NEO Capital Fund	
– Seed and Preseed Programs	
• Kansas	
• Kentucky	21
– Commonwealth Seed Capital Fund	
• Michigan	>200
– 21 <sup>st</sup> Century Jobs Fund	
– Venture Michigan Fund	
– Renaissance Fund	
• Missouri	81
– Vectis Life Science Fund	
• Pennsylvania	60
– PA Venture Capital Investment Program	
• Wisconsin	135
– State of Wisconsin Investment Board	

# MIDWEST HEALTH CARE VENTURE GROUPS

AAVIN Venture Capital  
Accutive Medical Ventures  
Adams Street Partners  
Advantage Capital Partners  
Affinity Capital Management  
Apjohn Ventures  
Arboretum Ventures  
ARCH Development Partners  
Arch Ventures  
Ascension Health Ventures  
Athenian Venture Partners  
Baird Venture Partners  
BioGenerator Fund  
Birchmere Ventures  
Black River  
Blue Chip Venture Company  
Bridge Investment Fund  
Cargill Ventures  
Channel Medical Partners  
Charter Life Sciences  
Chrysalis Ventures  
CID Capital  
Clarian Health Ventures  
Corridor Ventures  
Draper Triangle Ventures

Early Stage Partners  
EDF Ventures  
Everett Partners  
First Analysis  
Flavin Ventures  
Fort Washington Capital  
Foundation Medical Ventures  
Frantz Medical Ventures  
Heron Capital  
iNetworks  
InnovationWorks  
JumpStart  
KB Partners  
Kegonsa Capital Partners  
Kentucky Seed Capital  
Lilly Ventures  
MB Venture Partners  
Morgenthaler Ventures  
Mutual Capital Partners  
NCT Ventures  
Novitas Capital  
Oakwood Medical  
Ohio Innovation Fund  
Open Prairie Equity Partners

Portal Capital  
Primus Capital  
Prolog Ventures  
Radius Ventures  
Reservoir Venture Partners  
River Cities Capital Funds  
Riverside Company  
RiverVest Venture Partners  
Seneca Partners  
Sightline Partners  
Sigvion Capital  
Split Rock Partners  
Spring Mill Venture Partners  
Sterling Venture Partners  
SWMF Life Science Fund  
Talisman Capital  
TechColumbus  
TGap Ventures  
Thomas McNerney  
Triathlon Medical Ventures  
Twilight Venture Partners  
UPMC Ventures  
Venture Investors  
Ziegler Meditech Partners

# MIDWEST ANGEL FUNDS AND GROUPS

3C Capital Partners - Northfield, MN  
Akron ARCH Angels - Akron, OH  
Blue Water Angels - Midland, MI  
Bluegrass Angels - Lexington, KY  
BlueTree Allied Angels - Pittsburgh, PA  
Capital Community Angels - Lansing, MI  
Centennial Investors - Columbia, MO  
Central Minnesota Growth Fund - Willmar, MN  
Core Network - Toledo, OH  
Cornerstone Angels - Northbrook, IL  
First Angels - Kalamazoo, MI  
Grand Angels - Grand Rapids, MI  
Great Lakes Angels - Rochester, MI  
Hyde Park Angel Network - Chicago, IL  
Irish Angels - Notre Dame, IN  
Lakes Ventures II - Alexandria, MN  
Louisville Angel Investor Network - Louisville, KY  
Main Street Venture Partners - Fort Wayne, IN  
Marquette Golden Angels - Milwaukee, WI  
Mid-America Angels - Lenexa, KS  
Midwest Venture Alliance - Wichita, KS

North Coast Angel Fund - Cleveland, OH  
Ohio TechAngels - Columbus, OH  
Phenomenelle Angels - Madison, WI  
Prairie Capital II - Worthington, MN  
Queen City Angels - Cincinnati, OH  
RAIN Source Capital - St. Paul, MN  
River Valley Capital - Montevideo, MN  
Rock River Capital - Rock Rapids, IA  
Rocket Ventures - Toledo, OH  
Silicon Pastures - Milwaukee, WI  
Sofia Angel Fund - Minneapolis, MN  
South Metro Investors - Burnsville, MN  
St. Louis Arch Angels - St. Louis, MO  
Stateline Angels - Rockford, IL  
Two Rivers Angel Network - Mankato, MN  
Wellspring Investor Alliance - Mankato, MN  
Wisconsin Investment Partners - Madison, WI  
Women's Capital Connection - Lenexa, KS