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# New York Biotechnology Association

## New York Biotech Business Brief

February 2008

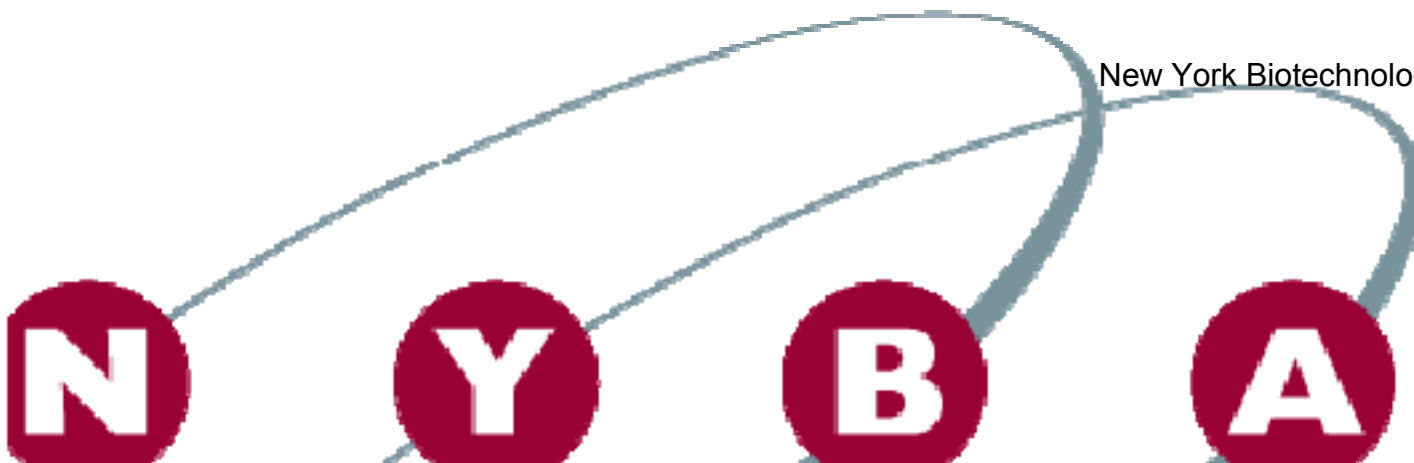
New York Biotechnology Association

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## Acknowledgements

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**(osi)** pharmaceuticals



Harter Secrest & Emory LLP



- Founded 1990
- 200+ members representing
  - Biotechnology companies
  - Academic and research institutions
  - Professional service providers and consultants
- Leadership
  - Nathan Tinker, PhD, Executive Director
  - Robert Van Nostrand, Chairman

## Networking



## Information



- ❖ Annual Meeting
- ❖ Executive roundtables
- ❖ Member-only events
- ❖ Purchasing consortium

## Advocacy



- ❖ Member news
- ❖ Industry intelligence
- ❖ Competitive intelligence

- ❖ Relationships with leaders
- ❖ Public policy
- ❖ Lobbying



## What is biotechnology?

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- The biotechnology industry originated in the 1970s, based largely on a new recombinant DNA technique whose details were published in 1973 by Stanley Cohen of Stanford University and Herbert Boyer of the University of California, San Francisco. Recombinant DNA is a method of making proteins-such as human insulin and other therapies-in cultured cells under controlled manufacturing conditions. Boyer went on to co-found Genentech, which today is biotechnology's largest company by market capitalization.
- Biotechnology has created more than 200 new therapies and vaccines, including products to treat cancer, diabetes, HIV/AIDS and autoimmune disorders.
- Biotechnology is responsible for hundreds of medical diagnostic tests that keep the blood supply safe from the AIDS virus and detect other conditions early enough to be successfully treated. Home pregnancy tests are also biotechnology diagnostic products.

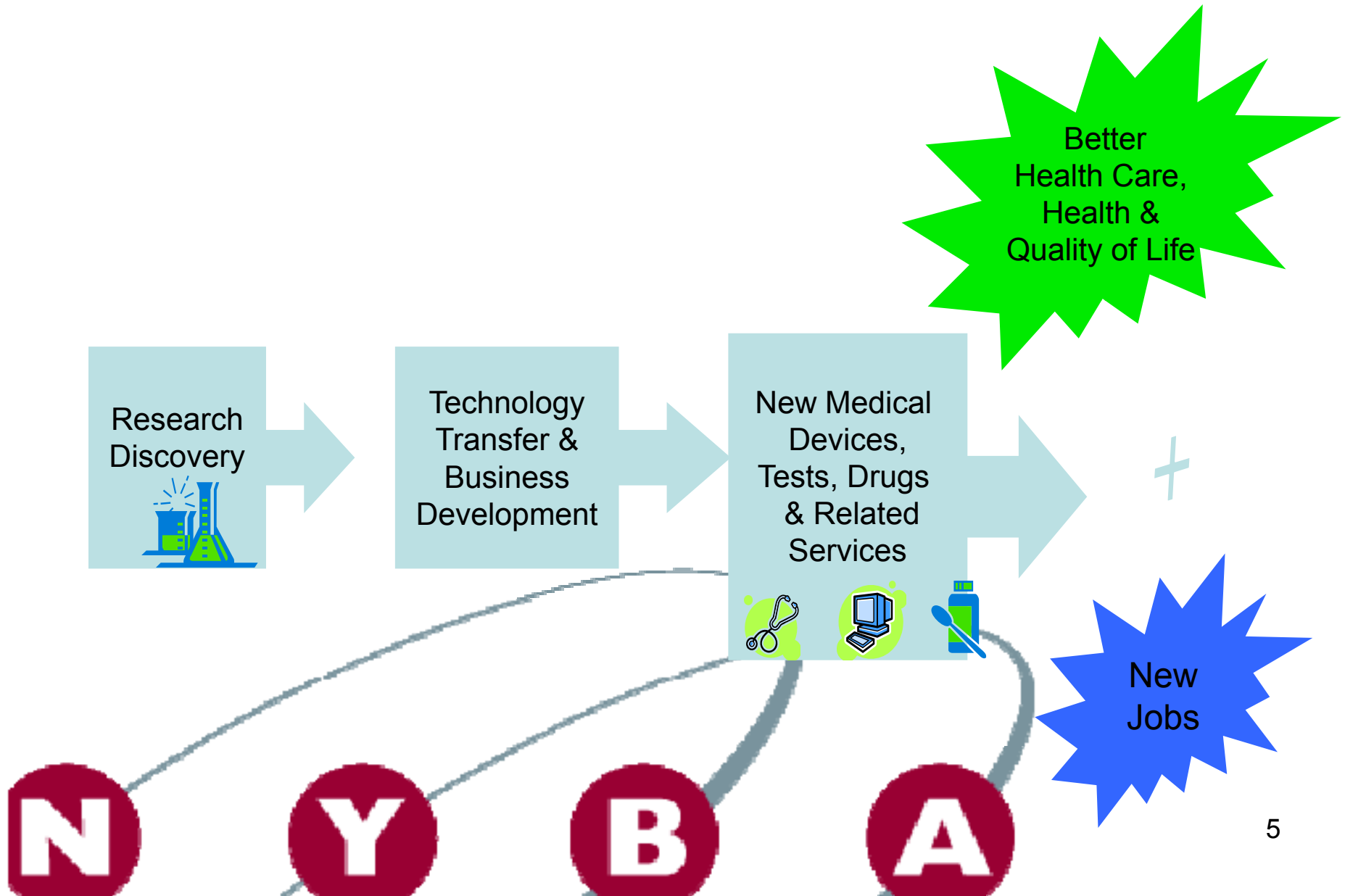
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# Why is bioscience important to New York?



## Bioscience pays well . .

- Total biomedical wages in New York  16.9% 2003-2006 to an average of **\$63,510**

	<u>Employment</u>	<u>% Change</u>	<u>Avg Wage</u>
Drug & Chemical Mfg	21,700	 13.8%	\$69,850
Labs & Research	21,200	 17.1%	\$64,030
Med Equip & Supplies	16,000	 22.3%	\$54,240

- Total employment **58,900**
- Total annual wages **\$3.75 billion**



Source: NYS DoL

## ... and is a state-wide phenomenon

### Rochester

Drugs/pharmaceuticals: 1,703

Medical devices & Equipment: 4,293

### Buffalo/Niagra

Drugs/pharmaceuticals: 1,544

Medical devices & Equipment: 4,293

### Albany/Schenectady/Troy

Research, Testing and Medical  
Laboratories: 3,634

### NYC Metro Region\*

Drugs/pharmaceuticals: 51,978

Medical devices & Equipment: 19,252

Research, Testing and Medical  
Laboratories: 35,228

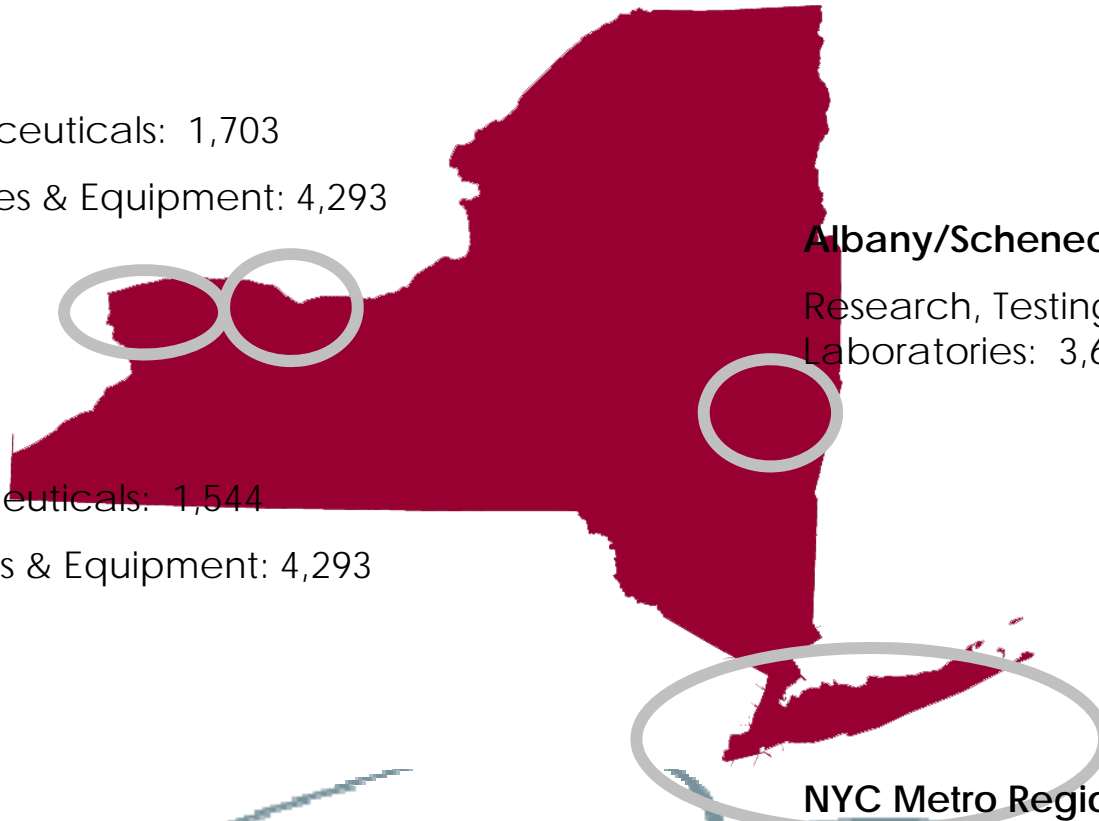
\*includes Northern NJ

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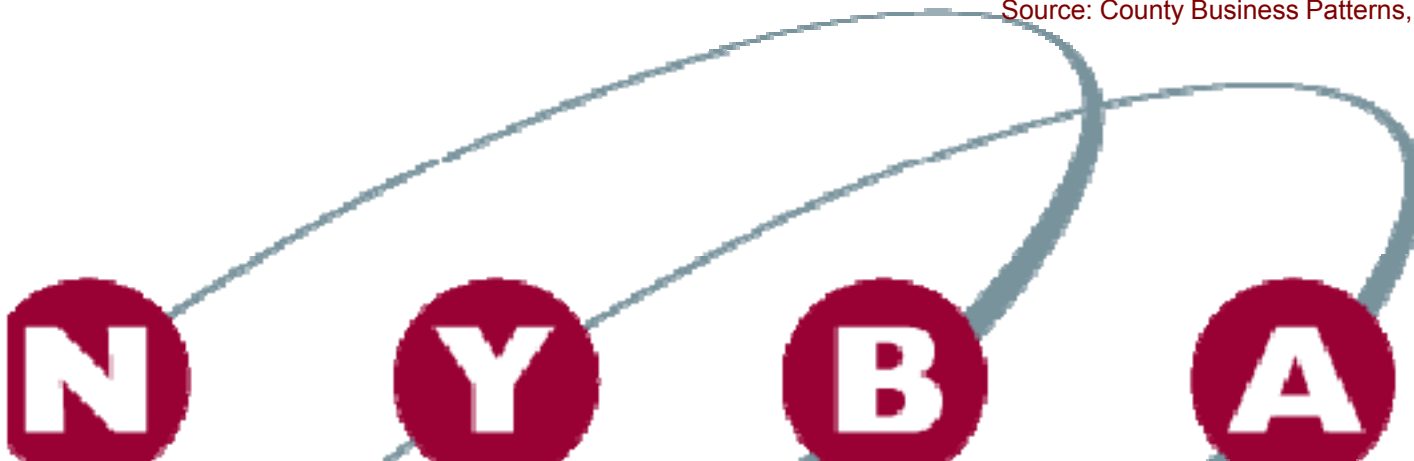
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# New York is 2nd in total bioscience employment

1998			2004			1998-2004 Employment % Change
Rank	State	Employment	Rank	State	Employment	
1	California	110,169	1	California	177,034	61%
<b>2</b>	<b>New York</b>	<b>60,107</b>	<b>2</b>	<b>New York</b>	<b>92,221</b>	<b>53%</b>
3	New Jersey	51,066	3	New Jersey	84,943	66%
4	Illinois	35,953	4	Michigan	55,987	239%
5	Massachusetts	33,618	5	Pennsylvania	55,899	71%
6	Pennsylvania	32,762	6	Illinois	48,496	35%
7	Texas	32,037	7	Massachusetts	48,242	44%
8	Maryland	26,072	8	North Carolina	47,796	92%
9	Virginia	25,440	9	Virginia	43,465	71%
10	North Carolina	24,928	10	Maryland	39,031	50%
	All States	662,635		All States	1,041,604	

Source: County Business Patterns, 2006; Non-Employer Series, 2006



# Bioscience companies large and small are located in New York . . .

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**(osi) pharmaceuticals**

 **Cleveland BioLabs, Inc**  
Nasdaq : CBLI

 **AMRI**

**Pfizer**

**AUREON**  
LABORATORIES

 **Cryo Bio System**  
Groupe I.M.V. Technologies

**cytopia**

 **Bristol-Myers Squibb**

 **gsk**  
GlaxoSmithKline

 **Genencor International**  
A Danisco Company

**ACORDA**  
THERAPEUTICS

**REGENERON**

**WelchAllyn**

Advancing Frontline Care™

 **AGI Dermatics**  
DNA SCIENCE FOR SKIN

 **Intra-Cellular Therapies**

 **VACCINEX**

 **CONMED**  
CORPORATION

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... and there is a thriving academic and research community



## Bioscience's contributes nearly \$8.5 billion to New York's economy . . .

Rank	State	Total Impact	Direct Impact	Indirect & Induced	Indirect Impact
1	New Jersey	22,198.51	10,173.26	12,025.25	7,645.61
2	California	21,227.55	9,637.88	11,589.67	6,293.25
3	Pennsylvania	15,812.85	7,341.69	8,471.15	5,210.58
4	Indiana	11,393.39	5,711.41	5,681.98	3,480.84
<b>5</b>	<b>New York</b>	<b>8,449.77</b>	<b>4,501.78</b>	<b>3,948.00</b>	<b>2,201.14</b>
6	North Carolina	9,374.50	4,493.25	4,881.25	2,849.46
7	Illinois	7,609.99	3,381.17	4,228.82	2,650.54
8	Massachusetts	4,822.64	2,351.62	2,471.03	1,225.61
9	Michigan	3,907.50	1,926.77	1,980.72	1,160.15
10	Connecticut	3,674.03	1,820.46	1,853.57	1,124.47
	All States	172,710.14	63,966.72	108,743.42	67,798.52

In billions \$US. Source: Milken Institute, 2006

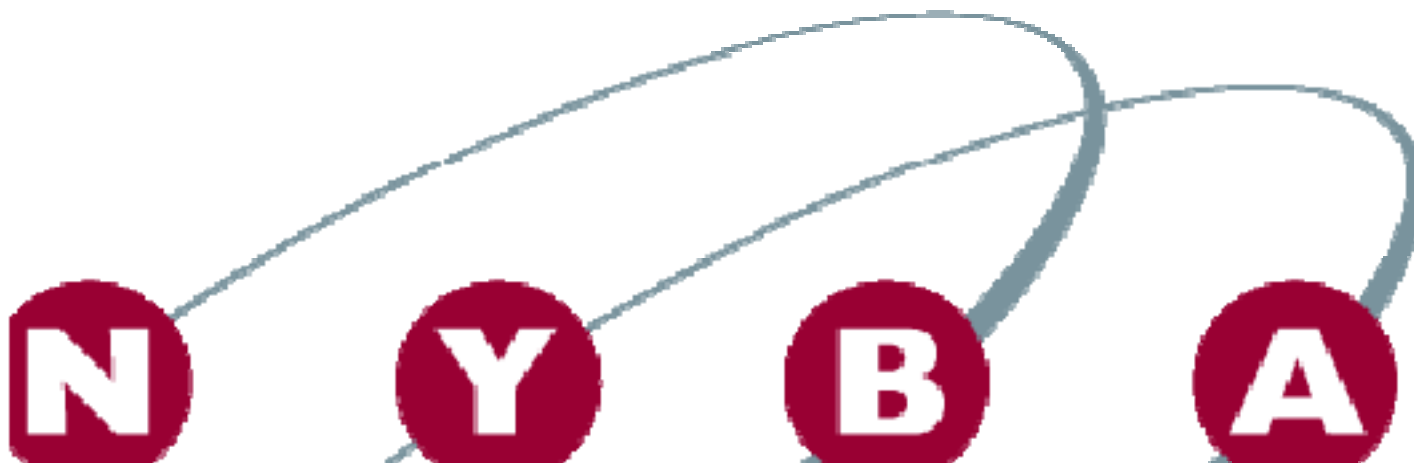


. . .and returns more than half a billion dollars in tax revenue

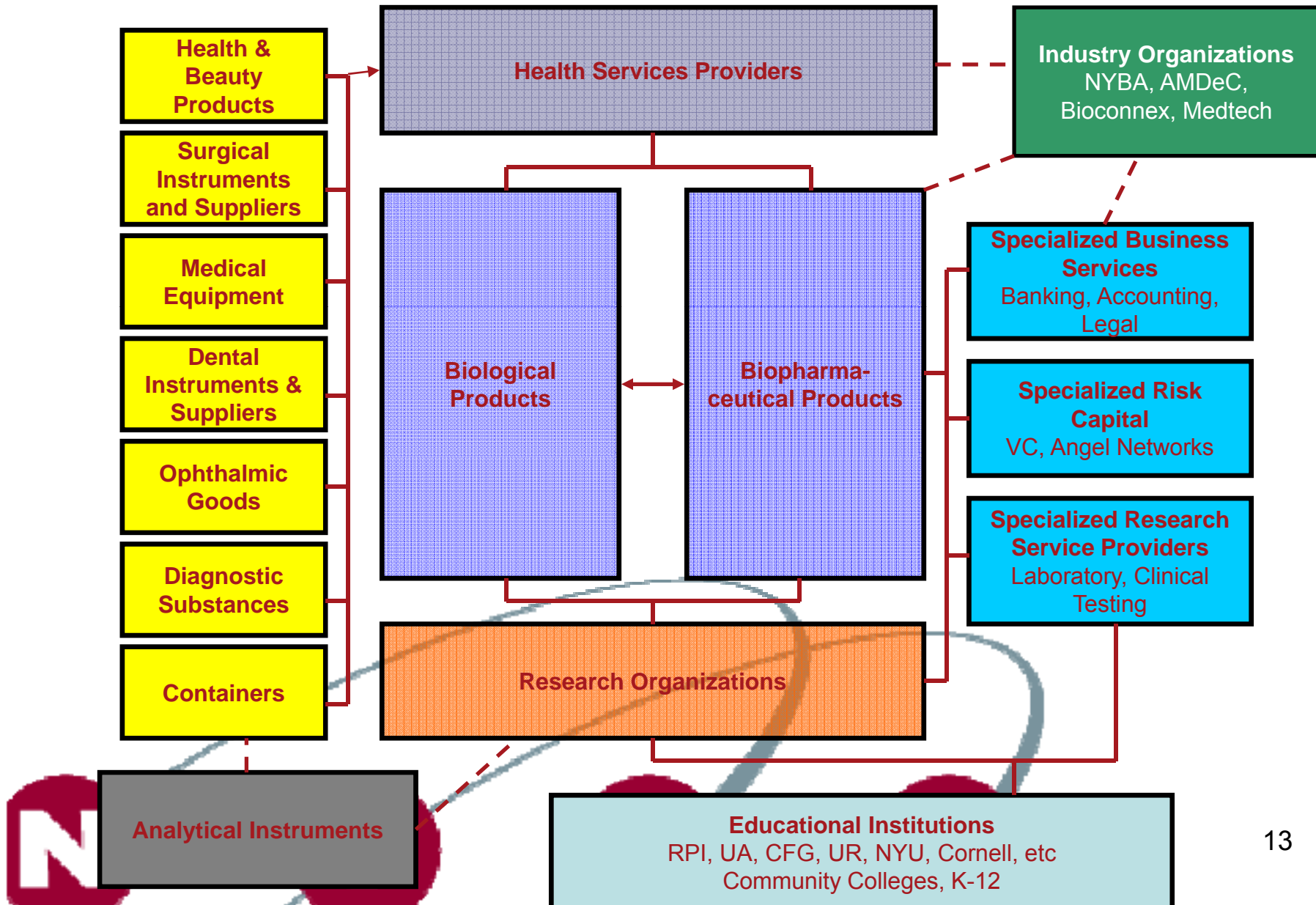
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	State & Local Taxes	Federal Taxes	Total Taxes
Total Tax Receipts	514.3	1,248.10	1,762.30
Personal Income Tax Receipts	372.7	841.5	1,214.20
Sales Tax Receipts	29.3	-	29.3
Corporate Income Tax Receipts	112.2	406.5	518.8

In millions \$US. Source: Milken Institute, 2006



# But coordinating state assets can be a challenge . . .



## ... and there is a critical need for further development

	NYS Grade
➤ Proximity to world-class science Ālinks to universities or other research Institutes	✓ +
➤ Access to talent Āability to attract and retain key research staff	✓ +
➤ Access to funding Āangel, VC, public markets	✓
➤ Quality of life factors Āschools, affordable housing, safety, culture	✓
➤ Appropriate premises and infrastructure thatĀ available, affordable and adaptable	X
➤ Entrepreneurial mindset	✓ -
➤ Inter and intra-institutional collaboration	✓
➤ Availability of support services	✓ +
➤ Access to large, diverse patient population	✓ +
➤ Favorable incentives and tax treatment	✓ -

Source: MedTech, LILSI, NYCEDC, NYS Center for Excellence in Bioinformatics & Life Sciences

New York State possesses all the components of a bioscience leader, but has certain areas requiring further development if it is to be fully competitive.

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# Key requirements for future success

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- **Discovery, Innovation and Technology Development**  
*State funding to fill gap in shrinking federal support of scientific innovation and new technology development*
- **Financing, Investment and Business Development**  
*Funding and business resources to support early-stage corporate development in the capital-intensive life sciences industry*
- **Facilities, Incubation and Expansion**  
*Appropriate facilities (lab space, prototyping, & manufacturing) and infrastructure to support nascent and expanding companies*
- **Workforce, Training and Entrepreneurship**  
*Institutional- and community-based initiatives to continue expanding skilled, multi-disciplinary workforce to support industry growth*
- **Taxes, Incentives and Quality of Life**  
*Pro-business programs and incentives – and program application assistance- to improve economic conditions for new and expanding companies and their employees*
- **Marketing, Outreach and Strategic Networking**  
*Statewide, asset- and opportunity-driven attraction and retention plan*



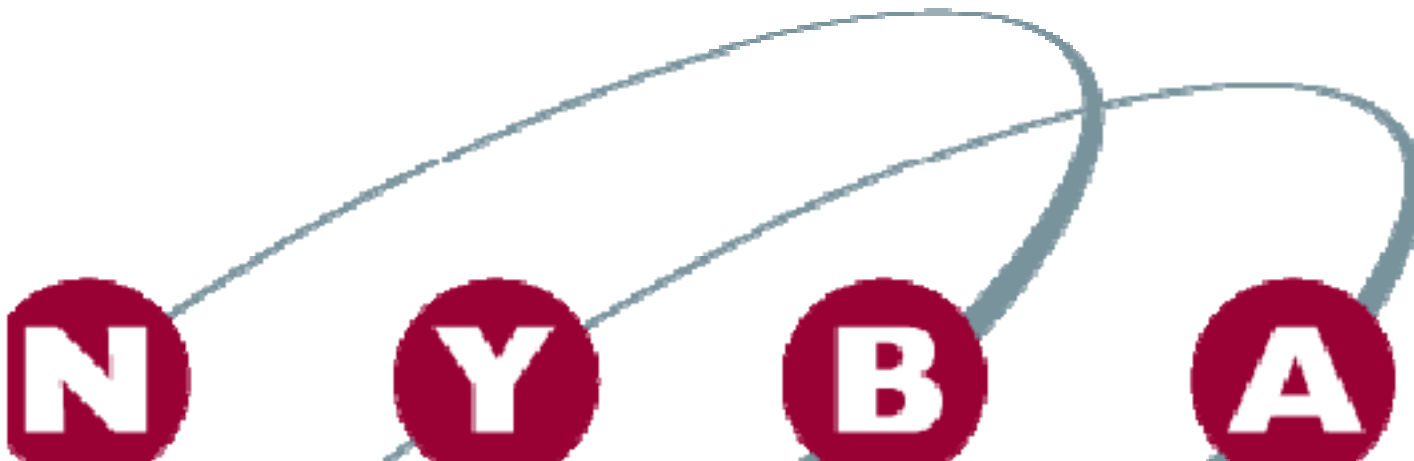
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- New York has a legacy of bioscience innovation and leadership
- Bioscience is currently a significant contributor to the NYS economy, with enormous potential
- A variety of challenges remain, but the resolve of the community is great





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[www.nyba.org](http://www.nyba.org)

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