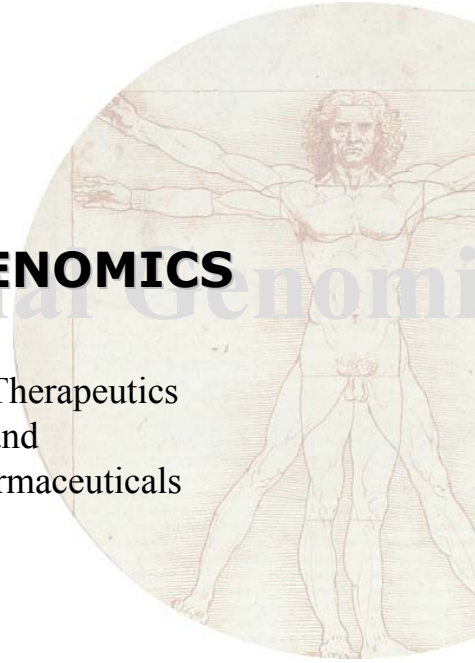


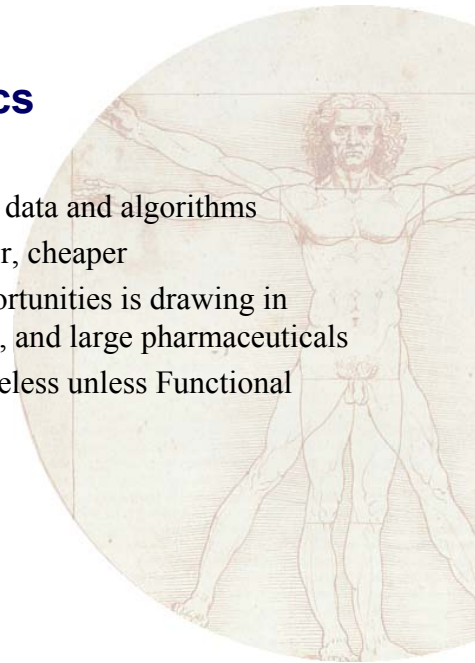
FUNCTIONAL GENOMICS

Athersys Therapeutics
and
IDEC Pharmaceuticals



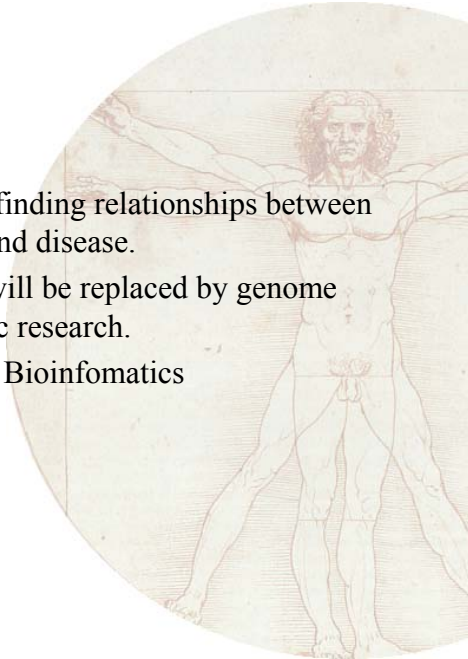
Functional Genomics

- Application of genomic data and algorithms
- Build drugs better, faster, cheaper
- “Post-genome” era opportunities is drawing in investors, entrepreneurs, and large pharmaceuticals
- Genome map will be useless unless Functional Genomics takes off



Post Genome Era

- Will be concerned with finding relationships between genes, proteins, drugs, and disease.
- Gene specific research will be replaced by genome wide and protein specific research.
- Key terms: Proteomics, Bioinformatics



Pharmaceuticals

- \$350 Billion pharmaceutical industry is investing heavily in Functional Genomics
- Rosetta, Illumina both managed \$1 Billion market valuations at IPO

Pre-Genome

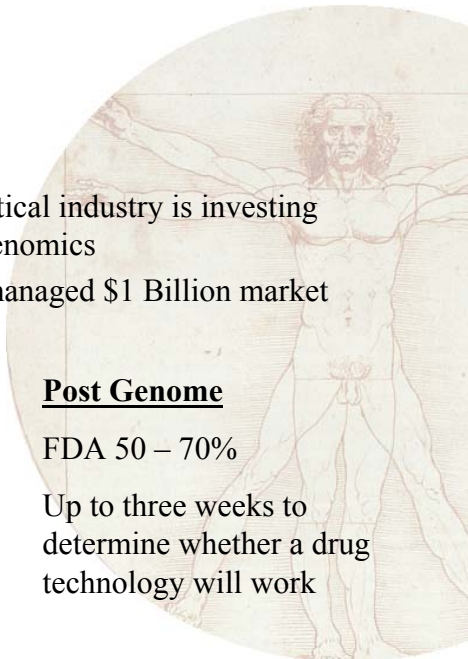
FDA 90% failure rate

High costs for failed research

Post Genome

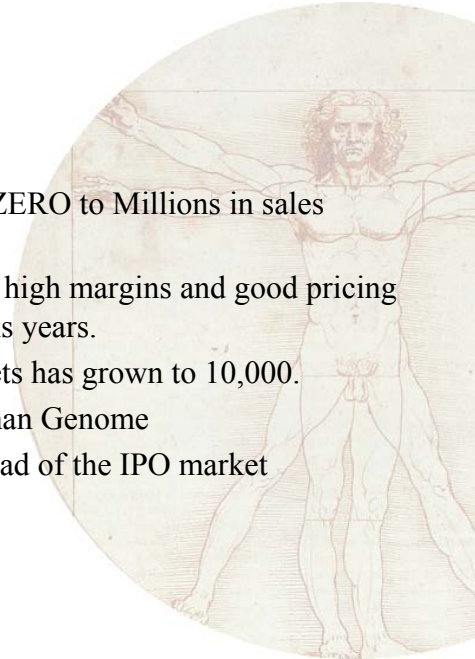
FDA 50 – 70%

Up to three weeks to determine whether a drug technology will work



Investor gains

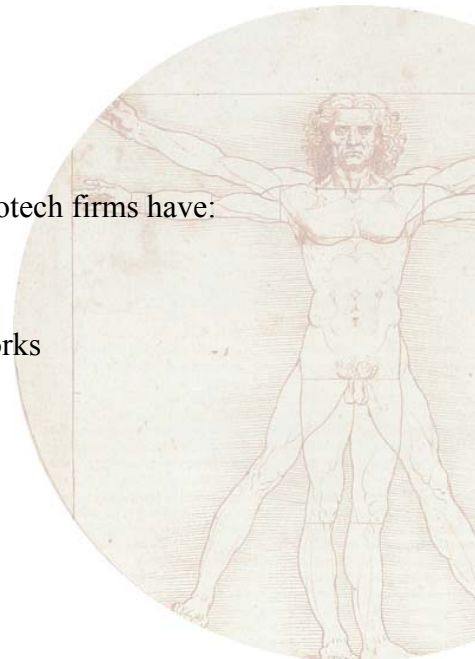
- Company can go from ZERO to Millions in sales almost overnight.
- Real Products that have high margins and good pricing power, and growth spans years.
- Potential 400 drug targets has grown to 10,000.
- Billions of gene in Human Genome
- Expected to be at the head of the IPO market



Not Pets.Com

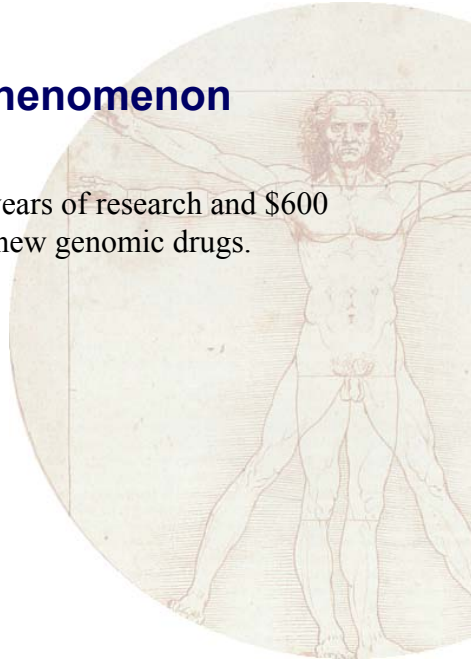
Unlike most Dot.Coms, biotech firms have:

- Real Product
- Realizable Earnings
- Business Model that works
- Business Cycle



Not An Overnight Phenomenon

- FDA requires up to 10 years of research and \$600 Million for approval of new genomic drugs.
- Patent Litigation
- Ethical Standards



Déjà Vu?

Biotech Developers

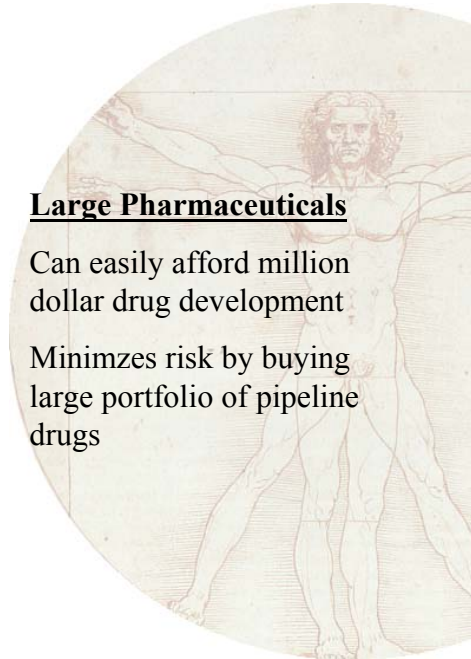
Product will make or break a developer.

Needs better Proteomic technology to reduce cost

Large Pharmaceuticals

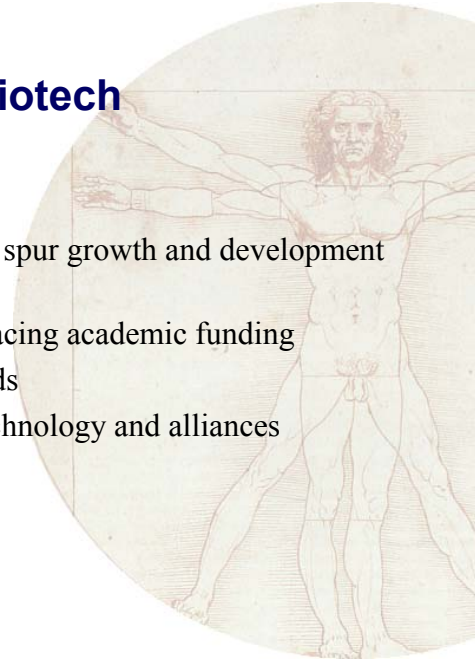
Can easily afford million dollar drug development

Minimizes risk by buying large portfolio of pipeline drugs



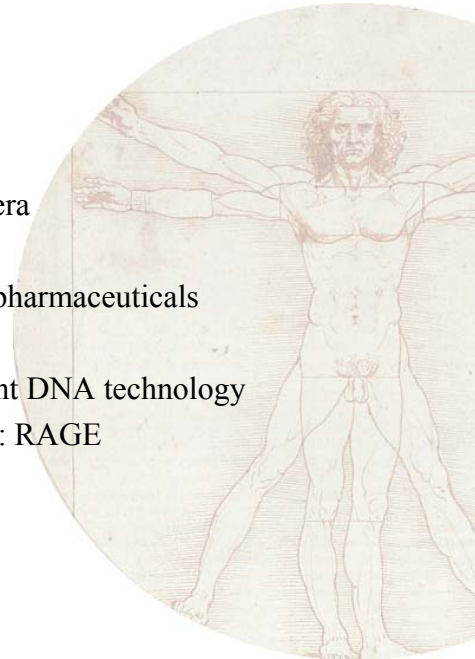
How to Approach Biotech

- This is only Phase I
- Support companies that spur growth and development in the Industry
- Public Investing is replacing academic funding
- Setting Market Standards
- Watch for innovated technology and alliances



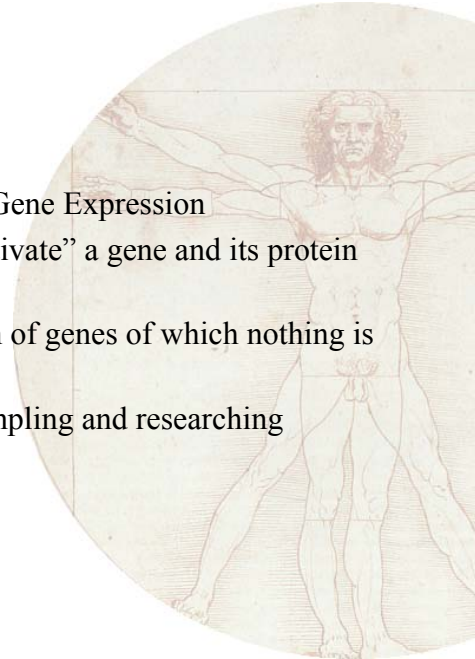
Athersys (ATHX)

- Biggest thing since Celera
- In the IPO pipeline
- Sell novel drugs to big pharmaceuticals
- Will replace recombinant DNA technology
- Proprietary Technology: RAGE



Athersys: RAGE

- Random Activation of Gene Expression
- Allows Athersys to “activate” a gene and its protein function
- Determines the function of genes of which nothing is known
- Revolutionize Gene sampling and researching

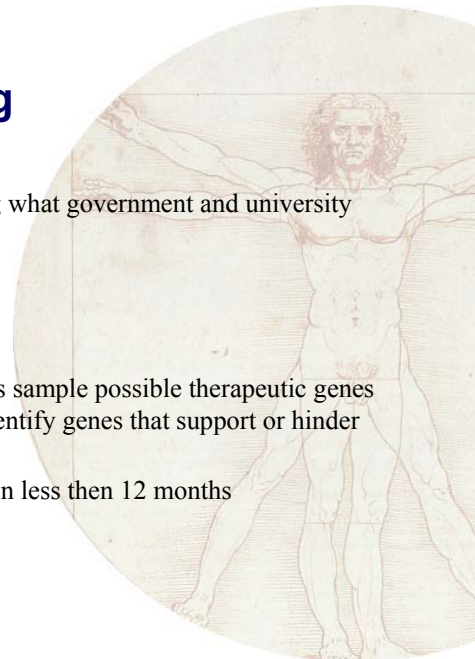


Athersys: Alliancing

- This small company is doing what government and university funded labs cannot
- Acorda: Nervous System
- Elan: AIDS
- Medarex: Prostate Cancer

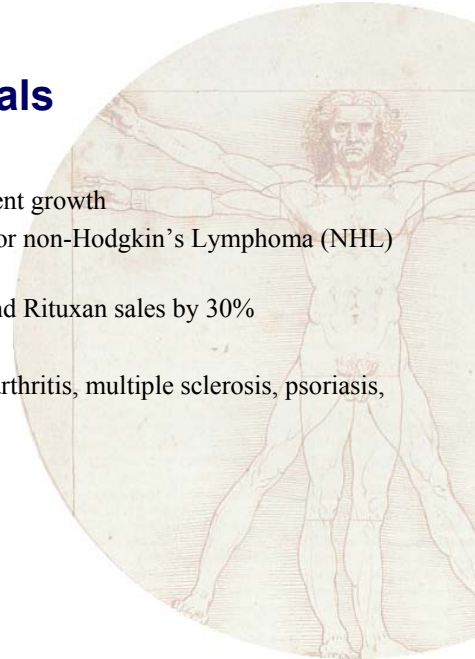
Takes Athersys 1 month to cross sample possible therapeutic genes against tumor sample and identify genes that support or hinder the cancer

Medarex can develop antibody in less than 12 months

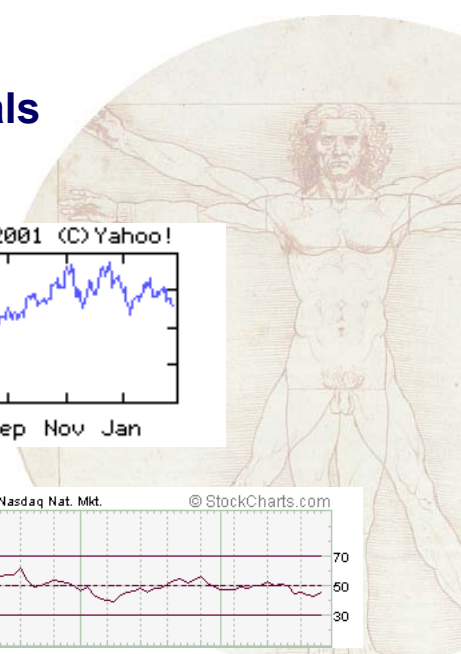
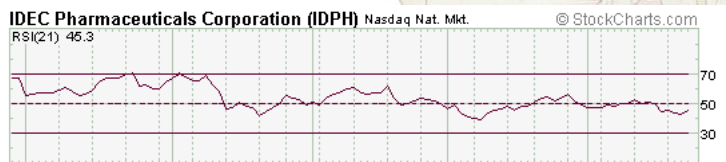
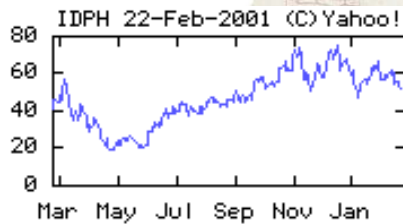


IDEC Pharmaceuticals

- Strong fundamentals, excellent growth
- Markets Rituxan treatment for non-Hodgkin's Lymphoma (NHL) with Genentech
- NHL is increasing by 6%, and Rituxan sales by 30%
- Next Product: Zevalin
- In the pipeline: rheumatoid arthritis, multiple sclerosis, psoriasis, and asthma treatments.



IDEC Pharmaceuticals



Key Numbers

Price & Volume

Recent Price
52 Week High
52 Week Low
Avg Daily Vol (Mil)
Beta

Valuation Ratios

Price/Earnings
Price/Sales
Price/Book
PE/Growth

Per Share Data

Earnings
Sales
Book Value

Mgmt Effectiveness

Return on Equity
Return on Assets
Return on Investment

Profitability

Gross Margin
Operating Margin
Profit Margin

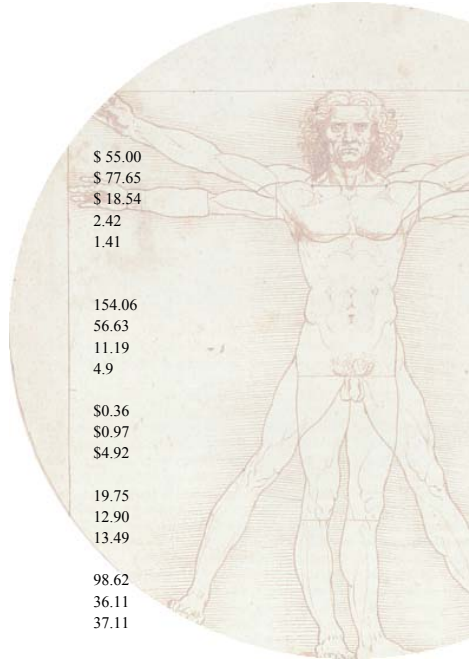
\$ 55.00
\$ 77.65
\$ 18.54
2.42
1.41

154.06
56.63
11.19
4.9

\$0.36
\$0.97
\$4.92

19.75
12.90
13.49

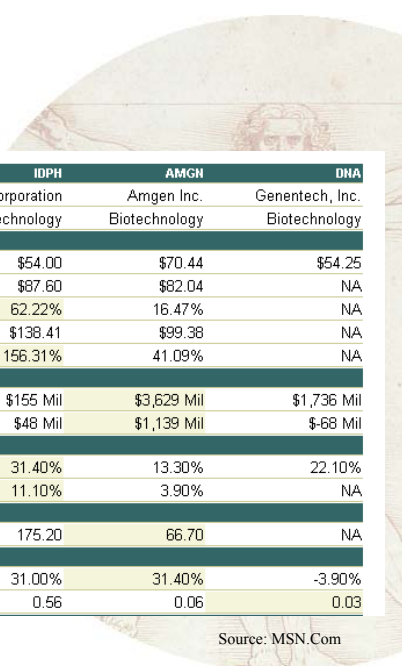
98.62
36.11
37.11



Industry Comparison

| | IDPH | AMGN | DNA |
|--|----------------------------------|---------------|-----------------|
| Name | IDEC Pharmaceuticals Corporation | Amgen Inc. | Genentech, Inc. |
| Industry | Biotechnology | Biotechnology | Biotechnology |
| Whose share price is estimated to gain the most? | | | |
| Current | \$54.00 | \$70.44 | \$54.25 |
| FY End | \$87.60 | \$82.04 | NA |
| % Change | 62.22% | 16.47% | NA |
| Next Fiscal Yr | \$138.41 | \$99.38 | NA |
| % Change | 156.31% | 41.09% | NA |
| Who sold and earned the most over past 12 months? | | | |
| Total Sales | \$155 Mil | \$3,629 Mil | \$1,736 Mil |
| Total Income | \$48 Mil | \$1,139 Mil | \$-68 Mil |
| Who grew sales and income the most over the past 12 months? | | | |
| Sales Growth | 31.40% | 13.30% | 22.10% |
| Income Growth | 11.10% | 3.90% | NA |
| Whose shares are priced cheapest relative to earnings? | | | |
| Price/Earnings Ratio | 175.20 | 66.70 | NA |
| Whose financial health is strongest? | | | |
| Net Profit Margin | 31.00% | 31.40% | -3.90% |
| Debt/Equity Ratio | 0.56 | 0.06 | 0.03 |

Source: MSN.Com



Final Notes

- **Winners:**
Companies that make use of functional genomics and provide innovative approaches and analytical tools, to improve our understanding between genes, proteins, drugs, and diseases.
- **Losers:**
Companies who fail to make the transition into the post genomic era, and remain competitive using current proteomic technology.

