

Genentech, Inc. (DNA)



March 30, 2004

**Rating: BUY**

Price:	\$103.64
52-week High:	\$113.96
52-week Low:	\$33.80
Shares Out:	527M
Avg. Volume	1.7M
Market Cap:	\$54.62B
P/E Ratio: <u>(which year?)</u>	89.42
EPS ttm:	\$1.159
EPS 2004E:	\$1.31
EPS 2005E:	\$1.97
Target Price:	\$138.23

**Highlights:**

- Currently this security is under priced at \$103.64. We have arrived at a target price of \$138.23. Mention from which valuation method
- Genentech is a leading Biotechnology company that discovers, manufactures, and commercializes biotherapeutics for unmet medical needs.
- The biotechnology industry has significantly outperformed the S&P 500 for the past year.
- Genentech has strong, competent management and many opportunities for new revenue with products currently in its pipeline.

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## Executive Summary

Our recommendation is to purchase (why 100 shares?) 100 shares at a market order. This is based on an overview of the company and recent news, an industry analysis, a fundamental analysis and a technical analysis.

A company overview and recent news indicates the firm has strong management and many opportunities for new revenue with new products currently in the pipeline.

The industry analysis indicates that the biotechnology index has significantly outperformed the S&P 500 within the last year.

The fundamental analysis produced an undervalued stock price by over 30% based on EPS forecasts and relative valuation. Also Genentech has strong ratios in many key areas compared to the industry and its competitors, including very low debt.

The technical analysis indicates that the stock is bullish and on an upward trend showing strength and stability of the company.

The combination of all of this analysis has led us to our recommendation to purchase 100 shares of Genentech.

## Company Overview & Recent News

<b>Last Close</b>	<b>52-Week Range</b>	<b>5 Year Range</b>
\$103.64	\$34.45 - \$113.96	\$25.10 - \$122.50
<b>1 Month Range</b>	<b>% Below 52-Week High</b>	<b>% Below 5 Year High</b>
\$94.41 — \$113.96 <u>usually mention high then low</u>	9.06	15.4

## STOCK CHART – 5 YEAR



Total Returns %

1999 2000 2001 2002 2003 YTD

Genentech, Inc.  
March 30, 2004

Stock	---	21.2	-33.4	-38.9	182.2	10.8
+/- Industry	---	-10.6	-15.5	-1.5	125.6	10.1
+/- S&P 500	---	30.3	-21.6	-16.8	153.5	10.9

Trailing Total Returns	1 Month	3 Month	1 Year	3 Year Avg	5 Year Avg	YTD
Stock	-3.9	9.5	191.9	27.1	---	10.8
+/- Industry	1.7	8.1	149.1	25.9	---	10.1
+/- S&P 500	-0.7	8.0	162.3	26.8	---	10.9

source of table and charts?? The chart and tables are interesting! Stock up from \$53 in one year

Price/Dividends/Splits

Daily Price History [???](#) [2000](#) [2001](#) [2002](#) [2003](#) [2004](#)

	12-99	12-00	12-01	12-02	12-03
Dividend History					
Dividend \$	0.00	0.00	0.00	0.00	0.00
Year-end Yield %	0.00	0.00	0.00	0.00	0.00
S&P 500 Yield %	0.95	1.01	1.18	1.55	1.39

[???](#)

5 Year History	Splits and Dividends	Amount Per Share
10-25-00	Split	2:1

**News:**

The strength or weakness of a company's performance is a reflection of the quality of a company's management.

**March 24, 5:15 pm  
Press Release**

On March 24, it was announced that Todd Pierce was promoted to vice president of Corporate Information Technology.

In this position, Pierce will continue to manage Genentech's CIT group, including information technology (IT) strategy, planning, application development, operations and networking. In addition, he will chair the company's IT Strategy Council. Pierce reports to Louis J. Lavigne, Jr., executive vice president and chief financial officer.

Pierce joined Genentech in May 2002 as senior director, CIT Operations, and was promoted to the head of CIT in October 2002.

While at Genentech he:

- established a clear blueprint for CIT's mission, strategies, projects, and communication channels.
- enhanced the company's IT systems by upgrading its corporate-wide email system; improving customer communications at the management, desktop and call-center levels; and implementing a cellular data service network on all Genentech campuses.
- helped form the IT Strategy Council, a cross-functional team of senior executives who coordinate and set direction for all of the company's IT activities.

Todd Pierce has improved and will continue to improve efficiency and reduced operating costs for Genentech.

#### News:

Stock splits don't actually change the intrinsic value of a stock, but they do often create frenzy among potential investors that can propel a stock's price sharply higher. [Interesting comment](#)

**March 25, 1:26pm**

#### **Health & Medicine Week**

#### **“Biotech board approves conditional stock split”**

Genentech, Inc., (DNA) announced that its board of directors has conditionally approved a 2-for-1 split of the company's common stock in the form of a stock dividend.

This stock split will be effective only if stockholders approve an increase in Genentech's authorized common stock at the annual meeting of stockholders, to be held on April 16, 2004.

The board will determine the record and distribution dates after the stockholder's meeting if the increase in Genentech's authorized common stock is approved. As of February 17, 2004, Genentech had approximately 527 million shares issued and outstanding. It last closed at \$103.

#### [Where do we expect stock to trade after split?](#)

The purpose of the stock split will be to increase the supply of the Genentech's Common Shares so that the price of a round lot or 100-Share block does not prohibit many investors from purchasing. It also improves the liquidity of the stock. The stock split will not actually change the intrinsic value of a stock, but it will increase demand from investors, which can propel a stock's price sharply higher. As volume increases, the additional shares outstanding will cause buying and selling to have a less impact on the price of the stock.

#### [Any recent news on drug developments?](#)

#### **Company History:**

1976 – Venture capitalist Robert Swanson and molecular biologist Heber Boyer founded Genentech to commercialize Boyer's patented gene-splicing techniques that could mass-produce genetically engineered substances.

1980 – The company went public

1982 –

- Genentech's market debut (the first FDA-approved biotech product) was a bioengineered form of human insulin.
- Eli Lilly bought the license and sold it as Humulin.
- Genentech sold marketing rights for royalties and focused on research; the company next developed the human immune system protein alpha interferon and licensed it to Hoffmann-La Roche, which sold the cancer treatment as Roferon-A.

1985 – The first product to bear the Genentech name was human growth hormone Protropin, approved by the FDA.

1987 – Genentech released Activase. Its \$180 million in sales was the best first year of any new drug at the time.

1990 – Roche bought 60% of Genentech for \$2.1 billion, including nearly \$500 million to maintain the long-term research pipeline.

1993 – Genentech and Merck developed a compound to prevent activation of the RAS oncogene, a trigger for cancerous cells in the pancreas, colon, and lungs.

1998 - Merck began human tests of anti-RAS drugs.

1994 – Genentech began shipping human growth hormone Nutropin.

1995 –

- CEO Kirk Rabb was ousted after trying to secure a \$2 million personal loan from Roche.
- Scientist Arthur Levinson replaced Rabb.
- The companies signed a pact that gave Roche Genentech's Canadian and European operations, with a provision allowing Roche to buy the rest of the company by mid-1999.

1996 –

- Genentech formed a new company to develop its sidetracked HIV vaccine after spending \$100 million in 10 years on AIDS-related research.
- The FDA approved Activase as the first effective treatment for acute stroke.

1997 –

Lymphoma treatment Rituxan (developed with IDEC Pharmaceuticals) became the first monoclonal antibody of its kind approved for cancer.

1998 –

- The FDA approved breast cancer drug Herceptin
- Genentech saw the demise of Neuleze, once thought to hold promise to treat diabetes-related nerve damage; the company took comfort in the accolades pouring in for Herceptin and the skyrocketing sales of Rituxan.
- Charges fell on Genentech that it marketed human growth hormone for non-approved uses led to a federal court fine of \$50 million.

1999 –

- Co-founder Swanson died of cancer.
- Roche bought the shares of Genentech that it did not own, and then spun off 16% of the company and 26% more in 2000.

2000 –

- Genentech issued a warning to physicians after Herceptin was linked to several deaths; together with the FDA, it set about relabeling the drug
- The FDA approved TNKase to treat heart attacks
- Genentech formed two collaborative agreements with ImmunoGen to develop cancer treatments.

2001 – Genentech won a patent dispute with GlaxoSmithKline over how Genentech makes Herceptin and Rituxan.

2002 –

- Genentech lost a royalty dispute with the City of Hope Research organization and was hit with \$500 million in damages from the suit, which the company is appealing
- Chiron had sued Genentech over a patent for Herceptin and sought 30% of the drug's sales, but a California jury ruled in Genentech's favor.

2003 – Genentech launched Raptiva, a psoriasis therapy it developed with XOMA, and Xolair, which received FDA approval in the US in mid-2003. No other developments over past year?

### **Opportunity:**

The biotech firm's profits could take off now that the FDA has approved Avastin, a colon cancer drug in development for decades that chokes the blood vessels that nourish tumors.

Avastin is the first FDA-approved drug that has inhibited tumor growth through angiogenesis and, as a result, extended the lives of colon cancer patients involved in clinical trials. Genentech solely owns Avastin, which is administered with chemotherapy. The FDA approved it this year.

### **News:**

Eloxatin vs. Avastin

**March 25, 1:20pm**

**Biotech Week**

**“Promising new trial investigates colorectal cancer”**

It was announced, New York University School of Medicine investigators are leading a national study, called TREE-2, which will evaluate the safety and efficacy of three regimens of Eloxatin plus fluoropymidine, plus Avastin as first-line treatment of patients with advanced colorectal cancer

Two hundred and ten patients will be enrolled at 80 sites in the United States.

This new study is based on promising data presented at the 2003 American Society of Clinical Oncology (ASCO) meeting demonstrating an incremental survival benefit when Avastin was added to a standard first-line colon cancer treatment regimen called IFL.

At the same meeting, it was reported that patients treated with Eloxatin, used in combination with the fluoropyrimidine 5-FU (FOLFOX), survived longer than those treated with IFL in a head-to-head comparison study. Eloxatin is manufactured by Sanofi-Synthelabo and Genentech manufactures Avastin.

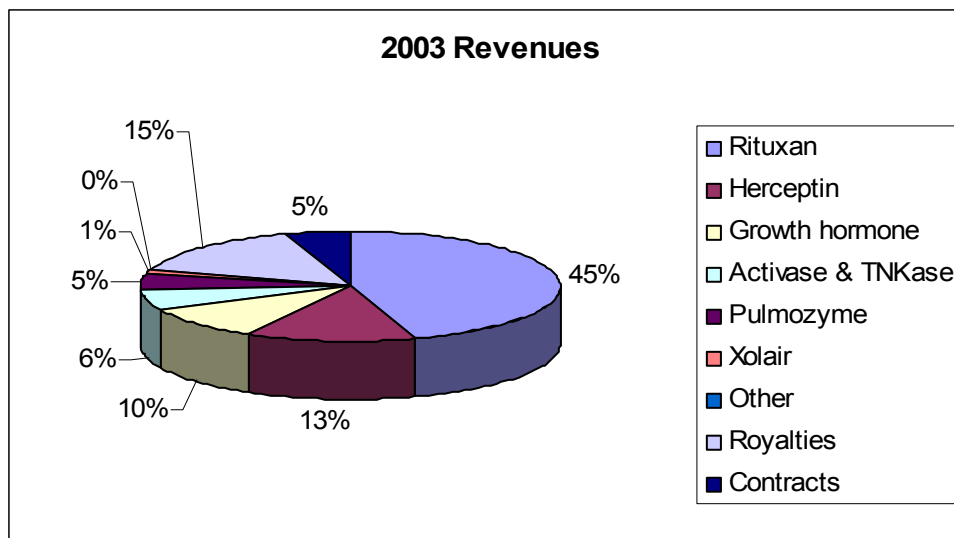
Sanofi-Synthelabo's drug Eloxatin, as proven as a more effective treatment than Avastin, may help the firm to steal market share from Genentech.

**Waiting for approval: Go over time frames needed for approval**

Also in its pipeline are some two dozen-drug candidates that are approaching the approval stage. Tarceva, a tumor growth factor inhibitor the company was developing with OSI Pharmaceuticals and Roche, failed to meet expectations in Phase III trials for non-small cell lung cancer. The partners are hopeful Tarceva will be effective against other types of cancer, though.

**Genentech's other products include: Could use chart with Stages of approval**

- non-Hodgkin's lymphoma drug Rituxan
- breast cancer treatment Herceptin.
- cardiovascular therapies Activase and TNKase
- human growth hormones Nutropin and Protropin,
- cystic fibrosis drug Pulmozyme,
- asthma drug Xolair, developed with Novartis and Tanox.



**Genentech's Revenues broken down by product types:**

- Rituxan and Herceptin have accounted for about 58% of the biotech's sales.
- Growth hormones Protropin and Nutropin accounted for 10%.
- Clot-busters Activase and TNKase together accounted for about 6% of sales
- Pulmozyme, for cystic fibrosis, made up about 5% of sales.
- Xolair accounted for 1% of sales
- Genentech earned royalties from hepatitis B vaccines, human and bovine growth hormones, and other products licensed to such major pharmaceutical companies as GlaxoSmithKline and Eli Lilly, accounted for 15% of sales.

**Genentech's Revenues broken down by customers:**

Top customers are AmerisourceBergen, Cardinal Health, and McKesson. Roche owns about 60% of the firm.

AmerisourceBergen is responsible for 23% of Genentech's sales  
Cardinal Health and McKesson each account for 18%.  
Hoffmann-La Roche handles foreign sales.

**Products in development:**

| **Awaiting US Regulatory Approval** – FDA approval Phase?

Nutropin and Nutropin AQ  
Estimate of Completion of Phase: 2004

**Preparing for Filing** – Filing of a new drug application

Nutropin Depot  
Rituxan  
Estimate of Completion of Phase: 2004

**Phase III** – the administration of a new drug to a larger number of patients in different clinical settings to determine its safety, effectiveness, and appropriate dosage

Rituxan	2005-2008*
Herceptin	2007*
Tarceva	2004-2005*
Avastin	2005-2007*
Lucentis AMD (formerly rhuFabV2 AMD)	2005*

\*Estimate of Completion of Phase

**Preparing for Phase III**

Rituxan 2004\*  
Xolair 2004-2005\*  
Avastin 2004\*

\*Estimate of Completion of Phase

**Phase II** – controlled clinical studies are conducted to evaluate the drug's effectiveness for a particular indication in patients with the disease or condition under study, and to determine the common short-term side effects and risks associated with the drug

Omnitarg (formerly 2C4 antibody) 2004-2006\*  
**Raptiva** 2004\*  
Tarceva 2004-2005\*  
Rituxan 2004-2005\*

\*Estimate of Completion of Phase

#### News:

Poor preliminary Phase II results of Raptiva

**March 22, 1:00am**

**PR Newswire**

**“Genentech and XOMA Announce Results Of Phase II Study of Raptiva(TM) in Psoriatic Arthritis Patients”**

Poor preliminary Phase II results of **Raptiva** in psoriatic arthritis patients caused slight dips in Genentech's value.

Genentech, however still benefits from its colorectal cancer drug, Avastin. Its stock, on March 22, lost only \$2.71 to close at \$102.14.

Raptiva, an immunosuppressive agent, was approved in late October and launched in November. During the last six weeks of 2003, there were reported Raptiva U.S. sales of \$1.4 million.

The trial showed that that Raptiva was safe, well tolerated and didn't cause signs or symptoms of psoriatic arthritis to worsen. However, the drug did not reach statistical significance for the test's primary endpoint, which looked for at least a 20 percent improvement in the patient's signs and symptoms of arthritis. Although psoriatic arthritis is associated with and occurs in a subset of patients with psoriasis, according to Genentech, the diseases are different and might have different pathophysiologies.

There are no other ongoing Phase II trials of Raptiva in psoriatic arthritis. Studies in other indications are expected, but any specific information on possible future trials had not been released, yet.

We hope Genentech clears up the situation as soon as possible. Without the ability to make an improvement in the patient sign's and symptoms of arthritis, the drug mymay? not be granted approval – thereby causing Genentech to lose potential revenues.

[What is the big upside for biotech companies??](#)

### **Preparing for Phase II**

Xolair

Rituxan

Estimate of Completion of Phase: 2004

**Preparing for Phase I** – the initial introduction of an investigation new drug in humans to obtain sufficient information about the drug's pharmacological effects to permit the design of well-controlled, sufficiently valid Phase 2 studies

PRO70769 2004\*

PRO1762 (formerly Apo2L/TRAIL) 2004\*

VEGF 2004-2005\*

\*Estimate of Completion of Phase

**Phase IV** – the post-marketing studies, conducted by the FDA, to describe additional information about the drug's risks, benefits, and optimal use

None

### **News:**

Public Relations

**March 23, 2:13pm**

**PR Newswire**

**“BIO 2004: World's Largest Biotech Event Goes Back to Where It All Began, San Francisco”**

Between June 6<sup>th</sup> and 9<sup>th</sup>, the BIO 2004 Annual International Convention, the world's largest biotechnology event, will be held San Francisco's Moscone Center. The Biotechnology industry will celebrate the benefits of biotech to health, agriculture, the economy and the environment. More than 16,000 biotech executives, investors, journalists, policymakers and scientists from more than 55 countries are expected to attend.

This event will increase the public awareness of the significant contributions made by the Biotechnology industry.

## **INDUSTRY OVERVIEW<sup>1</sup>**

### **Life Cycle Process Location and Impact**

Genentech Inc. (DNA) is a company that operates in the Biotechnology Industry. This industry consists of companies that engage in the buying and selling of pharmaceutical drugs, therapeutic products, research equipment and related research services. It is estimated that there are approximately 325 publicly traded biotechnology firms in the United States. The biotechnology industry is still in its early phase of development. However, this industry has the potential for strong growth and analysts expect to see annual sales increase to \$15 billion by the end of this decade due to the sales of the latest biotech-based medicines that are being approved.

The biotechnology industry relies heavily on the research in genetic engineering. It involves transferring genetic fragments of cells from one organism to another to form new compositions of genetic material. Genetic engineering is very essential to this industry because it provides the tools necessary to produce proteins, typically found in the human body, used for the treatment of various diseases. Up till now, some of the key developments in the biotechnology industry are gene therapy, DNA probes and monoclonal antibodies. Gene therapy is very important because it continues to offer hope for finding treatments for diseases that still have no cure or treatment. DNA probes can be applied in food and forensic testing, as well as medical diagnostics. Monoclonal antibodies are used in performing diagnostic tests and human therapeutics.

### **Market Trends**

Standard & Poor's expects the biotech industry to have continued revenue gains for new biotech medications, an increase in sales of newly approved therapeutics, and a wide pipeline of products that should generate approvals by the FDA in the future. It is expected that the largest sales gain would be acquired by mid-sized to large biotech firms because of the special strategies these firms are employing to expand their sales reach. Some biotech companies are planning on reaching out to markets outside of the United States. In addition, some biotechnology firms are planning to build product franchises around a specific disease category. For instance, Amgen Inc. is planning to focus on nephrology, while Genentech, Inc. in oncology. Oncology is known to be one of the most profitable areas of possibilities for biotech firms. Biotech firms usually generate sufficient amount of dollars in sales of cancer-related therapeutics. Since cancer is known to be the second leading cause of death after heart disease, there should be high innovations for cancer medications in the future.

In addition to cancer-related medications, autoimmune conditions, and infectious diseases, biotech companies are also reaching out to new therapeutic opportunities in disease areas that affect people in other geographic locations such as the West Nile Virus and SARS (Severe Acute Respiratory Syndrome).

After cancer, autoimmune diseases and inflammatory conditions are a wide area of focus for biotech companies. Diseases such as rheumatoid arthritis, asthma, psoriasis and multiple

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<sup>1</sup> Information obtained from [www.netadvantage.standardandpoors.com](http://www.netadvantage.standardandpoors.com)??

sclerosis fall under these categories. According to Genentech, there are about two million asthma sufferers in the United States. Approximately, 400,000 people suffer from multiple sclerosis in the United States and around 700,000 individuals suffer from psoriasis. Therefore, there are a large number of individuals that are waiting and hoping for new medications to be developed in these areas by biotech companies.

Another area of wide concentration by biotech companies is infectious disease area. There are more than 100 biotechnology-based medicines that are in the process of development for the treatment of various kinds of infectious diseases, including HIV/AIDS. There is a very large patient population that some of these medications can reach. However, there is also heavy competition in the infectious disease area due to the significant number of occurrences and the various forms of infectious diseases.

### **Factors**

Companies in the biotech industry range in size from small start-ups to multibillion-dollar firms. Research and Development spending is the highest in the biotechnology industry in the US compared to other industry groups. Although Biotech R&D has exceeded 50%, it is estimated to decrease gradually as a result of strong revenue growth from the sales of existing highly demanded products, along with the sales expected from future product inventions. However, when a company attains a promising new product, it usually teams up with another larger biotech or pharmaceutical company. This is beneficial to the company because usually the larger company provides R&D funding, royalties and other up-front fees. In addition, the partner company provides other production facilities and sales organizations in exchange for marketing rights under licensing arrangements. There are many scientific and economic benefits associated with the partnerships of two biotech firms. As it can be perceived, the collaboration of both companies in launching a new product line can be highly advantageous to both firms if the new product is a success.

In the biotechnology industry, patents are one of the most important benchmarks in developing new products because when a company obtains a patent for a new product, competitors are prohibited from commercial use of that discovery. Patents are important for raising capital for research and development.

Another important factor that affects the biotechnology industry is the FDA (Food and Drug Administration), which regulates the introduction of new drugs. The FDA requires that the pharmaceutical or biotech companies perform testing that proves the safety and effectiveness of the product before it is available for sale to the public. The approval process is lengthy, costly and uncertain. The average developmental time takes approximately ten to fifteen years to undergo preclinical development to marketing approval. Government Regulation in the United States and other foreign countries is a big factor in the manufacturing and marketing of products, research, and activities relating to the development of products. Prior to commercialization, products must obtain regulatory approval by government agencies. These regulations usually influence the manufacturing, labeling, storage, and record keeping of the products.<sup>2</sup>

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<sup>2</sup> <http://www.gene.com/gene/ir/financials/annual-reports/2003/2003annualreport.pdf>.

Companies in the biotechnology industry face environmental risks since they use hazardous materials in their research and manufacturing activities. In addition, companies face market risks, including changes to interest rates, foreign currency exchange rates and equity investment prices. Therefore, some companies, like Genentech, enter into various derivative hedging transactions pursuant to the companies risk management policies and procedures, in order to reduce the volatility relating to these risk exposures.

The good news about the biotechnology industry is that it is not affected by changes in general economic activity because the demand for medicine is related to the population's health and medical conditions. If an individual needs medication, he/she will obtain it no matter what the circumstances are. They could obtain medicine through health insurance programs. Since, many government entities and insurance programs reimburse the cost for medicine; prices of the drugs are not much of a concern for many individual patients. Health Maintenance Organizations (HMOs) and other managed care providers help patients take care of drug expenses. Therefore, the company still receives money from the insurance program. Also, drug pricing is relatively inelastic since patients still obtain pharmaceutical course of therapy despite the rise in prices. New biopharmaceuticals are classified as being very profitable and many factors play a role in pricing them. These factors include: how effective the drug is when compared to its rivals; the size of the target market; the price of other similar therapeutics; and the costs that were incurred in developing the drug.

Another interesting aspect of biotech drugs is that they have more advantages compared to pharmaceutical drugs because biotech drugs are usually used to treat severe medical conditions, and without the medication the patient faces a higher risk of dying. Also, there may not have alternative therapies available to treat a particular condition. Therefore, doctors have little choice in deciding what to prescribe to a patient.

### **Forecasts**

According to Standard & Poor's, drugs are considered to be the most cost-effective and efficient methods of therapy. In other words, an individual can most likely eliminate the need for surgical procedures, hospital stays and nursing care by taking medications. The cost savings can be viewed as being substantial as the population ages. As baby boomers grow older, they are expected to represent a large portion of the market for biotech products.

### **Interesting!**

Studies have shown that the four main causes of death in the United States are heart diseases, cancer, cerebrovascular diseases, and chronic lower respiratory diseases. Biotech drugs for the treatment of illnesses and disorders such anemia, asthma, cancer, heart diseases, infectious diseases, multiple sclerosis, psoriasis, rheumatoid arthritis, and sleep disorders should show the strongest growth over the next several years. Therefore, it can be seen that there will be a continuous demand for medications that treat these diseases, and the companies who develop these medications or therapeutic products are going to be highly profitable.

## **ANALYSIS OF STRATEGIES**<sup>3</sup>

### **a. Competitive Strategies**

#### ***Cost Leadership***

Genentech, Inc. follows the tradition of reinvesting its revenues in Research and Development efficiently. According to [www.gene.com](http://www.gene.com), the company's website, it is stated, "In 2003, Genentech invested \$722 million or 22 percent of its operating revenues, into research and development. It is highly essential for a biotech firm to have adequate funding for its research and development efforts. The company because it has been successful in transforming research does the reason why the company follows this practice on potential products into new offerings. R&D expenses for Genentech consist of independent R&D costs and costs associated with collaborative R&D and in-licensing arrangements.

#### **sound like product differentiation?**

The company cannot be described as a low-cost producer because its products sell for prices that are the same for all drugs sold by other companies in the industry. However, for a biotech company to be productive, it has to figure out how to manufacture its therapeutic commercial products cost effectively, as well as secure financing to construct its facilities. The management team at Genentech is well experienced in being efficient in using their resources and allocating funds for future projects. For this reason, they came with strategies like the 5x5 plan that will assist them in accomplishing the specific goals outlined in this plan.

#### ***Differentiation***

Genentech, Inc. differentiates itself from pharmaceutical companies, pharmaceutical divisions of chemical companies, and other biotechnological companies of various sizes by its commitment to research leading to the discovery and development of new products and the manufacturing methods it uses. The management team understands that its competitors may have greater clinical, regulatory and marketing resources than it has. However, Genentech differentiates itself from its competitors also by providing ancillary services to support its products, customer service, and to the healthcare community, as well as implementing unique strategies such as the 5x5 plan. Therefore, Genentech follows the product differentiation strategy to target its customers and become a leader in the biotechnology industry.

The company's development pipeline focuses on oncology, immunology, vascular medicine and specialty therapeutics. The pipeline has more than twenty projects that target a broad range of diseases across all phases of clinical development. As the management team at Genentech states, "We are focused on letting the science lead us to therapies that can be in the clinic and will improve health and extend lives", it expanded its facilities by 280,000 square ft and creating a Founders Research Center. It is a place where there is 500,000 square ft. of research space available to hold more than 700 scientists and research staff. After its completion in 2003, this center is known to be the largest biotechnology facility in the world.

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<sup>3</sup> <http://www.gene.com/gene/ir/financials/annual-reports/2003/2003annualreport.pdf>.

### ***Focus***

Genentech's research organization is primarily focused on cancer, immunology and vascular. However, the major focus of the company's research organization is on oncology. The research organization is currently examining the function of various molecules in the different types of cancers. Scientists hope that this would aid them in extending their immunotherapeutic product line to areas such as breast, colon, lung, liver and brain cancer.

Another area of significant focus by the Genentech's researchers is on immunology. This is an area of major focus because many patients who suffer from immunological diseases usually have to take medicine their entire lives. Therefore, Genentech is aiming to develop safer and more effective therapies for these patients in the long run, which would help them treat and control the severity of the diseases.<sup>4</sup>

The company plans to help its scientists and researchers by providing them with access to the most advanced technology and biological information necessary to assist them in becoming successful with their research on both of these areas.

### **b. Additional Management Strategies**

Genentech creatively established the 5x5 plan, which began in 1999 and continues through 2005 and outlines specific goals the company will strive to accomplish. The 5x5 goals include<sup>5</sup>:

1. 25% average annual non-GAAP EPS growth
2. 25% non-GAAP net income as a percentage of operating revenues
3. 5 new products/indications approved
4. 5 significant products in late-stage clinical trials
5. \$500 million in new revenues form strategic alliances or acquisitions

Of the five new products that the company is trying to have approved by 2005, two have been approved, which are Xolair and Avastin. In addition, the development pipeline of Genentech has over twenty projects. There are steady flows of projects that are moving forward in the pipeline, while several projects are still in the early stage.

Another important strategy the company implemented is known as the "Horizon 2010" strategy. This strategy was designed to help the company in developing medications and therapeutic products for immunological diseases, cancer and angiogenic disorders. Through this strategy, Genentech aspires to become the dominant U.S. oncology company in sales by 2010. Furthermore, another important vision with the Horizon 2010 strategy is, to achieve annual EPS growth rates that will improve the image of the company and make it appear to be a growth company.

### **c. Skill and Competence of Management**

Genentech, Inc. operates with approximately 6,226 employees. The company has experienced the largest annual growth in employees in its history, since it recruited and hired

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<sup>4</sup> <http://www.gene.com/gene/research/researchvision.jsp>.

<sup>5</sup> <http://www.gene.com/gene/news/press-releases/display.do?method=detail&id=7267>

more than 1,500 employees. Genentech aims at bringing in talented and highly qualified individuals to its workforce. This biotech firm continues to receive outside recognition for being the employer of choice. *FORTUNE* ranked Genentech #15 on the list of “100 Best Companies to Work for in America” in early 2004. In addition, a magazine known as *Science* classified Genentech as being the most admired company and top employer in the biotechnology and pharmaceutical industries. Also, *Health* magazine recognized Genentech as being one the top ten healthiest companies for women in the United States. According to the July 2002 issue of *Med Ad News Magazine*, the company was recognized as “Biotechnology Company of the Year” due to its diverse product portfolio and strong pipeline, and notable sales and earnings figures.<sup>6</sup> It is very interesting to see that this company has acquired so much recognition from all of these popular magazines. This definitely illustrates a positive image of the management team at Genentech, Inc.

According to Standard & Poor’s a biotech company should employ individuals who have helped develop and commercialize pharmaceutical products at large drug companies. The goals of the management team at Genentech are geared towards long-range planning for growth in the years ahead. The Chairman and Chief Executive Officer of this company is Arthur D. Levinson, PH.D. Dr. Levinson became the CEO of Genentech in 1995 and he became the Chairman in 1999. However, he has been part of the management team since 1990. Dr. Levinson was named one of the top CEOs in the May 2001 edition of *Worth Magazine*, based on his ability to deliver long-term shareholder value, work under stress and properly cope with the challenges faced by the company. The Chief Financial Officer and Executive Vice President is Louis J. Lavigne, Jr. He has been the CFO since 1988, and he became the Executive Vice President in 1997. The Chief Operating Officer of Genentech and Executive Vice President, Commercial Operations is Myrtle S. Potter. Before joining Genentech, Potter was president of Bristol-Myers Squibb’s US Cardiovascular/Metabolics Business. Potter and Chief Medical Officer, Susan D. Desmond-Hellmann, M.D., M.P.H, were on the list of “50 Most Powerful Women in America” on the September 2003 issue of *Fortune Magazine*.

[GREAT work here!](#)

Genentech’s distinguished scientists and engineers possess doctorate degrees and have significant experience in their fields. The company’s workforce also includes a Scientific Resource Board, which is an advisory group for the company that directs the company on its research and early development projects.<sup>7</sup>

Overall, the management team at Genentech is primarily focusing on meeting their 5x5 goals, as well as delivering products that have a strong potential to improve the lives of patients. Dr. Levinson writes in his letter to stockholders, “Fortunately, with our financial resources, we are able to invest both for near-term growth in our product launches and at the same time in our research and development programs to provide longer term growth prospects.”<sup>8</sup>

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<sup>6</sup> <http://www.gene.com/gene/about/awards/index.jsp#50women>.

<sup>7</sup> <http://www.gene.com/gene/research/resourceboard/>

<sup>8</sup> 2003 Annual Report. Levinson, Arthur D. “Letter to Stockholders.”

## RELATIVE INDUSTRY VALUATION

1-year Daily Chart of the Dow Jones U.S. DJ Biotechnology Index (US) Index<sup>sm</sup>



The above chart displays the performance of the Biotechnology Industry compared to the S&P 500 Index. It is evident that the Biotechnology Industry is outperforming the S&P 500 Index. However, there is not such a large gap between both currently, but there was a big gap in the performance during the months of July through September of 2003. Although the gap has decreased, it is still outperforming the S&P 500. The Biotech industry has been above the benchmark since May of 2003, where it cut through the S&P 500 line from below. Therefore, according to the chart the industry is currently overvalued. has outperformed S&P but may still be a good value

### Key Factors (03/28/04)

#### Latest 12 Months / Most Recent Quarter

	Biotechnology Industry	Market
P/E	NE <u>NE or NA?</u> <u>why?</u>	33.06
Price/Book	4.31	2.68
Price/Sales	9.49	1.38
Price to Cash Flow	103.37	13.45
EPS	(0.13)	0.83

<b>Dividend Rate</b>	0.01	0.43
<b>ROE</b>	NE	7.9%
<b>Debt/Equity</b>	0.26	1.41

The biotechnology industry was compared to the Market based on a few key measures obtained from [www.hoovers.com](http://www.hoovers.com). As the above chart indicates the EPS of this industry is significantly low compared to the EPS of the market. In addition, the dividend rate is low compared with that of the market. However, to look on the positive side, other factors such as the price/book, price/sales, and the price to cash flow are higher when compared to the market's figures. Also, the biotechnology industry has a lower Debt/Equity ratio when compared to the market's debt/equity ratio.

### **Ratio Analysis GREAT TABLE!!**

<b>Internal Liquidity</b>	<b>Year Ended</b>			<b>Industry TTM</b>	<b>Eli Lilly Bristol-Myers</b>	
	<b>*12/01</b>	<b>*12/02</b>	<b>*12/03</b>		<b>*12/03</b>	<b>*12/03</b>
Current Ratio	3.39	3.22	3.16	3.76	1.58	1.58
Quick Ratio	2.53	2.25	2.39	3.1	1.1	1.2
Cash Ratio	0.61	0.32	0.43		0.50	0.72
Receivables Turnover	6.86	7.25	6.65	6.2	5.7	6.3
Inventory Turnover	6.23	5.23	5.98	1.5	1.2	4.3

### **Are LLY and BMY really their competitors? What about AMGN etc?**

*Liquidity Ratios:* Liquidity refers to the firm's ability to pay its bills over a short period of time. These expenses may be planned or unplanned. A firm should maintain reasonable liquid assets to meet these unexpected demands for cash. These ratios, also known as short-term solvency ratios, give potential lenders and investors an idea of the firm's competence to meet its debts.

*Current Ratio:* The current ratio measures the company's ability to pay its short-term liabilities from its liquid assets, which can easily be converted to cash. Genentech has consistently outperformed its competitors in this area, which displays the company's strong ability to generate cash and liquid assets in order to cover its short-term liabilities. Genentech is slightly below the industry current ratio; however, ratio has remained fairly steady, which shows good internal management.

*Quick Ratio:* Also known as the acid-test ratio, the quick ratio measures the company's ability to pay off its short-term obligations from current assets, excluding inventories. As the least liquid current asset, inventories can turn out to be damaged, obsolete or lost, thus this adjustment needs to be taken into consideration. A quick ratio greater than 1 implies that the firm does not need to rely on its inventories as much as other firms to pay-off its short-term debt. Genentech's quick ratio has consistently been greater than 1 and outperformed its competitors. Although, like the current ratio, the quick ratio is below industry levels it has remained fairly constant.

*Cash Ratio:* The cash ratio is the most conservative liquidity ratio. It only takes into account cash and marketable securities in relation to current liabilities. These are the company's most liquid assets and would be used first to cover current liabilities. Genentech's ratio has consistently under-performed its competitors. This shows that most of the company's assets are not very liquid and may be tied up in other less liquid investments.

*Receivables Turnover:* The accounts receivable turnover ratio indicates the number of times that accounts receivables is cycled during a given period, usually a year. In other words, the AR turnover reflects how fast a company can collect on its sale of inventory and use the funds to pay off current liabilities and expand business ventures. Genentech has a strong receivables turnover with respect to both the industry and its competitors. This reflects that Genentech has good credit policies in place.

*Inventory Turnover:* Inventory turnover measures the processing time the average inventory of finished goods was sold during a year. This exemplifies the businesses ability to limit the costs associated with warehousing. It is calculated by taking the cost of goods sold divided by average inventory from the most recent and previous year's balance sheets. A high inventory turnover ratio indicates the firm is efficiently managing its inventory. Genentech is very efficient in managing its inventory. The company's inventory turnover is well above the industry and its competitors. Many of Genentech's products are sold as soon as they are produced.

	Year Ended			Industry	Eli Lilly	Bristol-Myers
<b>Operating Efficiency</b>	<b>*12/01</b>	<b>*12/02</b>	<b>*12/03</b>	<b>TTM</b>	<b>*12/03</b>	<b>*12/03</b>
Total Asset Turnover	0.29	0.38	0.43	0.3	0.6	0.80
Net Fixed Asset Turnover	2.40	2.71	2.46		4.23	3.79
Equity Turnover	0.35	0.47	0.56		1.40	2.23

*Total Asset Turnover:* Total asset turnover measures how efficiently a company uses its average total assets to generate sales. As an operating performance ratio, total asset turnover is important for it demonstrates a company's ability to generate a satisfactory income so its stockholders will continue to invest in the firm. Genentech's TAT has been rising indicating a stronger ability to generate sales from assets. The company has outperformed the industry in the last 2 years however it is still way behind its competitors. Genentech need to continue its upward trend by increasing sales.

*Net Fixed Asset Turnover:* The Net Fixed Asset Turnover Ratio reflects the firm's realization of fixed assets. Abnormally low turnover implies capital tied up in excessive fixed assets, while an abnormally high NFAT ratio can indicate a lack of productive capacity to meet sales demand or it might imply the company's use of old fully depreciated equipment that may be obsolete. Genentech's NFAT is below both of its competitors and has fluctuated in the past. Predicted rising sales should help offset the large amount of fixed assets and allow the company to catch up to its competitors.

*Equity Turnover Ratio:* This ratio is used to examine a company's profitability in relation to its sales and capital. This ratio is similar to the Total Asset Turnover Ratio; it measures a

company's performance because it compares a company's sales to capital, as opposed to, the comparison of a company's sales to equity. Although Genentech is behind its competitors with respect to equity turnover, there has been a steady increase in the past 3 years. Strong sales growth would continue this trend.

<b>Operating Profitability</b>	<b>Year Ended</b>			<b>Industry</b>	<b>Eli Lilly</b>	<b>Bristol-Myers</b>
	<b>*12/01</b>	<b>*12/02</b>	<b>*12/03</b>	<b>TTM</b>	<b>*12/03</b>	<b>*12/03</b>
Gross Profit Margin	82.97%	83.13%	85.45%	82.49%	83.10%	67.44%
Operating Profit Margin	60.18%	61.23%	61.37%	6.33%	25.92%	22.47%
Net Profit Margin	7.22%	2.44%	17.04%	-0.03%	20.35%	14.87%
Return on Assets	2.19	0.94	6.98	0	11.80%	11.30%
Return on Equity	2.52%	1.18%	9.82%	n/a	26.20%	31.74%

*Gross Profit Margin:* The gross profit margin is a measurement of a company's manufacturing and distribution efficiency during the production process. The gross profit tells an investor the percentage of revenue left after subtracting the cost of goods sold. Gross profit margin for Genentech has steady increased showing good cost control methods, which exceed growth in net sales. The company has also been ahead of its competitors and the industry.

*Operating Profit Margin:* The operating profit margin shows how effective a company controls its costs and expenses associated with their normal business operations. Genentech has greatly outperformed the industry and its competitors in operating profit margin. The company has managed to create large profits and keep down general and administrative expenses.

*Net Profit Margin:* The net profit margin is an indication of how effective a company is at cost control. The higher the net profit margin is, the more effective the company is at converting revenue into actual profit. The net profit margin is a good way of comparing companies in the same industry, since such companies are generally subject to similar business conditions. Genentech has greatly increased NPM in the last year allowing it to outperform the industry and some of its competitors except Eli Lilly. [HOW?](#) This is good news for investors because it shows the company has kept costs down even with large sales growth.

*Return on Assets:* Return on Assets indicates how many dollars of profits can be achieved for each dollar of assets under control. It measures a company's earnings in relation to all of the resources it had at its disposal. It is one of the most important characteristics used to determine return to shareholders. Genentech's return on assets is low compared to its competitors; however, ROA has greatly increased in the past year. The company is now more efficiently managing its assets.

[What about discussion of ROE? Can put Dupont Analysis here.](#)

<b>Financial Risk</b>	<b>Year Ended</b>			<b>Industry</b>	<b>Eli Lilly</b>	<b>Bristol-Myers</b>
	<b>*12/01</b>	<b>*12/02</b>	<b>*12/03</b>	<b>TTM</b>	<b>*12/03</b>	<b>*12/03</b>
Debt to Equity	n/a	n/a	6.32%	26.00%	48.00%	87.08%
LTD to Total Capital	n/a	n/a	6.32%		32.44%	46.55%
Total Debt Ratios	10.56%	18.37%	22.64%		51.18%	48.19%

*Debt to Equity Ratio:* Total debt to equity ratio helps to determine the risk of the firm to investors. The higher the number the more risky the firm becomes for investors and therefore a higher return is demanded. Genentech has kept relatively little or no debt in the past. This is a reflection of the company's ability to generate cash to pay off its liabilities quickly. The low debt leads to a lower risk for investors.

*Long Term Debt to Total Capital:* Long term debt to total capital measures how much of a company's total "capitalization" is made up of debt. [And - discussion regarding Genentech?](#)

*Total Debt Ratio:* This measures how much debt a company has compared to how many assets it has. It indicates what percent of the company's assets are financed with debt. Again, Genentech has very low debt, which places it well below its competitors.

<b>Earnings &amp; Cash Flow Ratios</b>	<b>Year Ended</b>			<b>Industry TTM</b>	<b>Eli Lilly</b>	<b>Bristol-Myers</b>
	<b>*12/01</b>	<b>*12/02</b>	<b>*12/03</b>		<b>*12/03</b>	<b>*12/03</b>
Interest Coverage	49.35	40.51	294.05	5	54.47	17.95
Cash Flow Coverage	100.82	171.64	211.40		54.12	16.33
Cash Flow/Total Debt Ratio	82.71%	10.76%	47.45%		69.12%	24.01%

*Interest Coverage:* Interest coverage tells how many times over a company can service their debt. Having low debt has allowed Genentech to keep interest expenses low and easily cover them compared to its competitors and the industry. [WOW! What a ratio.](#)

*Cash Flow Coverage:* This ratio relates cash flow to interest expenses in order to display how much cash is generated as a result of borrowing. Genentech has low borrowing and therefore low interest expenses. The company therefore greatly surpasses its competitors who have larger amounts of borrowing and larger interest expenses.

*Cash Flow to Total Debt Ratio:* This measures the ability of a firm to repay all of its debt. A lower number displays a company's ability to tackle debt as a whole. Genentech is between its competitors in respect to cash flow to total debt. The company sufficiently covers its total debt with cash flow.

### **DuPont Analysis:**

ROE = PROFIT MARGIN \* ASSET TURNOVER \* EQUITY MULTIPLIER

$$\frac{\text{Net Income}}{\text{Equity}} = \frac{\text{Net Income}}{\text{Sales}} * \frac{\text{Sales}}{\text{Total Assets}} * \frac{\text{Total Assets}}{\text{Equity}}$$

#### **FY2001:**

$$2.52\% = 7.22\% * 29\% * 120.52\%$$

$$\frac{\$150,236,000}{\$5,919,819,000} = \frac{\$150,236,000}{\$2,081,733,000} * \frac{\$2,081,733,000}{\$7,134,847,000} * \frac{\$7,134,847,000}{\$5,919,819,000}$$

#### **FY2002:**

$$1.18\% = 2.44\% * 38\% * 126.94\%$$

$$\frac{\$63,787,000}{\$5,338,884,000} = \frac{\$63,787,000}{\$2,617,867,000} * \frac{\$2,617,867,000}{\$6,777,319,000} * \frac{\$6,777,319,000}{\$5,338,884,000}$$

#### **FY2003:**

$$9.82\% = 17.04\% * 43\% * 133.98\%$$

$$\frac{\$562,527,000}{\$6,520,298,000} = \frac{\$562,527,000}{\$3,300,327,000} * \frac{\$3,300,327,000}{\$8,736,171,000} * \frac{\$8,736,171,000}{\$6,520,298,000}$$

#### **Analysis:**

The DuPont Analysis shows that Genentech's ROE has increased over the period from 2001 to 2003 with exception to the decline (decline? it goes from 1.18% to 9.82%) in 2003. All of the factors show strong, steady, long-term growth over the period with exception to Net Income in 2002. This decline was due to one time special litigation-related charges of over \$500 million. This however does reflect the strength of the company. Genentech was able to recover from the large loss (loss?) in 2002 and get right back on target in 2003.

Why did ROE go up from 1.18% in '02 to 9.82% in '03? All three factors went up but NPM jumped from 2.44% to 17%! WHY?

### **Valuations (See attached spreadsheets):**

To determine a target price for Genentech we used Relative P/E and the Multiple Cash Flow (Intrinsic Value) models. The Relative P/E model produced a target price of \$145.84 and the Cash flow model produced a target price of \$130.62. Our final target price of \$138.23 is an average of the two estimates.

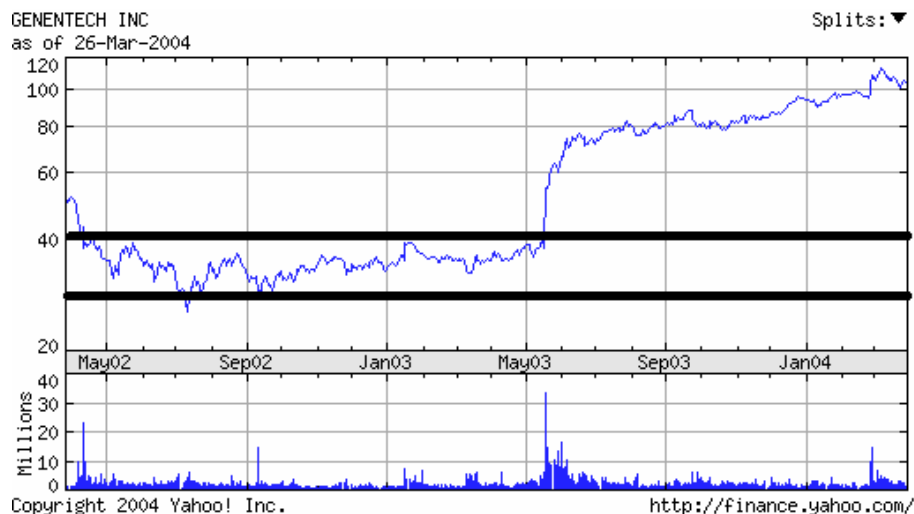
In the Relative P/E model a 4-year average high and low multiple that Genentech trades at relative to the S&P 500 was calculated. Then the estimated P/E for the S&P was calculated based on 2005 EPS estimates. A range from the 4-year average high to the 4-year average low multiple was multiplied by the S&P estimated P/E for 2005 to arrive at an estimated P/E for Genentech. The average of these P/E estimates was taken and applied to EPS estimates to arrive at the target price of \$145.84.

In the Multiple cash flow model FY2003 cash flows per share was calculated and a growth rate of 20% per year for 2004 and forward was applied to future cash flow estimates based on guidance issued by Genentech management. EPS was also estimated till 2007 based on 20% growth after 2005 in order to find a stock price for 2007. The future cash flows and 2007 stock price was discounted and a target price of \$130.62 was reached.

For a biotech company - what is the best method of valuation? Where is the value created? Why does company get such a high P/E?  
See Emisphere report.

## TECHNICAL ANALYSIS:

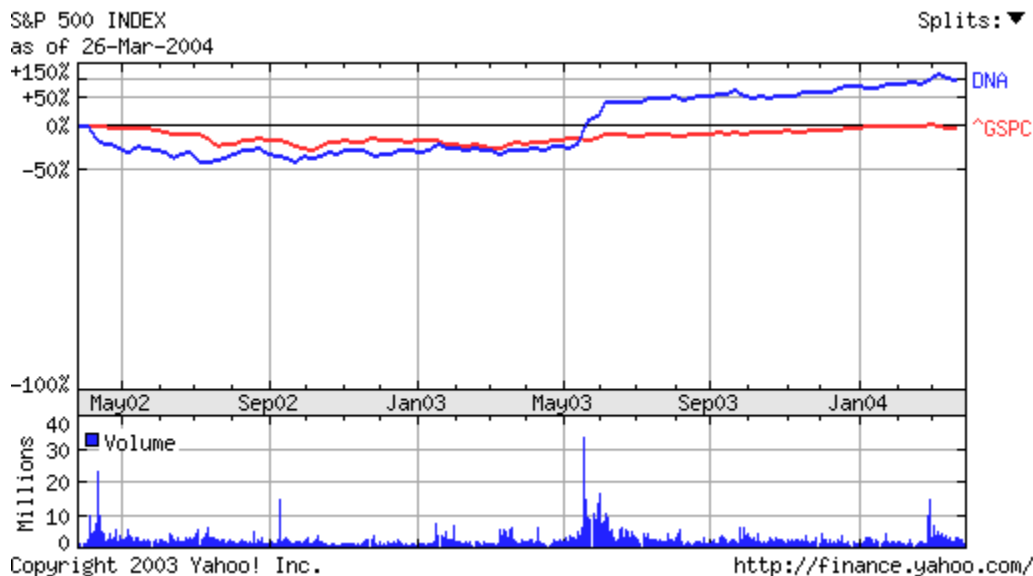
### 2-Year Stock Price Analysis:



Analyzing the previous two years stock fluctuations, we can conclude that the extreme resistant and support price levels are \$40 and \$30 accordingly. (Where are other support and resistance levels?) However, even though the stock appears to have a calm cyclical trend, Genentech's announcement on May 19, 2003 that a Phase III study of Avastin™ (bevacizumab, rhuMab-VEGF) plus chemotherapy in previously-untreated metastatic colorectal cancer patients met its primary endpoint of improving overall survival, caused the stock price trend to go through the Resistance level, an indication that investors were Bullish about it. Avastin is an investigational humanized therapeutic antibody designed to inhibit tumor growth by binding to and inhibiting VEGF, a protein that plays a critical role in tumor angiogenesis (the formation of new blood vessels to the tumor), and maintenance of existing tumor blood vessels.

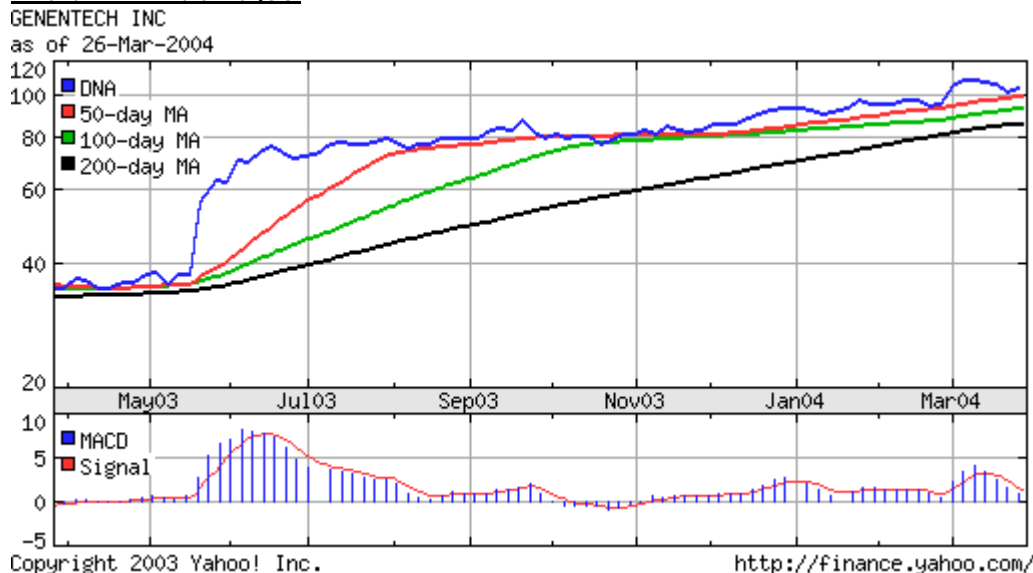
The magnitude of the benefit observed far exceeded what the study was designed to demonstrate. The trial also met the secondary endpoints of progression-free survival, response rate, and duration of response.

### Comparison with the S&P 500 Index:



The S&P 500 index is the primary benchmark for our Student Managed Investment Fund Portfolio. In the above chart we can see that Genentech's performance was lower compared to the S&P 500. However, due the news release on May 19, 2003 Genentech has gradually outperformed the S&P 500 index, by as much as 150% percent. We expect this trend's steady growth to continue in the future.

### MA and MACD Chart Analysis:



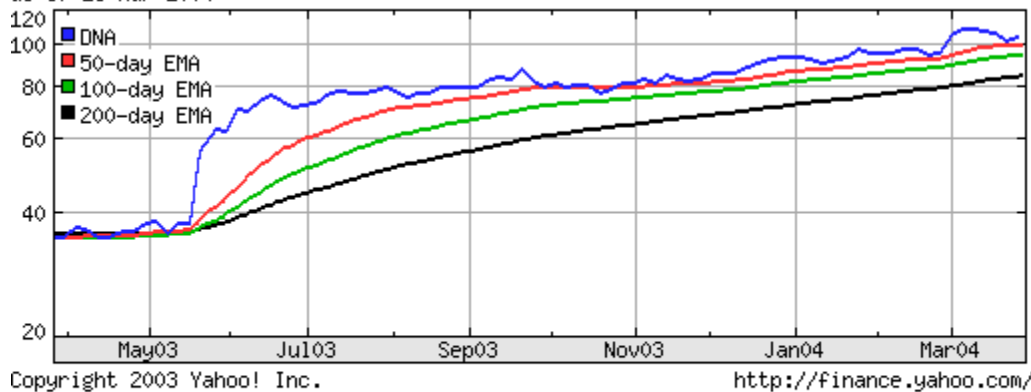
A moving average is the average price of a security at a given time. For the last nine months, the moving average has shown a consistent upward trend. The stock has traded at a price above its 50,100, and 200 day moving averages, showing that it is constantly rising and that investor expectations are above current expectations. This can be perceived as an indication that investors are being bullish about it.

[Very good work here](#)

The MACD indicator shows that the stock is bullish because it is above the 0 line. When the MACD is above zero, it means the 12-day moving average is higher than the 26-day moving average. This is bullish, since it shows that recent expectations, the 12-day moving average are more bullish than previous expectations, the 26-day average. This implies a bullish, or upward, shift in the supply/ demand lines. Overall, the MACD informs us that in general, during the last nine months the stock has been above the signal line of 0, meaning that the 12 day moving average is above the 26-day moving average, implying a bullish shift in the supply/demand lines. Moreover, since the MACD index is over the signal line of 0, then the stock is a good buy at the moment. Also, Investors are typically "bullish" when the price moves above its moving average.

**EMA Analysis chart:**

GENENTECH INC  
as of 26-Mar-2004



Although an exponentially smoothed moving average is similar to the moving average, it places a greater emphasis on the most recent data. Once again, Genentech's continuous and steady upward performance is higher than all three averages. This also implies that the stock is currently doing great, and it indicates that the specific trend will carry on in the near future as well.

### RSI Analysis Chart:



The Relative strength index (RSI) is a popular Technical Analysis tool. It values the internal strength of a single security, in our case Genentech. Again, the relative strength index reconfirms that Genentech's internal strength is strong, since the indicator is performing over the neutral region of 50.

Overall, this analysis indicates that the stock is bullish and in no serious danger of declining. Even though a swing trader might prefer to use an RSI based on 14-periods, considering ourselves long term investors, we used an RSI that was based on 30-periods. We believe that this gives us a greater time overview of the stock's strength and stability.

All the tools and theories that were used for our technical analysis have indicated that Genentech's that stock price will continue to increase in the long term time span.