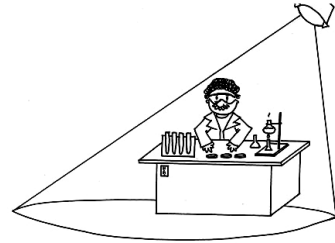


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# Biotech Live

## Investing in Biotechnology

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The “Stock Market” is a term that actually describes several markets such as the New York Stock Exchange and the American Stock Exchange where the stocks of companies are traded. Shares in a company are sold and the shareholders then become part owners of the company. Shareholders receive stock certificates that show the number of shares purchased.

By offering shares to the public, companies become publicly traded. Offering shares of stock raises money for continued research and development of company products or services. To determine the prices of shares, investment bankers evaluate the company’s value and earnings or potential earnings. Then, stocks are offered to the public at some initial public offering (IPO) price. The public can buy shares of the stock at the given price per share.

When investing in a company, the goal is to buy shares at a low price and then sell them at a higher price. Individual stocks may go up or down independent of how “The Market” is doing overall. Stock market indices such as the Dow Jones Average, the NASDAQ, and the Standard and Poors 500 report how “The Market” is doing “on average.” To check the progress of individual stocks, one can look up their price per share on one of the published indices. These are available in the business section of newspapers and on the Internet.

Many times, when employees are hired at high tech companies they are offered “stock options.” Stock options allow employees the option to buy stock at a lower price than the public after a certain length of employment. Depending on the economy and the market, purchasing stocks or using stock options can be a good way of investing an employee’s extra income.

How does one know which stocks to buy? No one ever knows for sure since no one knows what will happen to the economy, the market, or a company. Purchasing stocks is always a gamble but the more you know about a company’s finances and it’s products the better you can decide whether a company’s stock has the potential to increase in value. For example, if a new drug is just completing Clinical III Trials, and is about to go on the market, the company may expect to start making money on that product. Using annual reports and researching companies, for example, on the Internet is a good place to start.

The screenshot shows the Yahoo Finance website for Genentech Inc. (DNA) as of June 3, 2006. The current stock price is \$82.29, down 0.32 (0.39%) from the previous close. The page includes a navigation menu, a search bar, and various financial metrics such as the 52-week range (75.58 - 100.20), volume (3,013,500), and market cap (86.70B). A line chart shows the stock price movement from 10am to 4pm on June 2, 2006. The chart shows a peak around 12pm followed by a decline. Below the chart, there are links for 'Annual Report for DNA' and 'Add DNA to Portfolio'. The page also features advertisements for Scottrade and Ameritrade.

**Yahoo.com and several other sites give up to the date financial information about company performance and stock value.**

**To Do** “Purchase and track” biotechnology stocks with the goal of buying low and selling high and ending up with the highest value investment portfolio after 120 days.

1. Each investor begins with “\$1000.”
2. Choose two biotechnology companies to invest in. Plan to buy enough shares of each stock to spend a total of between \$900 and \$1000. You will hold onto these stocks for two months.

Each investor must have rationale for selecting their investment strategies. Following the Procedures section, in a short paragraph, list your reasons for selecting the stocks you have chosen and the amount of money you want to invest in each. Consider past performance, future potential, present or future marketed products, management or management changes.

3. Using Excel®, make an individual data table for each stock purchased to use as an investment record.

Each data table should include:

- a. A title with the company's name, the company's trading symbol (i.e. ABI for Applied Biosystems), the number of shares purchased, the length of the study, and the date of your stock purchase.
  - b. Columns to record the price per share and the total value of the shares of stock purchased every week for 16 weeks.
4. Maintain the data table for 60 days. After 60 days, you may want to modify your stock portfolio. You have three investment options:
- a. You may leave your investments as is.
  - b. You may redistribute all your investments to new stocks from different companies (and start new data collection).
  - c. You may sell part of your shares of stock and take the profit or loss and buy other companies' stocks. At no time may you own less than two companies' stocks.

If you decide to take option "b" or "c" you must write another one-half page rationale for your new stock distribution.

5. Determine the amount of profit or loss for your portfolio of stocks after 60, 90 and 120 days. Make a summary data table to report the initial value of each stock, the current value of each stock and the total gain or loss of your portfolio. The two investors that have the greatest profit (or the least loss, if "The Market" does poorly) will receive an award, in the form of points, at each of these times.

**Portfolio Value after \_\_\_\_\_ Days**

Company	Symbol	# of shares purchased	Stock Value at Purchase (\$)	Current Stock Value (\$)	Net + or - (\$)
		Total			

**Final Analysis of Your Stock Portfolio**

6. Using Excel®, make a summary line graph to show how each stock's price per share changed through the period you owned it. These should be different colored lines on the same graph, each line representing one of the stocks.
7. Make another graph that shows the total value of each stock for every week that you owned it. These should be different colored lines on the same graph, each line representing one of the stocks.

• **Hints on graphing:**

The easiest way to do these graphs is to quickly type up a **summary** data table with the Time (weeks) on the left-hand column and a column each for each stock's price per share **OR** total value to the right of the "Time" column. Don't forget to give it a title.

Then if you “highlight” just the numbers (not the labels) for each column and choose the “XY Scatter” graph in Chart Wizard, it should be setup correctly.

Just title the graph, label the axes of the graph, and name each line in the “series” step. You can color code your lines by double clicking on them and choosing a different color for each line (and its points).

8. Print a copy of each graph using a color printer and glue them into your notebook. Connect these graphs to your individual stock data tables with a “from” statement.
  9. Conduct online research to try to determine the reasons the stocks in which you invested went either up or down in value. Citing your references, write a 10-20 sentence description of what happened to your stocks and why?
  10. Prepare a PowerPoint® presentation of 5-10 min to be given to the other investors in the class. Include a company description and stock profile for each stock in which you held shares for the 120-day period. Include graphs of the stock’s performance, the final value of your portfolio, and the percent increase or decrease from the original investment. Discuss any events (political, financial, etc.) that may have affected the stocks’ performances.
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