## Is the biotechnology industry recession proff?

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(Accepted: September, 2009)

Key words: Biotechnology industry, Alcoholic beverages, Cheese, Citric acid

Biotechnology is an age old science although not formally recognized as so. Initially it was only applied to produce alcoholic beverages, cheese, citric acid and substances similar to these. However, this industry came to be recognized as a major industry only during the end of the twentieth century. Much of the coming explosion in the biotech industry can be attributed to one key event during the 1990's; that is the mapping of the human genome.

As this industry has grown; so we should have its benefits to the society. It has been estimated that more than 130 biotech drug products and vaccines approved by the U.S. Food and Drug Administration, mostly during the last few years, have helped millions of people around the world. Hundreds of medical diagnostic kits created through biotech research have not only provided early detection of many treatable diseases but also have kept blood supply free from the AIDS virus. Biotech foods with enhanced nutritional benefits, and improved safety conditions are coming up. Environmental biotech products are allowing effective clean up of hazardous wastes. Also, biotech methods involved in DNA fingerprinting are helping in solving of criminal cases and paternity suits. Biotech research has brought about improvement in many sectors, thereby allowing the manufacturing of products using cleaner and much efficient technologies using less energy, less water and producing fewer wastes. Also, about a three dozen companies are soon going to present cuttingedge Bio-terrorism related technologies to the officials at U.S. Departments of Defence and Health . This will cover such topics as chemical and biological pathogen detection systems, vaccine and human – antibody development, new injection devices, and treatments for anthrax and smallpox.

## Biotech industry during the recent downturn:

Most of the economy has taken a downturn during the last year, but biotech kept growing. Patrick Kelly, Director of State government relations with the Biotechnology industry Organization or BIO states that "It's not an exponential growth rate, but it's growing steadily, and it has been since the mid-90's."

"I think the health is good," agrees biotech observer David Deeds, Assistant professor of Management Policy and Entrepreneurship at the Weatherhead School of Management at case Western Reserve University in Cleveland." With the downturn it's been a relatively quiet year, but there haven't been a lot of losses. It's not in a growth spurt, but it's solid."

According to research by Ernst and Young, investments have left at least half of publicly traded firms in this industry with three years or more of operating cash, and also, Biotech stocks outperformed the hi-tech sector and broader markets. "The biotech and life sciences industry has benefited significantly from the mass exodus from the dot com industry," says Kelly Patrick.

The overall faith in biotech extends beyond the public equity markets, according to BIO president Carl Feldbaum. "Venture capital investment actually has held steady over the last two years as funds have shifted from dot com industry and telecom investments into biotech. So far this year, privately held companies have raised \$1.1 billion, after raising \$ 3.7 billion last year and \$3.9 billion in 2000." Thus, biotech would make it through the recession in decent shape, observes Jay Kizer, managing partner for the healthcare industry at executive search firm of Ray and Berndtson. "People are going to be concerned about their health Good health is not perceived as luxury.

## Future potential:

There is tremendous potential for future growth in biotech industry. The average return on investment timeframe is 7 to 12 years and sometimes 15 years. There are some 350 medicines and vaccines in pipeline and many more are coming due to advancements in genomics, proteomics, bioinformatics, nanotechnology, stem cell research, and various other biotech tools. Scientists have now started aiming their research at many new targets.