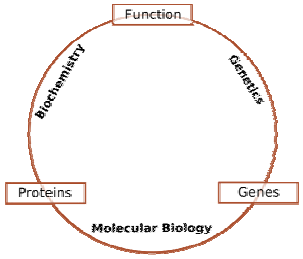

BIOINFORMATICS

THE SCIENCE AND TECHNOLOGY CONNECTION

Donna Poniatowski
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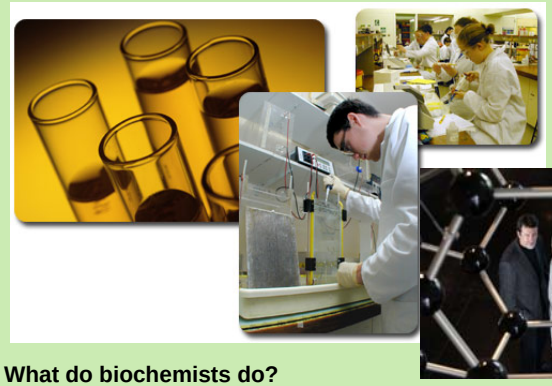
Sanford, FL

BIOCHEMISTRY



What do biochemists do?
Biochemists combine the fields of microbiology, cell biology, genetics, chemistry, cell biology, and physics in their day-to-day work or experiments. Many of the molecular tools that allow us to analyze genes and proteins were developed by biochemists.



Biochemists use these powerful new tools to learn about the genome and the roles of specific genes and proteins. Some biochemistry professionals work to increase our understanding human disease processes and aging. Others focus on applying biochemistry to genetically engineer plants and animals, or produce useful products ranging from drugs and other pharmaceuticals to foods, biochemicals, and fuels.

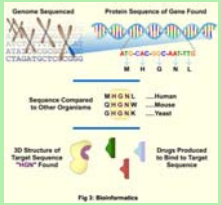
[What kinds of jobs do biochemists get?]
Environmental and pollution control; pharmaceuticals; agricultural research; microbial research and engineering molecules

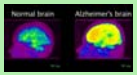
[What do I need to learn to prepare for a career in Biochemistry?]
CURIOSITY!
Mathematical ability; problem-solving and analytical skills; oral and written communication skills; ability to work within a team; technological skills and ability to see relationships of biochemisty to other fields of interest

[What do biochemistry majors do after they graduate?]
Some common job titles are chemist, biochemist, research associate, quality control technician, research analyst, research scientist, laboratory technician and research fellow

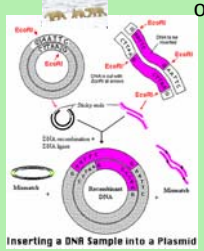
BIOLOGY

Bioinformatics is an emerging field being fueled in part by the **Human Genome Project**. Each bit of data produced by the project must be sorted and analyzed, then studied for possible clues and eventual cures for diseases





GenBank has made it possible for biologists to quickly obtain a sequence and associated annotation information in all areas of biology.

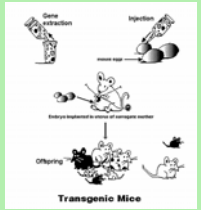


Agriculture

Forensic Science

Anthropology and Human Ancestral Mapping

Environmental Management



Bioengineering

Marine Biology

Wildlife Management

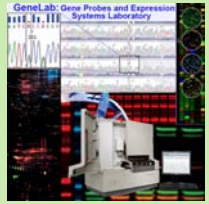
Evolutionary Biology

TECHNOLOGY

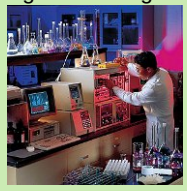
The bioinformatics sector represents the technological future of the biotech industry. Utilizing sophisticated computer equipment for gathering and analyzing biological information, bioinformatics holds the promise of significant advancements in all fields.

Using, designing, developing, engineering or maintaining the tools and technology used in a biotechnology career typically requires either a high school diploma, some postsecondary education and training, or a bachelor's degree or higher.

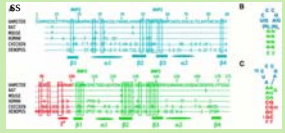
The more education you have the higher the wage.



Analyzing biological data and creating massive genetic databases to unlock genetic secrets are made possible by the development of high throughput technologies.



The sciences of biology and chemistry have progressively transitioned from bench-based skills to a computer-based science.



TECHNOLOGY

FROM THE LAB TO YOU!