EMERGING CAREERS IN HEALTH RESEARCH: BIOINFORMATICS

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Are you really keen on the biological sciences, but are just as good with computers? When you saw the movie "Jurassic Park," did you think to yourself, "Wow! Could scientists *really* create a living dinosaur, if they had the correct genetic code? And how would they figure out the code"? Then you may be interested in the field of "bioinformatics."

Bioinformatics involves using the most up-to-date computing and information technology to solve complex problems in the life sciences. With a variety of technological "tools," biological information (e.g., gene and protein sequences) is analyzed and interpreted, predictions are made, and relationships between data sets are assessed. Two related aspects of bioinformatics concern the organization of information using reliable, up-to-date databases, and the development of new tools and resources for use in analyzing new problems.

The really wonderful thing about Bioinformatics is that it has practical applications in a broad range of scientific disciplines, such as gene therapy, drug development, improving nutritional quality, and the forensic analysis of microbes. You don't have to limit your focus to one narrow aspect of science. As an important member of a team of scientists, you'll bring specialized technological tools and expertise to the table that will complement the skills and knowledge of the others.

Job opportunities for bioinformatics specialists are growing in leaps and bounds in ALL sectors—industry, government and academe. Supply is so short that companies are coping by offering on-the-job training to qualified scientists. Even university students who are enrolled in co-op bioinformatics programs have many, many more placement opportunities than they can pursue during their program.

If you're looking for a way to combine your interest in the biological sciences and your love of the power of computing technology, check out Bioinformatics!

Starting Points for Further Information

Bioinformatics Web (Great web portal with definitions, history, tools …)
http://www.geocities.com/bioinformaticsweb/index.html

Bioinformatics* degree programs:
http://bioinformatics.ca/bioinformatics_resources/courses_and_programs/programs/

*Bioinformatics programs may have other names, such as: computational biology, computational biochemistry, computational chemistry, biomedical computing and data mining.

Job posting site:
http://bioinformatics.ca/resources/jobs/

Even though you're not looking for a professional job right now, visit this job-posting site and read the job titles** and descriptions. You'll learn a lot about the duties and responsibilities of these specialists and the different environments in which they work.

**Just as programs have different names, jobs in bioinformatics have different titles. Examples include: "Research Scientist in Bioinformatics," "Data Mining Specialist," and "Scientific programmer."

The topic of our next profile will be: Nutrigenomics