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BIOTECHNOLOGY

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For many people, the word 'biotechnology' evokes genetically modified foods and cloning. But in fact this term applies to an entire range of technologies 'informed' by the advances in fields such as microbiology, biochemistry, cellular and molecular biology, chemical engineering and information technology and used in highly varied industrial processes. All of which constitutes a vast area of particular interest to the food-processing and pharmaceuticals industries, medicine and environmental sciences.

There are an estimated 5,000 biotechnology companies in the world. Observers maintain that biotechnology is now entering a phase of development which is comparable to that seen in the field of computers and information technology in the 1970s and 1980s. The rapid growth of this sector offers numerous career possibilities in biotechnological R&D, sales and marketing, production and quality control, as well as administration and management of information.

The biotechnologist conducts fundamental or applied researchin a university, a public laboratory or the R&D division of a large firm. The field offers an ideal market for highly qualified young people, essentially PhDs, but also engineers. Particularly sought after are candidates with double backgrounds in management and science, who are thus prepared for the specific challenges of management applied to the biotechnologies (management of high-risk companies, legal advisors in the area of intellectual property, knowledge of computer science, etc.).
The most frequently requested profiles are PhDs and post-docs; Masters programmes (1 or 2 years) lead rather to lab technician positions.
For websites in French only, click on "Formations" or "Enseignements" to access offerings. Admission into Masters programmes generally requires an undergraduate diploma in Life Sciences (see "Biology" data sheet as well). There are, however, French undergraduate programmes with an initial specialisation in biotechnologies.

Websites

- Centers of competitiveness in biotechnology
http://www.industrie.gouv.fr/enjeux/zonebio.html
- CNRS, life sciences : http://www.cnrs.fr/sdv
- National Institute of Agronomic Research : http://www.inra.fr
- Interministerial site on the OGM : http://www.ogm.gouv.fr
- National network of clusters in genetics : http://rng.cnrg.fr
- Biotechnologies France database : http://www.biotechnologiefrance.org
- Association of biotechnology firms « France Biotech » : http://www.france-biotech.org
- Biotechnology in the Paris region : http://www.econovista.com/econovistav2
- National Research Agency : http://www.agence-nationale-recherche.fr
- Fondation Alfred Kastler (services for international researchers visiting France) : http://www.fnak.fr
- Bernard Gregory Association (from dissertation to employment) : http://www.abg.asso.fr/
- Adebiotech (synergies to support and promote the biotechnology sectors in France and at the international level) : http://www.adebiotech.org
- Généthon, research center on the human genome : http://www.genethon.com

Keywords

agri-food, agrobiosciences, agroindustry, biochemistry, bioinformation science, biomaterials, biomechanics, bioprocesses, biostatistics, biotechnics, plant biotechnologies, biotherapies, oncology, cosmetics, law, environment, ethics, genetics, imaging, pharmaceutical industry, information science, macrobiology, management, mathematics, mecatronics, microbiology, microbiology, modeling, nanobiotechnologies, nutrition, populations, animal reproduction, plant reproduction, toxicology, commercialization, vectorology.