THE BUSINESS SIDE OF SCIENCE CAREERS

Business Development
Business development is a combination of strategic analysis, marketing, and sales. Business development professionals can be involved in everything from the development of their employers’ products and services, to the creation of marketing strategies, to the generation of sales leads, to negotiating and closing deals. The job of the business development professional is typically to identify new business opportunities—whether that means new markets, new partnerships with other businesses, new ways to reach existing markets, or new product or service offerings to better meet the needs of existing markets—and then to go out and exploit those opportunities to bring in more revenue.

Networking and Training

The Society for Business Development Professionals

American Chemical Society Division for Business Development and Management

MBA

Clinical Research Associate
The main function of a clinical research associate is to monitor clinical trials. He or she may work directly with the sponsor company of a clinical trial, as an independent freelancer or for a Contract Research Organization (CRO). A clinical research associate ensures compliance with the clinical trial protocol, checks clinical site activities, makes on-site visits, reviews Case Report Forms (CRFs) and communicates with clinical research investigators. A clinical research associate is usually required to possess an academic degree in Life Sciences and needs to have a good knowledge of Good clinical practice and local regulations. In the United States, the rules are codified in Title 21 of the Code of Federal Regulations.

Clinical Research Associates help design and monitor clinical research projects including clinical trials that test new pharmaceuticals on humans. They write detailed documents called ‘protocols’ showing how a clinical trial is to be conducted. In some cases, these workers help design experiments using drugs on animals, a process called pre-clinical testing.

Clinical Research Associates help recruit and screen human subjects for clinical trials. They help develop and obtain informed consent from subjects and manage patient participation in the trials. They may issue payments to study participants. Their general duties include training and coordinating the activities of staff, visiting clinical testing sites to ensure facilities are adequate, and mentoring junior staff. They maintain regular contact with clinical trial staff to ensure regulations are followed and they participate in government audits.
Clinical Research Associates work for pharmaceutical companies, biotechnology firms, medical device manufacturers, medical research universities, government agencies, and contract research organizations. Large organizations have several levels of Clinical Research Associate positions leading to senior and management positions.

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The Society of Clinical Research Associates

Association of Clinical Research Professionals

Society for Clinical Trials

Consulting
Consulting is a broad term used by many industries to describe the process of providing advice and recommendations to solve complex issues. Consultants are hired by organizations to strategize solutions to business, organizational, or industry specific problems. A consultant is often brought in to provide a fresh perspective, objectivity, and a specific knowledge base or expertise. They are often cost effective for a company to hire to provide time or personnel the client can't spare but needs in order to accomplish necessary tasks seasonally or on a temporary basis.

As a consultant you will work with clients to define problems and then use your expertise to determine the best approach to solve the problem. The websites of the consulting firms have interactive cases that provide insight into the type of work you would engage in as a scientific consultant.

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Management consultant firms visit campuses and host webinars to recruit consultants

Vault.com

Consulting Firms

Marketing
Marketing is a data driven, rationale science. Marketing professionals may be involved from the earliest stages of a product’s development all the way through managing brands after product launch. They advise on product development plans and assess the commercial viability of business development deals. Marketing is a
great way to apply your scientific, medical and business acumen.

Networking and Training

MBA

Medical Marketing Association

International Society for Pharmacoeconomics and Outcomes Research

Medical Science Liaison
A Medical Science Liaison (MSL) is a clinical research professional that specializes in translating scientific and medical information and building relationships between groups of people, such as physicians and industry personnel. Many of the job descriptions say that a "qualified candidate" will have a PhD; PharmD or MD. A few key responsibilities include: establishing and maintaining peer relationships with key opinion leaders (usually clinical/research leaders in specific therapeutic area); developing educational materials and support programs for personnel; maintaining thorough knowledge of literature and data in therapeutic area; and independently managing home-based work with extensive travel. MSLs usually cover a specific regional area, from one/two states to regions with more than five states. MSLs can provide off label product information (new indications/recent findings) while sales professionals can only provide information contained on the product label.

Networking and Training

Medical Science Liaison Institute

Medical and Technical Writers
Medical communicators write, edit, or develop materials about medicine and health. They do this by gathering, organizing, interpreting, and presenting information in a manner appropriate for the target audience. Materials prepared by medical communicators, collaborating with others or working independently, include the following: 1) Patient education brochures, news articles, Web content, and books for the general public 2) Journal articles and continuing education monographs for health care professionals 3) Regulatory documents for government agencies 4) Grant proposals for research scientists and institutions and 5) Sales training and marketing materials for the pharmaceutical industry

Networking and Training

American Medical Writer’s Association

Regulatory Affairs
Regulatory affairs specialists must be familiar with legal requirements, licensing requirements, and any other requirements that companies must meet in order to
adhere to government requirements or legal requirements. As a result of the wide scope of the job, regulatory affairs specialists must constantly stay abreast of any new changes in national or international government policy or law that pertains to the company they work for or industry they work in.

Networking and Training

Regulatory Affairs Professional Society – Regulatory Affairs Certification

Recruiters
Recruiters help build teams and serve as hiring consultants. Their strength is in understanding the strategy within an organization and exactly what talent is needed in order to achieve a company’s goals. Their expertise and knowledge of the industry and of the leaders in the field provide insight into who is best qualified. Recruiter’s provide a valuable service that save companies time, energy and money.

Networking and Training

National Association of Executive Recruiters

Technology Transfer
Technology transfer refers to the transfer of technology developed or initially discovered in the public sector (e.g. universities, government agencies) to private industry for further development and commercialization. Jobs in technology transfer may be found on either end of this transfer, i.e. in the institutions seeking to bring their technology to market or in the companies that will develop the technology. In addition, jobs are also found in go-between organizations such as non-profit technology transfer centers that facilitate the transfer of technology from public sector to private.

Networking and Training

Association of University Technology Managers (AUTM)

University and Government Technology Transfer Offices

Project Management
Project managers ensure that projects are moving forward according to pre-established timelines, scope, and budgets. A project manager works as part of a team that includes technical specialists. The project manager does not have direct authority over these functional team members; instead, they coordinate the tasks of the project so that the team works more effectively and efficiently.

Networking and Training

Project Management Institute
Quality Assurance
In developing products and services, quality assurance is any systematic process of checking to see whether a product or service being developed is meeting specified requirements. Many companies have a separate department devoted to quality assurance. A quality assurance system is said to increase customer confidence and a company's credibility, to improve work processes and efficiency, and to enable a company to better compete with others. Today's quality assurance systems emphasize catching defects before they get into the final product.

Quality Control
Quality control (QC) is a procedure or set of procedures intended to ensure that a manufactured product or performed service adheres to a defined set of quality criteria or meets the requirements of the client or customer. In order to implement an effective QC program, an enterprise must first decide which specific standards the product or service must meet. Then the extent of QC actions must be determined (for example, the percentage of units to be tested from each lot). Next, real-world data must be collected (for example, the percentage of units that fail) and the results reported to management personnel.

Financial Analyst
The financial side of biotechnology includes professions such as venture capital, institutional investing, investment banking, and equity research. These careers provide great opportunities to delve into the biotechnology industry and lean how the world of finance and Wall Street work while you leverage your medical, science and business knowledge.
Patent Agent
A patent is government-sponsored protection given to an inventor that guarantees his or her sole right to produce and sell his or her invention during a designated period of time. A patent agent is a specially qualified person who has received recognition from the United States Patent and Trademark Office (USPTO) as having met their qualifications to be able to prepare and file patent applications, as well as process them. A patent agent may be an attorney as well; in which case, he or she would be called a patent attorney and have extended capabilities. However, one can be a patent agent without being an attorney.

Networking and Training
United States Patent and Trademark Office Exam

Patent Lawyer
Lawyers incorporate companies, provide legal and business counsel and conduct transactions. They also manage intellectual property, including a company's patents, copyrights, and trademarks. Patent attorneys draft and obtain patents form the USPTO. Patent litigators serve as advocates for clients in patent disputes and prepare and conduct court cases. Transactional lawyers draft and negotiate license agreements and business transactions involving intellectual property.

Networking and Training
Law School and United States Patent and Trademark Office Exam

Patent Examiner
Patent examiners review patent applications to determine whether the claimed invention should be granted a patent. The work of a patent examiner usually includes searching patents and scientific literature databases for prior art, and examining patent applications substantively by examining whether the claimed invention meets the patentability requirements such as novelty, "inventive step" or "non-obviousness", "industrial application" (or "utility") and sufficiency of disclosure.

Networking and Training
United States Patent and Trademark Office Exam

Technical Sales
There are three types of sales in biotechnology: scientific, drugs, and medical devices. For scientific sales the end consumers are research scientists. For drug and medical devices the end users are physicians.

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Toastmasters International

Society of Pharmaceutical and Biotech Trainers

The Business Side of Science Magazines

Reading these magazines can help familiarize you with business terms and trends

- BioCentury
- BioWorld
- Start-Up
- In Vivo
- Price Waterhouse Coopers Biotechnology Review