

INDUSTRY RESEARCH CAREERS: THE SCIENCES

Like any corporations, industrial research companies in the pharmaceutical, biotechnology and chemical industries employ many individuals in numerous roles. This guide will specifically focus on research based jobs as well as a few other common entry points for people with advanced degrees in scientific fields. It is not uncommon for industry employees to eventually transition into other roles within the industry.

RESEARCH & DEVELOPMENT (R&D) SCIENTIST

Research and Development of products are two distinct sectors of industry but for the purposes of this summary they will be considered together. This is the work that bears most resemblance to the work in an academic research unit. For this reason, it is often the first role that academic researchers envision when they think of “industry” jobs.

Although the research methodologies are the same as academic labs, there are also several distinctions worth noting:

- **Fast Pace.** There is an emphasis on speed and efficiency. High operating budgets allow for access to a wealth of equipment and materials in order to speed the pace of the projects.
- **Volatility.** Projects are continuously being evaluated and may be terminated quickly for a variety of reasons including strategic business decisions. Scientists in industry must be adaptable in this fast-paced environment.
- **Organizational Structure.** There are multiple levels of hierarchy. Instead of one PI making all of the decisions, there are typically several additional layers of management. A successful scientist is expected to eventually take on an increasing amount of management responsibility within this structure.
- **IP Policy.** Publication policies vary quite a bit within industries. Some are more open to publishing in scholarly journals, while others are more guarded about intellectual property. This is worth considering if one wants to consider returning to academia.
- **Diverse Objectives.** Whereas most academic research groups focus on new discoveries, this type of work is only one element of the industrial research system. Researchers can be involved in many aspects of the manufacturing process including mass production and quality control.

INITIAL RESOURCES

[Science Careers](#): career information, advice, job listings

[Biospace](#): job listings, career advice, industry news

[Biocareers](#): job listings, career advice, blogs

[American Chemical Society](#): job listings, career advice

[Cheeky Scientist](#): career advice

[The Lab Rat](#): job listings, company listings, career advice

[Biopharm Guy](#): company directories

[Bioscience Career Center](#): career advice

[American Society for Cell Biology](#): career advice, personal perspectives

[Kelly Scientific](#): staffing firm for contract and full time positions

UCHICAGO GRADUATE/POSTDOC CAREER GUIDES

COMPETENCY	WHY THEY WANT IT	WHAT YOU CAN DO NOW
TECHNICAL SKILLS	Often a company is looking for candidates with a specific set of technical competencies. Although they may be willing to train on some elements of the work, they prefer that new scientists bring experience in most of the required technical skills so they can start producing quickly.	Read job ads and determine which skills are in demand. Identify contacts on campus who are currently using these techniques and ask them for training. Try to find out when training on specific equipment is being offered by vendors and attend these sessions.
TEAMWORK	Industry research is highly collaborative. Although it is usually unjustified, academics are viewed as researchers who are only able to operate independently.	Try to engage in team projects, inside and outside of research. Working on teams outside a lab setting counts! But think about how to effectively communicate this experience in the context of research.
LEADERSHIP	Industry employers want scientists who have the potential to eventually lead their own research team. Demonstrating leadership abilities will distinguish a scientist beyond his/her technical abilities.	Volunteer to manage and mentor others in the lab. Join student organizations and community groups and take leadership roles.
ORAL AND WRITTEN COMM.	In an industrial research setting, one must be able to effectively explain research to a variety of stakeholders at a range of technical specificity. The ability to speak to different audiences and competently explain your work is essential for these roles.	Seek out additional opportunities to talk in non-traditional settings. Make sure to effectively convey your communication experience.
BUSINESS ACUMEN	Since private sector research is operated as a business, showing familiarity with some common business practices can be advantageous. Any experience working with a company can serve as evidence of the ability to effectively transition out of academia.	Think of the laboratory as a small business: Can you help with any business-like operations or administration? Consider joining CIM Fellows or working with a startup at CIE or MATTER to gain industry experience.
NETWORKING	Open positions in industry get hundreds of applications and it is difficult for hiring managers to sort through all of this. A lead on a verified candidate from within the company goes a long way. It also serves as evidence of your pro-activeness and social competency.	Talking to current industry scientists is an essential step in trying to secure one of these jobs. They may be able to direct you toward specific units looking for your expertise or even tell you about current or upcoming openings.



NON-RESEARCH ROLES TO CONSIDER

FIELD APPLICATIONS SCIENTIST (FAS)

Many biotechnology companies employ PhD (or sometimes Master's) level scientists to help with pre- and post-sale support of their proprietary technologies. In some cases, the FAS will serve as more of a tech-support specialist and in others the FAS will play a significant role in the sale of the technology.

When a company sells research technology or equipment, the sales team is often supported by FASs, who serve as the technical specialists. The FAS travels with the sales team and performs live product demos and/or presents seminars on the relevant technologies. The role of the FAS is to answer the client's technical questions before the sale, and often are contracted to provide support for the product after the sale. These are some additional things worth considering:

- **Intellectual Stimulation:** FAS roles appeal to many because they require continued engagement in the technical scientific research world, through keeping up with current literature and interacting with clients. Still, the scope of the technical knowledge required may vary and may be more repetitive than working on original research.
- **Travel:** FASs are often on the road over 50% of the time. This may be a concern for many with family considerations.
- **Compensation:** FASs are paid relatively high base salaries (comparable to R&D scientists) and are sometimes offered incentives based on sales outcomes as well.

[Science Careers Article on FAS Jobs](#)

[Ed's Job List](#)

TECHNICAL SUPPORT SPECIALIST

Similar to FAS, companies need specialists with scientific knowledge available to its customers. These roles are typically on-site and much of the support may be done by phone. While the compensation is lower than FAS roles, the hours are more regular and there is typically no travel involved.

[Science Careers Article on Tech Support Jobs](#)

SALES REPRESENTATIVE

Companies that sell research related products are always looking for people with technical knowledge, including PhDs that can communicate effectively with their customers. While many of these roles will require previous sales experience, there are also positions that are available to "off the bench" scientists. Sales roles have high potential compensation and often require a large amount of travel.

[Science Careers Article on Sales Jobs](#)

[Ed's Job List](#)

MEDICAL SCIENCE LIAISON (MSL)

Biopharma and medical device companies employ scientists (PhD, MD, or PharmD) to be experts in the science of how their products work. MSLs serve as official representatives of the company, but are charged with delivering unbiased, scientific knowledge about how a product works. They meet with physicians and researchers to discuss technical details of the products including issues like off-label usage of drugs. MSLs also represent their companies at conferences and may play a role in training other employees within the company. These roles are often high-travel and MSLs are considered well compensated. Researchers with more clinically relevant knowledge may find it easier to make this transition than basic scientists.

[Medical Science Liaison Institute](#)

[Medical Science Liaison Society](#)

MEDICAL WRITER

Medical writers manage several different types of technical communication for biopharma and device companies. These roles may be specialized toward a particular type of audience. Marketing communications are intended for the customer, while other communication may be directed toward regulatory bodies, business partners or physicians. Companies employ their own medical writing staff and also hire external companies to perform some of these duties on a contract basis. PhD scientists work as medical writers in both settings.

[Science Careers Article on Medical Writing](#)

[American Medical Writers Association](#)