

## **Pharmaceutical Industry: Research and Development Holland Code: IRC**

### **Background**

Pharmacists in industry are employed in a variety of positions. Although practice titles, descriptions, and prerequisites differ by company, the educational requirements for these positions are often similar. Most pharmacists in industry work in the following areas: research and development (R&D), all phases of drug product development, sales and marketing, corporate administration, all phases of clinical trials research, drug information, manufacturing, regulatory affairs, health policy, scientific/professional affairs (e.g., professional relations, professional education, medical science liaison, medical information), and quality control.

Pharmaceutical industry corporate facilities are located throughout the United States, although there is heavier geographic concentration in the Northeast (including Delaware, New Jersey, New York, and Pennsylvania), the Midwest (including Illinois and Indiana), the Mid-Atlantic (North Carolina), and the West Coast (California), where many biotechnology start-up firms are headquartered. Regional plants and offices exist throughout the country.

R&D pharmacists in the pharmaceutical industry spend 23% of their time doing research. This is followed by 21% of their time spent on project management, 19% of their time for business/organization/department management activities, and 12% for data management. R&D activities may take on many forms ranging from the development of new chemical/drug entities to the evaluation of existing products for alternative indications.

### **Characteristics**

Forty-nine research and development pharmacists responded to the 2012 *APhA Career Pathway Evaluation Program* survey. Half of the respondents had a PharmD degree. Fifty-nine percent indicated an advanced degree (MA, MS, MBA, PhD, or other). Twelve percent had completed a residency program, 22% a fellowship, 14% had received certificate training, and 12% reported that they had been through some form of other training. Respondents' average age was 48 years old. More than half (51%) of respondents were female. Income data show only 3% earn less than \$100,000. Forty percent indicated that they earn more than \$150,000 per year. The average time worked per week was 40 hours.

The majority of respondents indicated that they were satisfied with their work, with 67% indicating "extremely satisfied" and 25% indicating "somewhat satisfied." The same percentages also were mentioned by respondents related to their work being

challenging, with 71% indicating “extremely challenging” and 25% indicating “somewhat challenging.”

## **Insider’s Perspective**

### **What aspects of the job are most appealing?**

Two qualities cited by several pharmacists were variety and intellectual stimulation. Three additional items were mentioned by the respondents were new product development, schedule, and the environment itself. A pharmacist wrote of enjoying the “environment, lots of variety, people, and job flexibility.” One respondent summed up the thoughts of many colleagues by stating enjoyment in the “intellectual stimulation, camaraderie with peer scientists, innovative atmosphere, location, corporate objectives, and compensation/ benefits.”

### **What aspects of the job are least appealing?**

In contrast to the most appealing aspects, pharmacists indicated that pressure/stress was the least appealing aspect of their work. Also mentioned were politics and no direct patient contact. Others listed a lack of resources as a concern. A respondent indicated one of the least appealing aspects was the “high pressure,” which was supported by a colleague who stated the least appealing aspect was the “high degree of pressure/stress.”

### **What advice should students and practitioners consider when selecting the option of working in the pharmaceutical industry doing research and development?**

Most respondents indicated the need for pharmacists to look at lifestyle considerations and the opportunities available. Others wrote that it is important to look at additional training, both formal degree training and information training, because this is a requirement in many positions. One respondent indicated the importance of pharmacists’ “willingness to seek additional advanced education.”

Adapted from the American Pharmacists Association