

# Post-Doctoral Fellowship Penetration into Pharmaceutical Industry: Outcomes of a 17-Year Retrospective Study

Phaneth Keo, Pharm.D., Ashley L.E. Pereira, Pharm.D., Merlene Varughese, Pharm.D.,  
James G. Alexander, Pharm.D. Joseph A. Barone, Pharm.D., FCCP  
Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey

## Introduction

In 1984, the Rutgers College of Pharmacy, now the Ernest Mario School of Pharmacy, and two pharmaceutical companies initiated a collaborative pilot program to evaluate the potential contributions of clinically trained pharmacists within a pharmaceutical industry practice setting. Over the past 20 years, the program has grown exponentially. Since its first graduate in 1987, the Rutgers Pharmaceutical Industry Fellowship (RPIF) program has expanded to include 13 different companies within the pharmaceutical industry and related medical communications businesses. Approximately 300 post-doctoral fellows have completed the program to date and nearly 70 Pharm.D.'s now participate in the fellowship program annually. The growth of the program has been due to the emergence of the Pharm.D. degree as well as an industry-wide desire to employ pharmacists throughout the pharmaceutical industry's corporate structure. Each year about 3% of the nation's graduating pharmacists apply to the program. Although the program is approaching its 20<sup>th</sup> anniversary, this is the first comprehensive study undertaken to evaluate and assess the impact of the Rutgers Pharmaceutical Industry Fellowship Program on career advancement of its graduates within the pharmaceutical industry.

## Objective

To track and assess the professional advancement of pharmacists within the pharmaceutical industry following completion of the RPIF Program from 1987 to present.

## Methodology

### Design

Distribution of a survey based on the existing database of graduates from the RPIF program. All participants' identities remain confidential. Completed surveys were collected from October 1 to November 16, 2004.

### Population

Alumni of the RPIF Program. Graduates of the program from 1987 to present (n=270).

### Materials

> Rutgers fellowship alumni database courtesy of the Institute for Pharmaceutical Industry Fellowships.

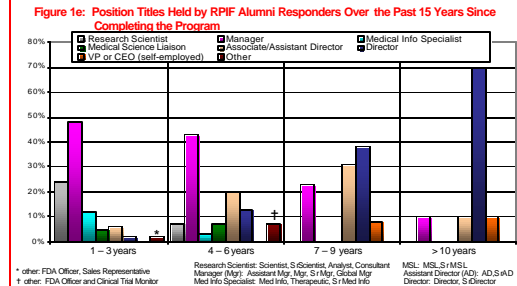
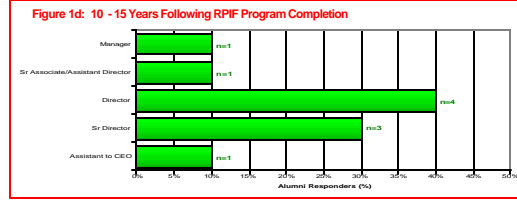
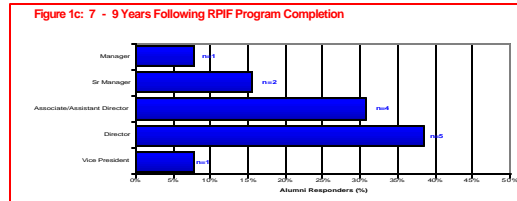
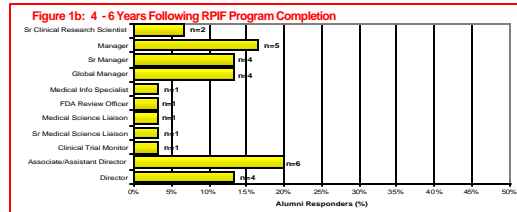
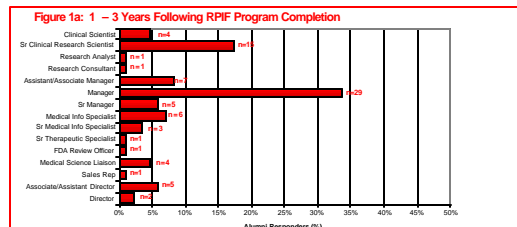
> Survey created by investigators consisting of the following:

- What degree(s) did you have upon entering the fellowship?
- What pharmacy school(s) did you graduate from?
- During the fellowship, please specify the company name and fellowship title.
- What was your official job title and company for 1-3, 4-6, 7-9, and 10-15 years?
- Based on a 5-point scale, how would you rate the importance of the fellowship program in obtaining your employment upon completion?
- If you did not pursue a career in pharmaceutical industry or related fields upon completion of the fellowship program, what career path did you choose?
- Are you currently employed by the same company you worked for during the fellowship program?
- Where do you see your career 5 years from now?

### Analysis

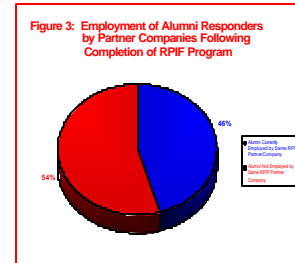
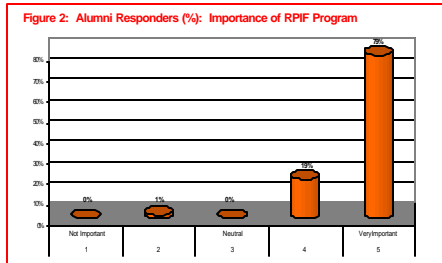
All analysis was initiated and completed by the investigators after November 16, 2004.

## Results



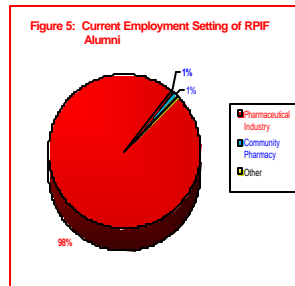
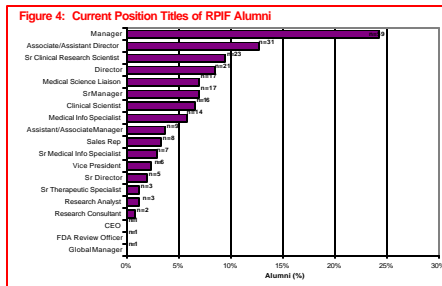
### Survey Analysis

- >25% response rate (68 of 270 alumni)
- >46% reported employment by their host companies following program completion
- >34% reported manager level positions 1-3 years following program completion
- >2% reported director level positions 1-3 years following program completion
- >38% reported director level positions 7-9 years following program completion
- >79% reported that the program was very important in obtaining employment following program completion
- >24% reported history of employment with 2 or more pharmaceutical companies



### Database Analysis

- >98% of alumni are currently employed in the pharmaceutical industry
- >35% of alumni report manager (all levels) and 23% report director (all levels) as their position titles
- >3% report Vice President or Chief Executive Officer (CEO) (self-employed) as their current position titles



## Discussion

The results of the database and survey analyses revealed that:

- > Nearly half (46%) of the RPIF alumni were successfully employed by their respective host company following program completion
- > Exceptional positions were achieved by RPIF alumni with the most common position titles including but not limited to the following:
  - 1 to 3 years: Manager
  - 4 to 6 years: Assistant/Associate Director
  - Greater than 7 years: Director
  - Greater than 10 years: VP and CEO (self-employed)
- > 98% of the alumni survey responders ranked the RPIF program as being an important or very important factor in attaining their first job within the pharmaceutical industry
- > Almost all of the RPIF alumni (98%) are currently employed within the pharmaceutical industry
- > RPIF alumni penetration among a variety of disciplines, including but not limited to the following:

- |                              |  |
|------------------------------|--|
| Food and Drug Administration | Medical Science Liaisons                       |
| Global Operations            | Medical Writing                                |
| Marketing                    | Regulatory Affairs                             |
| Medical Affairs              | Research Scientists, Analysts, and Consultants |
| Medical/Drug Information     | Sales Representatives                          |

## Limitations

- > Variability of position titles across the different companies
- > Incorrect email addresses limited survey responses or usable survey data
- > Interpretation of survey responses was dependent upon investigator judgment
- > This outcome study was not designed to evaluate the relative value of the RPIF program. This can only be accomplished by a controlled study comparing RPIF alumni to those pharmacists within industry who did not receive formal post-doctoral training.

## Conclusions

Since its inception in 1987, the Rutgers Pharmaceutical Industry Fellowship program has provided the opportunity for the professional advancement of pharmacists within industry. The variability of disciplines and position titles revealed in this analysis demonstrates the consistently increasing responsibilities gained by alumni. The findings of this outcomes study prove that the RPIF program is successful in achieving its primary goal of promoting the role of pharmacists within the pharmaceutical industry.

## References

- > Rutgers Pharmaceutical Industry Fellowship website: <http://pharmafellows.rutgers.edu>
- > Data on File, Institute for Pharmaceutical Industry Fellowships, Ernest Mario School of Pharmacy, Rutgers University