

## **Academia: Economic, Social, and Administrative Sciences**

### **Background**

Academia is an attractive option for pharmacists who enjoy working with students while having opportunities to engage in research. With the increase in the diversity of academic positions, it can no longer be said that an academician's career is confined to the laboratory or classroom. Three distinct profiles are included in this series: Clinical Practice; Economic, Social, and Administrative Sciences (ESAS); and Pharmaceutical Sciences. Each profile provides information on the similarities and differences in these three academic careers.

ESAS academicians often work with other health care professionals in a consultative capacity or as a lead investigator in research. Moreover, the opinions of ESAS academicians are frequently solicited by the pharmaceutical industry and the government before making policy decisions. Therefore, ESAS academicians have an indirect impact on patient care.

The "Academia" category may be loosely defined as belonging to a university faculty, usually that of a college of pharmacy. However, ESAS academicians also hold academic positions in medical, veterinary, public health, public policy, marketing, and other health care–related educational institutions. Positions may range from the dean of a college of pharmacy to a teaching clinical pharmacy position at an off-campus or remote hospital to a classroom professor.

Duties of an ESAS pharmacist may include administrative activities, scientific research, teaching student pharmacists, supervising research and teaching graduate students, speaking and/or publishing in scientific venues, and teaching student pharmacists through experiential practice sites.

In the 2006–2007 academic year, there were 4,340 full-time pharmacy faculty at the nation's colleges and schools of pharmacy. (Source: [http://www.aacp.org/Docs/MainNavigation/InstitutionalData/6676\\_2005-03.pdf](http://www.aacp.org/Docs/MainNavigation/InstitutionalData/6676_2005-03.pdf). Accessed August 25, 2007.)

One North Carolina respondent noted, "We are helping to mold the future of our profession by educating leaders of tomorrow."

### **Characteristics**

Sixty-four individuals responded to the 2007 *APhA Career Pathway Evaluation Program* survey. Seventy percent of the respondents had an entry-level degree in pharmacy, with 16% having earned a PharmD degree. Eighteen percent of respondents had a residency or fellowship. Seventy-three percent reported an advanced degree (PhD) with an additional 13% holding an MBA. An additional 11% indicated certificate training of some kind.

Respondents' average age was 45 years old. Slightly less than two thirds (61%) of respondents were male. Income data show over one third (36%) earn between \$80,000–

\$100,000, while 45% earn \$100,000 or more per year. Consultative fees are included in the income figures. The average time worked per week was 50.7 hours, among the highest of all job areas surveyed. Respondents represented 30 states.

A large majority of respondents indicated that they were satisfied with their job, with 69% indicating “extremely satisfied” and 28% indicating “somewhat satisfied.” On a similar scale, respondents said that they felt the job was challenging, with 72% indicating “extremely challenging” and 28% indicating “somewhat challenging.”

One respondent from Washington noted, “The opportunity exists to advance practice and work with future practitioners.”

### **Insider’s Perspective**

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

Reflecting the different types of activities involved in ESAS, 25% of respondents said the most appealing aspect of their work was its “flexibility.” “Working with students,” was cited by 16% of the respondents with “freedom” listed by 10% of the respondents. “Freedom to do what you like—teaching, research, service” was one Minnesota respondent’s message of the most appealing aspect of the position.

Independence, teaching student pharmacists, and working with graduate students were cited in comments, indicating the satisfaction level previously noted.

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

Among the least appealing aspects of an academic position was a 14% response for both “bureaucracy” with “administrative activities.”

Working within a large organization, like a university, usually requires a considerable administrative workload in addition to teaching and research responsibilities. “Bureaucratic and political concerns, along with not always working with like-minded folks,” was noted by one Washington respondent. Another stated, “Sometimes I feel my group’s work is not considered important by the remainder of pharmacy.” Just under 8% indicated their concerns for low salaries and long hours as least appealing aspects.

#### **What advice should students and practitioners consider when selecting the option of academia in economic, social, and administrative sciences?**

The ability to work independently was the most frequent factor cited by respondents, as 12% indicated this need. One respondent from Arizona wrote that pharmacists need the “ability to self-motivate, ability to manage time among multiple responsibilities, and be project oriented.” Other respondents included the thoughts of looking at the “larger issues confronting pharmacy and health care.”

## Critical Factor Ratings

### **Interaction With Patients**

Interaction with patients and the public was identified on the low range at 2.8. A significant variance is noted; some respondents are likely to work with clinical faculty in a clinical setting while others are more research oriented and less likely for such encounters.

$$= 2.8$$
$$\sigma = 1.9$$



### **Conducting Physical Assessments**

Relatively little time is spent in conducting physical assessments. Given the need for multitasking numerous activities, this is likely a reflection of the specific job responsibilities of ESAS faculty.

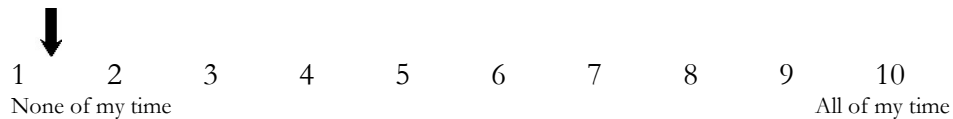
$$= 1.4$$
$$\sigma = 0.3$$



### **Interpreting Laboratory Values**

Again taking into account the roles of ESAS faculty, there is little opportunity to interpret laboratory values unless involved in a research project that includes these data. This is the lowest ranked factor for this group.

$$= 1.3$$
$$\sigma = 0.8$$



### **Continuity of Relationships**

ESAS pharmacists responded in the low range with a 3.0 rating for the continuity of relationships with patients or consumers, indicating that many are not involved in such relationships. This may illustrate the focus of the respondents with teaching student pharmacists or graduate students. Some relationships may be ongoing with long-term clinical-based research activities.

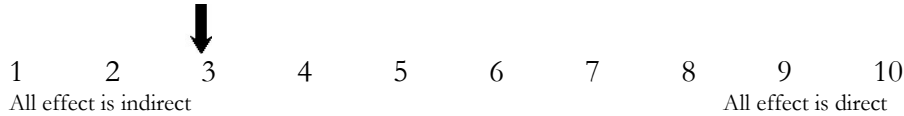
$$= 3.0$$
$$\sigma = 2.7$$



### Helping People

A 2.9 rating places this group on the indirect side of the scale. ESAS academic pharmacists help individual people indirectly through research activities and teaching future practitioners.

= 2.9  
 $\sigma = 2.3$



### Collaboration With Other Professionals

Collaboration with other professionals ranked just below the mid-point with a 4.7 rating, indicating that these pharmacists collaborate some of the time. Again, this could be in conjunction with non-clinical-based practice research activities, with other health care professionals, or with research-based academicians.

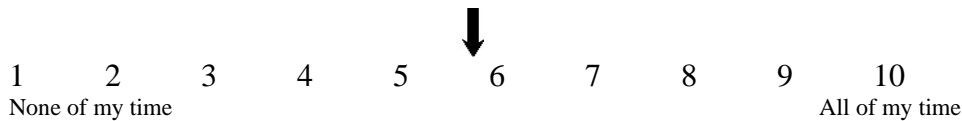
= 4.7  
 $\sigma = 2.5$



### Educating Other Professionals

To a substantial degree, ESAS academicians spend their time involved with educating other professionals. This is not surprising, since many are involved in university, government, or industry projects. In addition, many are involved in interdisciplinary educational efforts. One respondent indicated enjoyment in the “opportunity to interact across the health professions.”

= 5.7  
 $\sigma = 2.8$



### Variety of Daily Activities

One of the higher ratings, at 8.1, reflects the academic pharmacist’s role in a variety of activities. One respondent enjoyed the “variety and intellectual stimulation” of the activities.

= 8.1  
 $\sigma = 1.7$



### Multiple Task Handling

One of the higher ratings at 7.9, multitasking is a near-universal aspect of these positions. Many respondents indicated that the ability to work with both student pharmacists and graduate students on multiple projects was very rewarding. One respondent indicated “a need to balance teaching and research, pressure for tenure and promotion, and family and leisure time.”

**= 7.9**  
 **$\sigma = 1.8$**



### Problem Solving

The response to this question indicates the need for the academic pharmacist to seek out new solutions for new problems, versus being able to rely on previously useful solutions.

**= 7.3**  
 **$\sigma = 1.4$**



### Focus of Expertise

ESAS academicians responding to this survey indicated only a slight tendency toward having sharply defined areas of expertise versus a broader area of expertise. This may be caused by the wide breadth of science and research that is included in this field.

**= 6.9**  
 **$\sigma = 2.2$**



### Innovative Thinking

A relatively high rating of 8.2 for this factor suggests that ESAS academicians encounter a high need for innovative solutions and thinking about pharmacy issues, leading to new ideas in general pharmacy practice, as well as in the academic setting. One respondent indicated that the “interest in larger issues confronting pharmacy and health care” require thinking outside the box.

**= 8.2**  
 **$\sigma = 1.7$**



### Applying Scientific Knowledge

Not surprisingly, ESAS academicians rely heavily on the application of scientific knowledge in their practice activities whether in teaching, research, or providing expertise for patient care.

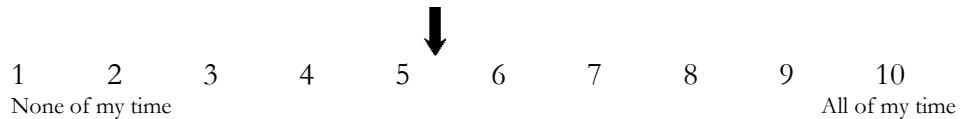
$$= 8.1$$
$$\sigma = 1.9$$



### Applying Medical Knowledge

Relative to the application of scientific knowledge, ESAS faculty apply less medical knowledge in their practice. Perhaps this is related to the specific research that they pursue, which can be related more to the practice of pharmacy than clinical pharmacy.

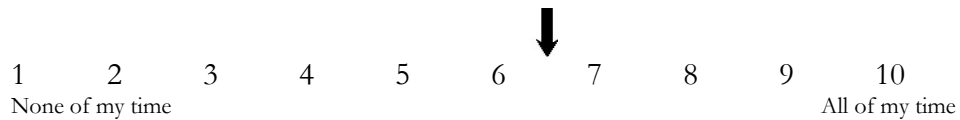
$$= 5.3$$
$$\sigma = 2.3$$



### Creating New Knowledge by Conducting Research

The slightly higher than mid-range rating of 6.5 for creating new knowledge by conducting research is commonplace for these practitioners. Thirty percent of the respondents' time is spent on research activities.

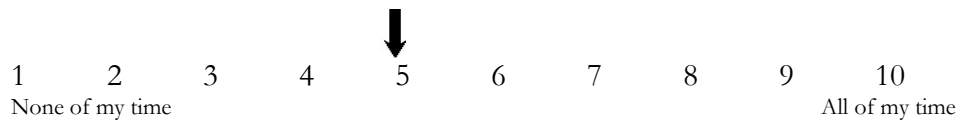
$$= 6.5$$
$$\sigma = 2.3$$



### Management/Supervision of Others

A mid-range response from participants shows that this group is moderately involved in the management and supervisory responsibilities of others. This seems to be related to the number of graduate students with whom many ESAS faculty work.

$$= 4.9$$
$$\sigma = 2.3$$



### Management/Supervision of a Business

Many of the respondents indicated that they spend little to no time managing a business. A few who are in administrative roles rated this factor higher. Only 6% of respondents' time is spent on business-related activities.

$$= 2.9$$
$$\sigma = 2.2$$



### Pressure/Stress

An upper mid-range rating of 6.8 indicates that ESAS pharmacists have a slight tendency toward experiencing stress or pressure in their work. Some stress is associated with publishing articles in professional journals and obtaining funding for research. One respondent indicated that the position is “stressful as sometimes there is an unrealistic expectation [of what can be accomplished] regarding administrative duties.”

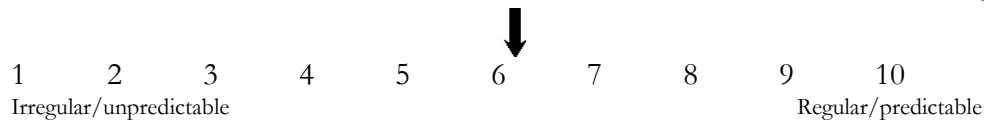
$$= 6.8$$
$$\sigma = 1.8$$



### Work Schedule

ESAS academicians responding to this survey are around mid-range of unpredictable versus predictable work scheduling. One respondent stated, “There is more time spent at home on ‘work’ stuff.”

$$= 6.1$$
$$\sigma = 2.3$$



### Part-Time Opportunities

Academic settings infrequently offer part-time work opportunities. However, this does vary by institution and the type of academic position.

$$= 4.1$$
$$\sigma = 3.1$$



### Job-Sharing Opportunities

Job-sharing is not a common practice in academic institutions, which is discernible by the low ranking of this factor.

$$= 2.6$$
$$\sigma = 2.4$$



### Exit/Re-entry Opportunities

Surprisingly, exit/re-entry opportunities are mid-range within the academic ESAS practice area. This may be due to a number of people who have worked in industry and then taken academic positions or vice versa.

$$= 4.6$$
$$\sigma = 3.0$$



### Parental Leave Opportunities

Parental leave opportunities ranked higher than others in the areas of work-related options. Most institutions provide the opportunity for parental leave.

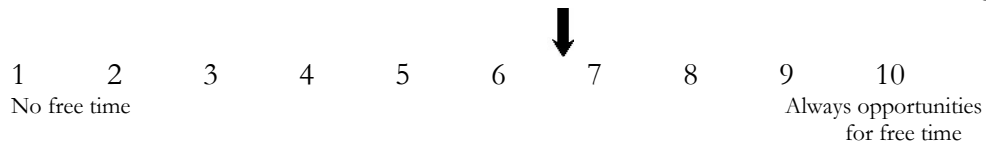
$$= 7.1$$
$$\sigma = 2.8$$



### Leisure/Family Time

ESAS academicians reported varying experiences regarding time for leisure and family activities. Some said they have adequate time for these activities, while others claimed to have very little.

$$= 6.7$$
$$\sigma = 2.1$$





### Job Security

ESAS pharmacists enjoy a high level of job security, ranking highly across all careers surveyed at 8.5. Employment contracts, tenure, and academic year appointments contribute to this stability.

= 8.5  
 $\sigma = 1.1$



### Opportunities for Advancement

To a high degree, academicians enjoy opportunities for advancement in their practice settings. Universities are large organizations with constantly changing and widely varying personnel needs, leading to openings and promotion opportunities, both within the pharmacy areas and administration within the university setting. There is a hierarchy within academia that includes the following positions: lecturers, clinical instructors, post-doctoral fellows, assistant professors, associate professors, full professors, assistant deans, associate deans, and deans. In addition, newer positions appoint directors of specific business units within an institution, such as director of alumni relations. Many ESAS departments have specific business type units that are overseen by a specific faculty member.

= 7.7  
 $\sigma = 2.1$



### Opportunities for Leadership Development

The 8.0 response indicates that ESAS pharmacists have ample opportunities to develop their leadership potential. Such opportunities could be within the college of pharmacy itself, within the greater university setting, nationally within the specialty field, or within the professional association field (e.g., APhA).

= 8.0  
 $\sigma = 2.0$



### Community Prestige

ESAS academicians, generally as employees of a university, are perceived as prestigious members of the community. Over many years of a national public opinion poll, pharmacists in general have been highly respected by the public. Therefore it is not surprising that pharmacists employed by such a prestigious institution as a college or university would be even more highly respected. Many ESAS faculty also work with the local and state professional associations by providing research in many areas. This was the highest rating for any profile in the survey.

= 8.2  
 $\sigma = 1.5$



### Professional Involvement

The highest rating by the respondents to this survey is their level of opportunity to participate in professional association meetings and similar events within the profession of pharmacy. Accordingly, it is not unusual to see an academically based ESAS pharmacist in a leadership position in a state or national professional association. Indeed, some universities provide faculty members incentives for such “community” service involvement.

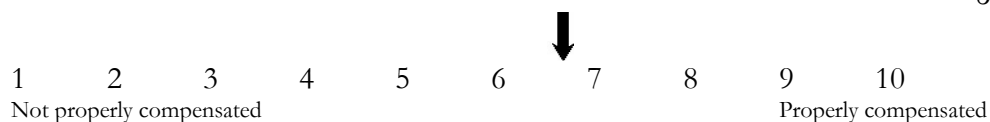
= 9.3  
 $\sigma = 1.0$



### Income

Academicians perceive that they are slightly above the mid-range of being properly versus not properly compensated for their professional services. It is not uncommon, however, for faculty members to be expected, even encouraged, to seek additional outside sources of income, through consulting projects, for example, which would supplement their faculty salary. In addition, some ESAS faculty work limited part-time hours as pharmacists.

= 6.7  
 $\sigma = 2.5$



**Benefits (vacation, health, retirement)**

This ranking moves toward the upper end of the scale, indicating a higher level of benefits in the form of vacation time, health insurance, and retirement packages. Faculty members are typically employees of large institutions, which normally offer such benefits to all their employees.

= 8.9  
σ = 1.3



**Geographic Location**

With a moderate to higher end ranking on this factor, ESAS academicians have an opportunity to practice many places in the country among the nation’s 100 colleges and schools of pharmacy. Nearly all states have at least one college of pharmacy, and those that do not are geographically close to another state’s colleges. Also, many colleges have “outreach” or similar programs in which faculty members are placed or “shared” with off-campus hospitals, clinics, and other sites. Another recent trend has been to have satellite campuses across a state.

= 7.2  
σ = 2.7



**Autonomy**

A high ranking of 8.6 indicates that pharmacy faculty members are trusted professionals with a high level of independence and decision making. The underpinning of this autonomy, however, is a high sense of responsibility, self-discipline, and initiative. A number of respondents listed autonomy as one of the most appealing aspects of their practice. This was the highest ranking for any profile in this survey.

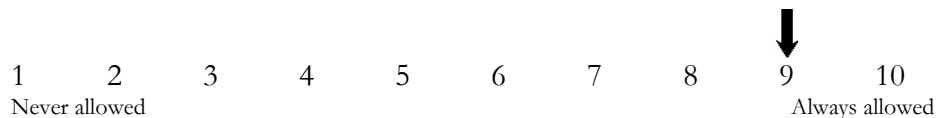
= 8.6  
σ = 1.0



**Self-Worth**

One of the higher rankings by ESAS academicians is for opportunities that create self-worth. The 9.0 ranking is the third highest for the group. College and university settings encourage the advancement of personal value and the full development of the potential of student and teacher alike. Many ESAS faculty are sought by practitioners for their knowledge in a variety of practice-based systems.

= 9.0  
σ = 1.0

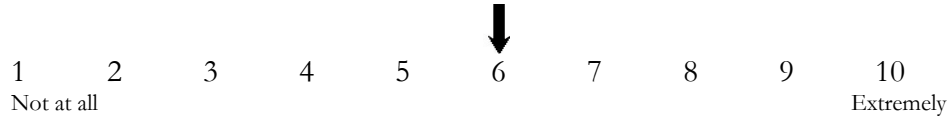




### Entrepreneurial Opportunity

ESAS faculty members indicate a mid-range level of entrepreneurial opportunity in their practice settings. External consulting or research activities present such opportunities

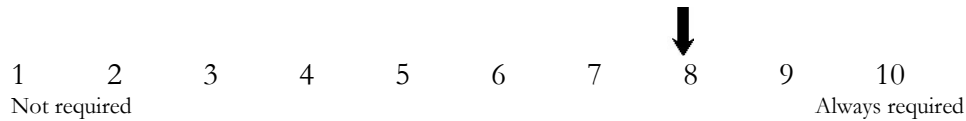
= 6.0  
 $\sigma = 2.6$



### Additional Training

Considering the high number of respondents who hold a PhD, it is surprising to see that they indicated the need for additional training. However, one can take into account the need for additional training in research methodology, statistics, and other related areas, which underscore the ranking of this factor.

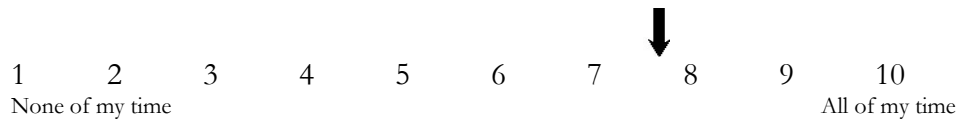
= 7.9  
 $\sigma = 2.7$



### Interacting With Colleagues

Academics tend to interact with coworkers on a regular basis through committee work and group teaching. ESAS faculty also tend to work together on committees for graduate students' research and projects.

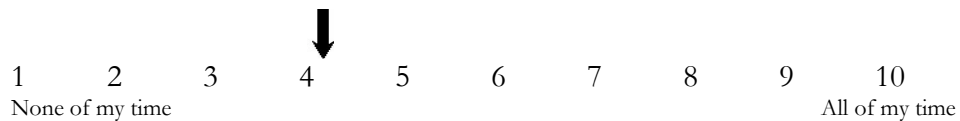
= 7.7  
 $\sigma = 1.6$



### Travel

Academics for the most part have lower needs to travel for their day-to-day activities. However, attending state, national, or international meetings provides some travel opportunities.

= 4.1  
 $\sigma = 1.7$



### Writing

Respondents were in the upper mid-range regarding writing. ESAS respondents focused on the preparation of publications, research proposals, and administrative reports they are involved with for the school of pharmacy.

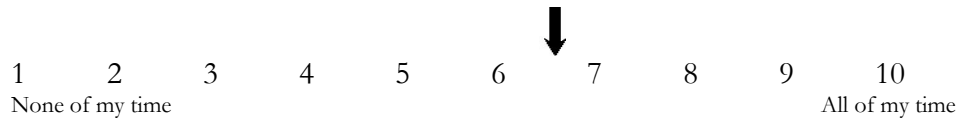
= 7.2  
 $\sigma = 2.1$



### Working With Teams

ESAS pharmacists tend to have more team-related assignments because they often team teach courses and work collaboratively on graduate student projects.

= 6.6  
 $\sigma = 2.2$



### “On Call”

Respondents indicated a low “on call” need for the positions. However, depending on the specific research project, the “on call” status can change.

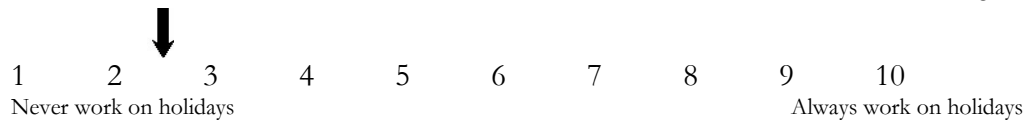
= 2.1  
 $\sigma = 2.1$



### Work on Holidays

Academicians tend not to work on holidays at their place of employment.

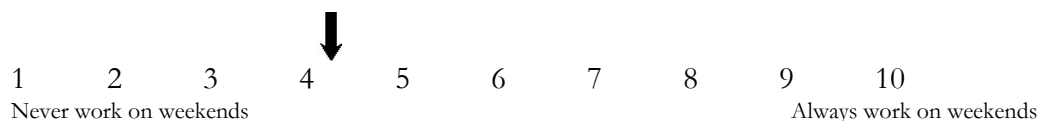
= 2.5  
 $\sigma = 2.0$



### Work on Weekends

This is similar to the above statement, although more work is required on weekends versus holidays. Nonetheless, this factor is rated lower mid-range on the scale.

= 4.2  
 $\sigma = 2.4$





### Mean Scores for Critical Factors

1. Interaction With Patients	2.8
2. Conducting Physical Assessments	1.4
3. Interpreting Laboratory Values	1.3
4. Continuity of Relationships	3.0
5. Helping People	2.9
6. Collaboration With Other Professionals	4.7
7. Educating Other Professionals	5.7
8. Variety of Daily Activities	8.1
9. Multiple Task Handling	7.9
10. Problem Solving	7.3
11. Focus of Expertise	6.9
12. Innovative Thinking	8.2
13. Applying Scientific Knowledge	8.1
14. Applying Medical Knowledge	5.3
15. Creating New Knowledge by Conducting Research	6.5
16. Management/Supervision of Others	4.9
17. Management/Supervision of a Business	2.9
18. Pressure/Stress	6.8
19. Work Schedule	6.1
20. Part-Time Opportunities	4.1
21. Job-Sharing Opportunities	2.6
22. Exit/Re-entry Opportunities	4.6
23. Parental Leave Opportunities	7.1
24. Leisure/Family Time	6.7
25. Job Security	8.5
26. Opportunities for Advancement	7.7
27. Opportunities for Leadership Development	8.0
28. Community Prestige	8.2
29. Professional Involvement	9.3
30. Income	6.7
31. Benefits (vacation, health, retirement)	8.9
32. Geographic Location	7.2
33. Autonomy	8.6
34. Self-Worth	9.0
35. Future Focus	8.1
36. Professional Prestige	9.1
37. Unique Practice Environment	7.0
38. Advanced Degree	9.6
39. Entrepreneurial Opportunity	6.0
40. Additional Training	7.9
41. Interacting With Colleagues	7.7
42. Travel	4.1
43. Writing	7.2
44. Working With Teams	6.6
45. "On Call"	2.1
46. Work on Holidays	2.5
47. Work on Weekends	4.2
48. Presentations	6.8



## References

Schommer JC, Brown LM, Sogol EM. *Career Pathway Evaluation Program 2007 Pharmacist Profile Survey*. June 2007.

American Association of Colleges of Pharmacy. Academic Pharmacy's Vital Statistics. April 2007. [www.aacp.org](http://www.aacp.org)

## Professional Organizations

Accreditation Council for Pharmacy Education (ACPE)  
20 North Clark Street, Suite 2500, Chicago, IL 60602  
Tel: 312-664-3575 Fax: 312-664-4652  
[www.acpe-accredit.org](http://www.acpe-accredit.org)

American Association of Colleges of Pharmacy (AACP)  
1426 Prince Street, Alexandria, VA 22314  
Tel: 703-739-2330 Fax: 703-836-8982  
[www.aacp.org](http://www.aacp.org)

American Association of Pharmaceutical Scientists (AAPS)  
2107 Wilson Blvd., Suite 700, Arlington, VA 22201  
Tel: 703-243-2800 Fax: 703-243-9650  
[www.aaps.org](http://www.aaps.org)

American College of Clinical Pharmacy (ACCP)  
3101 Broadway, Suite 650, Kansas City, MO 64111  
Tel: 816-531-2177 Fax: 816-531-4990  
[www.accp.com](http://www.accp.com)

American Foundation for Pharmaceutical Education (AFPE)  
One Church Street, Suite 202, Rockville, MD 20850  
Tel: 301-738-2160 Fax: 301-738-2161  
[www.afpenet.org](http://www.afpenet.org)

American Pharmacists Association (APhA)  
1100 15th Street NW, Suite 400, Washington, DC 20005  
Tel: 800-237-APhA Fax: 202-783-2351  
[www.pharmacist.com](http://www.pharmacist.com)

American Society of Health-System Pharmacists (ASHP)  
7272 Wisconsin Avenue, Bethesda, MD 20814  
Tel: 301-657-3000  
[www.ashp.org](http://www.ashp.org)

NOTE: For further pharmacy organization information, please visit the American Association of Colleges of Pharmacy Web site at [www.aacp.org](http://www.aacp.org) and click on the "Related Pharmacy Organizations" link.