Fellowship Programs and Career Tracks

Joseph D. Ma, PharmD
joema@ucsd.edu
Associate Professor, SSPPS

August 22nd, 2013
Outline

• Definition of a fellowship
• Fellowship programs
  – Academic fellowship (e.g., Bassett)
  – Industry fellowship (e.g., Rutgers)
• How to get started?
  – Which fellowship to pick from?
  – What are the barriers/obstacles?
• Career opportunities from fellowships
• Panel session of current fellows
Definition

• A fellowship is a “directed, highly individualized, postgraduate program developed to prepare the participant to become an independent researcher.”*

• However, there is a little bit more to add to this definition...

Definition – cont’d

• The previous definition is academically focused.

• The definition does not consider how a fellowship is viewed from an industry perspective.

• The previous definition needs to consider what types of careers/jobs will be available upon completion of a fellowship.
Fellowship Types - Academic Fellowship
Academic Fellowships

- Setting: College, University and/or hospital
  - (some fellowships can be divided; 1 year at an academic institution, another year in industry)

- Duration: 2 to 3 years

- Previous experience: Completion of residency is usually required (there are exceptions)

- Salary: varies ~$40K/yr
  - Bassett Healthcare from 2002-2004 ($28-30K/yr)
Academic Fellowships – cont’d

• Generally an split of your time b/t research-related and clinically-related functions.
  - Key point: The majority of time will be spent on research-related functions
  - This contrasts the amount of time spent for research-related functions for a residency
Academic Fellowships – cont’d

• Research-related functions
  – Research project – Will vary. Usually will involve a human subject/drug study.
  – Learn how to use PK and statistical software programs (WinNonlin, NONMEM)
  – Potential for additional didactic coursework
  – LOTS of background reading related to your research project/area of research interest
  – Journal club (related to your research interest/focus)
  – Scientific writing (posters, abstracts, manuscripts)
Academic Fellowships – cont’d

• Clinically-related functions (~20%)
  – May spend time as a pharmacist for patient consultations
    • (e.g., Bassett fellowship; 2-week on call/pager, INPT. consultations for pain management, Abx dosing, DDI/drug information requests, etc.)
  – Shadow pharmacists/MDs in various therapeutic areas
  – May have to present lectures to pharmacy students
  – Generally no dispensing/RX staffing requirements
<table>
<thead>
<tr>
<th>Types of Academic Fellowships</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiology</strong></td>
</tr>
<tr>
<td><strong>Drug Information</strong></td>
</tr>
<tr>
<td><strong>Oncology</strong></td>
</tr>
<tr>
<td><strong>Pharmacoeconomics</strong></td>
</tr>
<tr>
<td><strong>Transplant</strong></td>
</tr>
</tbody>
</table>

*Source: ACCP website [accessed 13 August 2013]*
Search Directory

Please perform your search by selecting the criteria for your interests (Default settings will return all listed):

- Specialty
  - Please Select-
- Country
  - Please Select-
- State/Province
  - Please Select-
- Program Type
  - Please Select-

Search  Cancel
<table>
<thead>
<tr>
<th>Fellowship</th>
<th>Specialty</th>
<th>Institution</th>
<th>View Listing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fellowship - Cardiology - CA</strong></td>
<td>Secondary Specialty: Outcomes Research</td>
<td>Western University of Health Sciences</td>
<td>View Listing</td>
</tr>
<tr>
<td><strong>Fellowship - Cardiology - NE</strong></td>
<td>Secondary Specialty: Critical Care</td>
<td>Creighton University</td>
<td>View Listing</td>
</tr>
<tr>
<td><strong>Fellowship - Cardiology - UT</strong></td>
<td>Secondary Specialty: Heart Failure/Hypertension</td>
<td>University of Utah</td>
<td>View Listing</td>
</tr>
<tr>
<td><strong>Fellowship - Clinical Pharmacology - MD</strong></td>
<td>Secondary Specialty: HIV Pharmacokinetics</td>
<td>NIH Clinical Research Center</td>
<td>View Listing</td>
</tr>
<tr>
<td><strong>Fellowship - Clinical Pharmacology - NY</strong></td>
<td>Secondary Specialty: Transplantation</td>
<td>University at Buffalo- SUNY</td>
<td>View Listing</td>
</tr>
<tr>
<td><strong>Fellowship - Community Pharmacy - IN</strong></td>
<td>Secondary Specialty: Medication Safety</td>
<td>Purdue University College of Pharmacy</td>
<td>View Listing</td>
</tr>
<tr>
<td><strong>Fellowship - Critical Care - MA</strong></td>
<td></td>
<td>Northeastern Univ/Tufts Med Center</td>
<td>View Listing</td>
</tr>
</tbody>
</table>
Fellowship Types - Industry Fellowships
Industry Fellowships

- **Setting:** Pharmaceutical or Biotech company

- **Duration:** 1 to 2 years
  - Some fellowships can be divided; 1 year at an academic institution, another year in industry

- **Previous experience:** None (residency is not required)

- **Salary:** varies; $40-60K/year
Industry Fellowships

• Experiences gained in several areas or departments:
  – Medical Affairs
  – Medical Communications/Education
  – Global Marketing/Market Research
  – R & D Strategy and Analysis
  – Clinical Operations/Clinical Research
  – Clinical Pharmacology/Early Development
  – Regulatory Affairs
Rutgers Pharmaceutical Industry Fellowship Program

In 1984, 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.
Rutgers Post-Doctoral Industry Fellowship Program

• Key Program Features
  – Career Path Acceleration
  – Outstanding Alumni Track Record
  – Family of Leading Companies
  – Rigorous Academic Component
  – The Pathway to Industry
Fellowship Core Curriculum

- Rutgers Component
  - Research project
  - Publication
    - Abstract, paper, poster
  - Administration
    - Course coordination
    - Co-chief Fellow
  - Rotation
    - Affiliated teaching/clinical site
    - Fellows are adjunct faculty
  - Other projects (TBD)

- Monthly Seminar Series
  - 1 year Fellows - 1 presentation
  - 2 year Fellows - 1 presentation/yr
Clinical Pharmacology/Research Fellowship Overview

• Generally 2 year fellowships

• Clinical Pharmacology
  – Planning/developing Phase I-II studies

• Clinical Research
  – Phase II/III studies
  – Larger, registration studies

• Medical Affairs
  – Phase IV studies (post-marketing)
Which fellowship to pick from?
Fellowship Selection

The most important determinant to fellowship selection = Program reputation*

• Questions to ask
  – Are preceptors renown for their clinical, teaching, or research experience?
  – How long has the program been in existence?
  – How many fellows have completed the program?
  – What is the retention rate of fellows?
  – How are fellows treated (responsibilities)?

Fellowship Selection – cont’d

• **Area of Pharmacy research**
  – What are the research areas available? Program location? Working environment?

• **Potential for career advancement**
  – Current positions of past fellows? Will program completion improve employment opportunities or fulfill career objectives?

• **Teaching opportunities?**

• **Benefits package**
  – Paid sick, holiday, vacation leave? Reimbursement for professional expenses? Relocation reimbursement? Health insurance coverage?

• **Miscellaneous**
  – Recommendations from current/past fellows? Amount of salary/stipend? How many fellows are accepted?
What are the barriers/obstacles?
Potential barriers/obstacles

- **Financial**
  - Reduced salary/stipend
  - Repayment of student loans

- **Options are available**
  - Postponement of federal educational loans (loan deferment)
  - Federal agencies (NIH) may be able to repay a significant portion of educational loans*

- **Program location**
  - Out of state? BUT relocation expenses may be covered

- **Fellowships that are not ACCP-approved**

- **Applicant selection process – academic success**
  - NOT the sole factor

Career Opportunities from a fellowship
Career Opportunities

- Opportunities for the ‘non-traditional’ careers
- Depends on what area your focused on during fellowship
- For example, if fellowship had emphasis in clinical pharmacology/drug metabolism, fellows who completed the Bassett Healthcare fellowship were employed in
  - Biotech and/or pharmaceutical industry
  - Academia (Clinical vs. Basic Sciences faculty track)
  - Government (FDA CDER/CBER Office of Clinical Pharmacology)
  - Consulting for various biotech/pharma. companies
Panel Session

• Joanna Cole-Masters, PharmD
  – 2nd year UCSD SSPPS/Pfizer fellow
  – Class of 2012 Alumni
  – Email: jcmasters@ucsd.edu

• Melissa Neighbors, PharmD
  – 2nd year Rutgers/Novartis fellow
  – Class of 2012 Alumni
  – Email: melissa.neighbors@novartis.com

• Andrew Wahlert, PharmD
  – 2nd year USC/Allergan fellow
  – Class of 2012 Alumni
  – Email: Wahlert_Andrew@Allergan.com
Potential Panel Questions

• What made you choose a fellowship over a residency?
• What were some activities that you completed in pharmacy school that helped you attain your fellowship?
• What opportunities are available for you after your fellowship?
• What advice would you give a student who has interest in pursuing a fellowship?
• Describe a ‘work day’ in your fellowship.....