Young Mass Spectrometrists Workshop

Monday, June 3, 2019

ASMS Annual Meeting, Atlanta, GA

Veronica Anania (Genentech) and Sharon Pitteri (Stanford) Presiding

- The room was approximately 80% full with ~200 attendees. Attendees mostly included graduate students and postdocs, and some non-student/post-docs with bachelors or masters levels degrees.
- Questions were answered by all five panelists and the moderators. Questions were from both the audience and the app. Many more questions were submitted through the app than we had time to answer.
- Panelists answered the questions frankly and differences in the different sectors (academia, industry, and government were highlighted.

Topics discussed included:

- Visas
- Whether to do a postdoc
- How to initiate contact with a potential hiring manager
- Where to look for open positions
- How to get a foot in the door if you don't necessarily have all the qualifications
- Salaries
- CVs
- Cover letters
- How the panel found their current jobs
- Networking

Other topics not discussed but raised by the audience through the app:

- When to start looking for a job in graduate school
- How to learn programming as a bench scientist
- How duration in graduate school is viewed by hiring managers
- What is the benefit of having a PhD in industry
- First author vs. non-first author publications
- Importance of impact factors
- Ways to highlight professional skills (beyond publications)
- Balancing effort in developing soft skills and hard skills
- Questions to ask during an interview to stand out
- How to be confident in areas outside of your expertise
- How to demonstrate soft skills and communication skills on a resume
- Balance between work and personal life in industry versus academia
• If you’re interested in switching areas, how competitive is an application with extensive instrumentation and technical experience, but with little experience in a particular application
• How to know what you like and what you are good at
• Which fields will be most popular in the future (proteomics, metabolomics, lipidomics)
• Advice for new graduate students early on that will make them more marketable for future careers
• Hurdles in working in working for a national lab, or other government job as an international PhD
• How to search for a job when you don’t know what you’re interested in
• Importance of an MBA to rising through the ranks in industry
• Choosing a postdoc in similar or different fields from the PhD
• How panelists chose their current roles and thoughts about changes during their career paths
• How to set yourself apart from other job candidates
• When to move from academia to industry
• Value of postdoc in getting a job in industry
• How to contact labs about postdoc positions, whether unsolicited emails are acceptable, whether a research proposal is needed
• Recommendations for CV or cover letter to avoid replies from companies that the candidate is outside of the hiring area
• Important factors in getting a job (instrumentation knowledge, biologically significant publications, ability to work with different sample types)
• Differences in levels and positions in industry and government
• Important skills that can be developed and how to cultivate them
• Relationship between current position and graduate school / postdoc work
• Entering the workforce as a foreign citizen
• Importance of publications (quality and quantity) for different career paths, and other important metrics
• Internships for international students
• Roles of biochemistry and molecular biology graduate students in mass spectrometry
MS Career Options: How to Kick Start Your Career

Co-chaired by Veronica Anania and Sharon Pitteri
June 3rd, 2019
Atlanta, Georgia

Veronica Anania
Representative of: Industry
Current Role: Scientist in Biomarker Development (Genentech)

Education: PhD in Molecular & Cell Biology (UC Berkeley), Postdoc in Protein Chemistry (Genentech)

Focus Area: discovery and development of pharmacodynamic biomarkers to support drug development and clinical assessment of disease
• Biomarker strategy for clinical trials
• Protein and lipid based biomarkers
• Neurology, lupus nephritis, IBD, Influenza, & Asthma
Sharon Pitteri
Representative of: Academia

Current Role: Associate Professor of Radiology (Stanford)

Education: PhD in Analytical Chemistry (Purdue University), Postdoc in Molecular Diagnostics (Fred Hutchinson Cancer Research Center)

Focus Area: cancer molecular diagnostics
- Analysis of clinical tissue samples to distinguish aggressive from indolent cancer
- Protein glycosylation analysis - method development and applications

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\text{Academia:} & \\
\text{Industry:} & \\
\text{Government:} &
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- Academia:
  - Professor (research vs. teaching institutions)
  - Staff Scientist
- Industry:
  - Pharma
  - Contract Research Organization (CRO)
  - Biotech-different sectors
  - Instrumentation
- Government:
  - NIH
  - FDA
  - NIST
Modern Job Search Tools

- General Job Search Sites
  - LinkedIn, Indeed, Monster, CareerBuilder, GlassDoor
- Scientific Journals and Websites
  - Nature Jobs, Science Careers, Inside Higher Ed Jobs
- Scientific Societies
  - ASMS Career Center, Conferences
- Recruiting agencies
- Internships
- Participation in local and national mass spectrometry discussion groups

Job Search Strategy in 2019

- Jobs posted 24/7
- Multiple online sources
- Need to apply for many jobs
- A lot to keep track of
  - Deadlines
  - Required Documents
  - Letters of recommendation
7 Ways to Take Control of your Job Search

1. Update your resume. Make sure it's compliant, concise, and current.
2. Post your resume. They won't hit you if they can't see you.
3. List a LinkedIn Profile:
   a. Use a professional headshot.
   b. Write a compelling headline.
   c. List your professional experience.

LinkedIn Roadmap: Career Management

1. LinkedIn Profile:
   a. Build a strong profile.
   b. Connect with industry leaders.
2. Explore Careers:
   a. Search for positions.
   b. Apply to jobs.
3. Develop a Job Search Strategy:
   a. Set clear goals.
   b. Network with industry professionals.

Follow-Up:
1. Thank you for your time.
2. Follow-up within 24-48 hours after an interview.

Network!
1. Connect with former colleagues.
2. Attend industry events.

Continuously Develop Professional and Personal Skills:
1. Attend workshops.
2. Engage in professional development activities.

How to the Next Step in Your Career:
1. Leverage LinkedIn.
2. Utilize your network.

5 Things I Wish I Knew Before Writing My Cover Letter

1. A cover letter is still a letter.
   - Address at the top right-hand corner, then the recipient's details, then the date. The font should be justified.

2. Speak the company language.
   - Search the company online and grasp their voice and tone. List all important keywords and use them on your letter.

3. Skip the familiar tunes.
   - Your letter is about YOU! So avoid using any generic, part-time templates. From a random or non-personal perspective, your letter is found online.

4. Don't echo your CV.
   - Your cover letter should be short, and only say what is necessary. It should not list information that belongs on a CV.

5. Tailor your letter to the job.
   - Always make the necessary adjustments, so that your cover letter demonstrates the information about you that is most relevant to the job.

Extra tip!
- It is generally best to find the name of the person you are writing to, and get-sprout with “Yourname.”
Use Technology to Meet New People

- Be prepared for delays to start dates and unexpected fees
- Stay in one country long enough to qualify for permanent residency
- Be prepared for fees associated with visas, ask your institution if they can reimburse you
- Have backup plans - visa could be denied at the last minute
- Keep all your paperwork - you may need it in your next move
Christopher Rose
Career Path: Biotech/Pharma

Current Role: Scientist, Genentech

Education: PhD in Analytical Chemistry (University of Wisconsin, Madison), Postdoc in Cell Biology (Harvard Medical School)

Focus Area: Quantitative proteomics to support Genentech Research and Early Development
- Quantitative analysis of biological pathways & drug MOA
- MHC peptidomics research related to individualized neoantigen specific therapies & biotherapeutic Immunogenicity
- Computational proteomics support

Thomas Blake
Career Path: Government

Current Role: Research Chemist, Team Lead (Centers for Disease Control & Prevention)

Education: PhD in Analytical Chemistry (Purdue University)

Focus Area: improving the detection, diagnosis, treatment, & prevention of disease from chemical emergencies
- Clinical assay development & application
- Animal model & countermeasure support
- Advanced laboratory automation & rapid prototyping of functional labware
Si Wu  
Representative of: Academia  
Career Path: Contract company/National lab/Academia  
Current Role: Assistant Professor (University of Oklahoma)  
Education: PhD in Analytical Chemistry (Washington State University), Postdoc in Proteomics (PNNL)  
Focus Area: development of high throughput quantitative top-down proteomics and functional proteomics tools to study diseases  
• Quantitative Top-Down Proteomics using Protein-Level Tandem Mass Tag (TMT) Labeling  
• Functional proteomics tools for drug target discovery  
• Autoimmune disease biomarkers

Ethan Badman  
Career Path: Academia→Pharma→Personal Care  
Current Role: Director, Analytical Chemistry, L’Oreal USA  
Education: BS Delaware, PhD Purdue  
Postdoc Indiana and Purdue  
Focus Area:  
mass spec or whatever it takes
Vagisha Sharma
Career Path: Academia

Current Role: Software Engineer, MacCoss Lab, University of Washington

Education: MS in Computer Sciences, University of California San Diego

Focus Area: Software to facilitate mass-spectrometry based proteomics research
- Data management systems
- Data visualization, analysis tools and pipelines
- Public data repositories

Starter Questions
- Where did you find your first/current job?
- What is the right path for me?
- What are my options?
- How did you transition to your current position?
- How to choose between academia, industry, and government?
- How do I go about starting my job search? Resources?
- How do I prepare for an interview?
  - Compare between different sectors