

Workshop minutes:

Title: Young Mass spectrometrists Workshop

Date: June 1st, 2015

Host: Olga Friese and Kristin Wildsmith

Panelist:

Industry: Lisa Marzilli, Daniel Spellman

Academia: Leslie Hicks

Attendees: ~300

1. Introduction of panelist

2. Introduction of how to become successful: your interest, your skillsets, your techniques, your CV, proficiency in job search tools, expand your network

3. Career Tools Podcasts



See slides starting on page 3.

Young Mass
Spectrometrists Work

Q&A

1. Question: I am interested in med school, but now I want to continue research only. Is getting an MD/PhD in small molecule mass spectrometry the correct path?

Answer:

Daniel: The MD/PhD program gives you a lot of options. Analytical techniques like mass spectrometry will be a good choice. Do rotations, and perform a program. Couple of fields where MD/PhD is beneficial. Search for where other MD/PhD end up doing: neuroscience, dermatologist.

Lisa: Depends on what you want to do.

2. Question: Academic: What do you see the field in 10 years? Money vs. freedom. I do not want to get a PhD, but I really enjoy the work and the field.

Answer: Leslie: Salary of public university is set, that of private university is flexible. The salary is pretty high. Important questions need to be asked for being a PhD in academia or industry. Long-term position (not professor) in larger lab is another option.

Lisa: Most people in industry do not end up getting that much money as a professor. You need to have a passion, and money will come.

3. Question: Academic, postdocs, what's your opinion on focus of projects? How to transit into a whole new field?

Answer: Lisa: Postdoc experience can bridge between PhD and industry. Gaining another skillset and make you more successful later. But don't be intimidated by not knowing new stuff. You have to always learn new things any way.

Kristin: Switch field in your postdoc. Know what motivates you and drives you.

Leslie: Know the complimentary field between PhD and postdoc and apply it in the future.

Daniel: Learn the skill how to dive in and also adapt quickly.

4. Is the economic environment in industry getting better in general?

Lisa: See more job opportunities. But also a lot of people in the market. Mass Spec is broadening out.

Daniel: The environment is improved. Figure out your interest and skillset is most important.

5. What skills are not taught in Grad school that is necessary?

Leslie: Omics type data analysis

Lisa: Communication (verbal and written), working in teams.

Daniel: LC-MS based protein assay becomes easier. Thus, most people don't have a good comprehension and deep understanding of their projects. Need to understand the full process.

6. Is a postdoc vital for someone who want to join industry eventually? What is the quality you need from a fresh PhD?

Daniel: Not necessary. If grad work aligns well, go ahead and apply for them. Or you can apply for postdoc program in industry.

Lisa: Go ahead to apply, even for the overqualified-level jobs.

7. Pros and cons in industry.

Lisa: Do a postdoc, and you will know.

Daniel: Programs in industry can help you. People can still switch career in a later stage of life.

8. Broaden your skillset. What are the other omics that need to be learned?

Daniel: Depend on the position. Hiring managers like people even if they haven't done the experiments but they are clear about the whole process. Also, there are system biology groups.

9. Is it easy to switch between industry and academia?

Daniel: Need to work on publication even in industry.

Lisa: Follow your passions and do good science. Need to be well-known in industry if you want to switch to academia.

10. If I am not looking for jobs, how to keep in contact with people?

Lisa: Just normal conversation, build a relationship. Use their network.

11. How to pass the HR screening process by using only CV?

Daniel: Read the job prescription. Email the hiring manager.

Lisa: Cover letter is important. Writing is part of the job. NO TYPOS.

12. How to develop potentials for programming in industry?

Lisa: Automate a lot of processes.

Daniel: Put together a workflow or all softwares.

13. What to pick up in CV? What to avoid?

Lisa: NO TYPOS. Skillsets are important. Without PhD: you can list courses. Education, title and your advisor on the top. You are not expert in everything. Be honest.

Daniel: Make it clean. Highlight several things: background and skillsets. Don't put personal information. Submit a pdf.

Leslie: Use other resources.

14. What to or not to do if you don't want to limit yourself in the future?

Lisa: If you are in a situation that you don't like, just leave.

15. How to transit from industry to school? How to choose where to go to?

Lisa: Luck. Start night classes.

Daniel: Graduate programs with multiple PI doing proteomics.

Leslie: Started cultivating the relationships with the professors when you are applying for it.

16. How to keep in touch?

Lisa: Email. LinkedIn.

Daniel: Make as many connections as you can.

17. How to know my compensation?

Daniel: Glassdoor.com. You definitely need to negotiate.

18. As a postdoc, should I stay in the same lab to get more publication? Or should I go to industry and get more experience?

Daniel: No rules. Too long in one position is not good, but too short is a red flag as well. Number of publications is not important if you are applying for industry position.

Lisa: Stay in postdoc, if you are interested. Timing is everything. Do whatever you need to do if you want to do it.

19. PhD focus does not fit in industry.

Lisa: Try to apply for it. May need to apply for a postdoc to bridge the skill sets.

Daniel: Find a side-project.

20. Academia vs. industry? Other things we can do?

Lisa: Marketing, editor, review grants. Non-traditional path do exist.

YOUNG MASS SPECTROMETRISTS WORKSHOP

Co-chaired by Olga Friese (Pfizer) and Kristin Wildsmith (Genentech)

June 1, 2015
Saint Louis, MO

IM LOOKING FOR A POSITION THAT USES MY KNOWLEDGE OF SEVERAL ELEMENTS IN THE PERIODIC TABLE.



So I looked at your Facebook page
...oh man...there's no way you're
getting this job!

Do not find yourself in these situations

The Workshop Description

- The workshop features a panel discussion on professional development in the area of mass spectrometry
- Topics will be focused on career planning and management, fundamental training, industrial internship, job search tools and interview strategies
- The panel, consisting of representatives from industrial and academic organizations, will share their knowledge and practices on career prospects

Panelists

○ Industry:

- Daniel Spellman, PhD. - Principal Scientist and Scientific Lead of Protein Bioanalysis at Merck
- Lisa Marzilli, PhD. - Associate Research Fellow and Group Leader at Pfizer

○ Academia:

- Leslie Hicks, PhD. - Assistant Professor at UNC Chapel Hill

Biography – Daniel Spellman, Ph.D. Merck

- Daniel earned his BS in Biochemistry from the University of Arizona and MS in Cell Biology from New York University.
- Mass Spectrometry Technician for 2 years in Protein Chemistry Laboratory at the University of Pennsylvania
- Pursued PhD at New York University's School of Medicine working in the laboratory of Dr. Thomas Neubert
 - Focus: development and application of quantitative proteomic methodology to the study of neuronal signal transduction, protein complexes, and posttranslational modifications
- Joined Merck in 2008 and is now Principal Scientist and Scientific Lead
 - Focus: Discovery proteomics technologies as well as targeted mass spectrometry-based assays for the quantitation of therapeutic proteins, pharmacodynamic biomarkers, and proteins of importance to drug metabolism
 - Previously:
 - Group Leader of Proteomics and Metabolomics in the Molecular Biomarkers
 - Neuroscience Lead for the Merck Proteomics Department

Biography – Lisa Marzilli, PhD. Pfizer

- Lisa received her B.S. in Biology/Chemistry (Union College) and then her Master's in Teaching (Boston University)
- She taught High School chemistry for 3 years
- Pursued her PhD at Northeastern University in Analytical chemistry
- Postdoc at Johns Hopkins (under Robert Cotter)
 - Focus: MALDI MS in immunology and protein structure analysis
- In 2000 joined Pfizer and is now an Associate Research Fellow and group leader
 - Manages 8 chemists who characterize biotherapeutics from early development to commercial launch

Biography – Leslie Hicks, Ph.D.

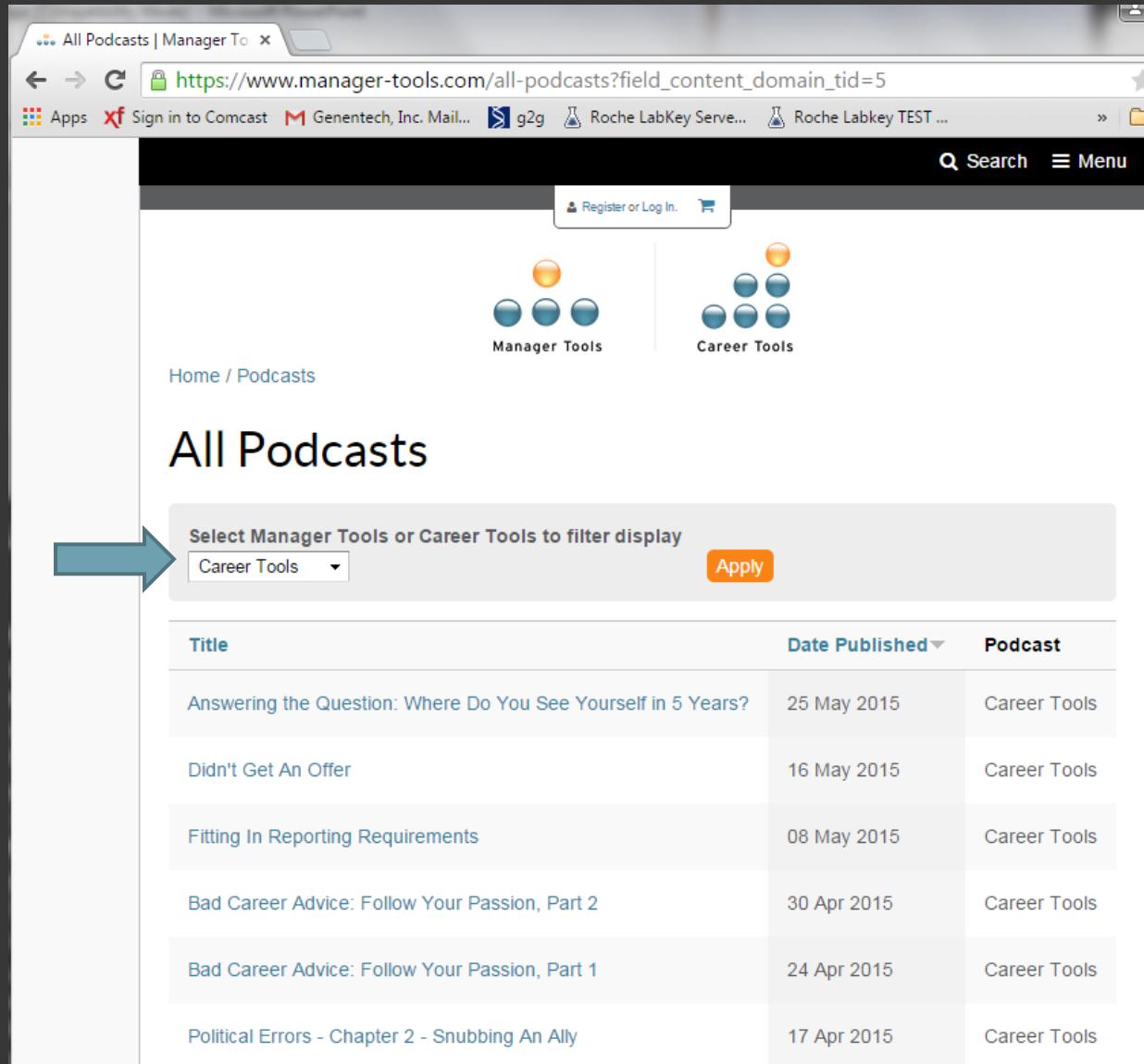
UNC Chapel Hill

- Leslie Hicks received her B.S. (Marshall University) and then Ph.D. (University of Illinois, Urbana-Champaign) in Chemistry with Neil Kelleher as an NSF graduate research fellow
- She moved to the Danforth Center as Director of the Proteomics & Mass Spectrometry Facility and became a Principal Investigator in 2012
- In 2013, she became Assistant Professor in the Department of Chemistry at UNC Chapel Hill, and received the 2014 Arthur C. Neish Young Investigator Award
 - Lab focus: development and implementation of mass spectrometric approaches for protein characterization including post-translational modifications, as well as the identification of bioactive peptides/proteins

Tools for Successful Career in the Field of Mass Spectrometry

- **Networking with people in the field through various avenues**
- **Knowledge of the broader field of mass spectrometry:**
 - How do all the different types of MS work?
 - When do I want to use the different types of MS
 - Where is MS applied?
 - Petroleum to food-to pharmaceutical industry as well as to clinical, sports, and cosmetics.
 - What bioinformatics tools and softwares do I need to be familiar with to run and analyze data? (e.g. Analyst, Skyline, etc.)
- **Proficiency in modern job search tools:**
 - Knowledge of online job search engines such as ASMS career center, Linked in, Indeed, Monster, CareerBuilder, etc;
 - Utilization of recruiting agencies
 - Familiarity with alternative places for job postings such as scientific journals and magazines, scientific societies websites, conferences, company and/or academic institution websites
 - Participation at the national and local mass spectrometry discussion groups

Career Tools Podcasts



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What is the right path for me?

How early should I start looking for a job?

What types of interview questions should I be prepared to answer?