

Mentoring Resources For Scientists

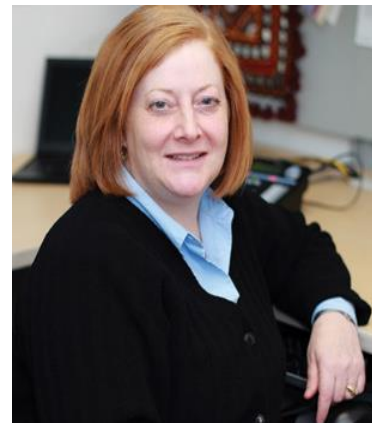
Addgene eBook, March 2014
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Mentor, Sponsor, Advisor, Boss – *Who will help me advance my science career?*

We spend many years becoming scientists. It takes us [a decade or more](#) for just the “training” portion of our careers. In that time we may have only 2-3 formal supervisors that will provide guidance and experience. Navigating a fulfilling career in science can be challenging – is advice and guidance from only 2 people enough?



For many years I’ve been organizing mentoring programs for scientists and doing training to help mentors and mentees have fulfilling, productive relationships. I will be sharing what I’ve learned along the way, including the answers to some of the top questions scientists ask me about mentoring:

1. What makes a good Mentor?
2. How do I choose an Advisor/PI who will also be a good mentor?
3. Where can I find a Mentor?
4. What is this I hear about “group” or “peer” mentoring?
5. How do I ask someone to be my Mentor?
6. I have a Mentor – what do I do now?
7. What are the benefits of taking on my own Mentee?

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“WHAT MAKES A GOOD MENTOR?” AND 6 MORE FAQs ABOUT SCIENCE MENTORING

Originally published to blog.addgene.org by Joanne Kamens | Dec 17, 2013

"The greatest good you can do for another is not just to share your riches but to reveal to him his own." -Benjamin Disraeli

I started a conversation about many of these topics with the researchers who joined a recent Twitter chat for Early Career Researchers. Here is the [storify summary](#) of this #ECRchat. Many of the participants had certainly realized the importance of seeking out mentoring as an important aspect to their ongoing success. There were unfortunate stories from researchers with advisors who did not serve as good mentors, but many had examples of very productive mentoring relationships with advisors and others who helped shape their experience. This led to the topic of “What makes a good Mentor?”

Some of the Tweeted comments:

- “A good mentor has your goals/needs/situation in mind, rather than (or as well as) their own.”
- “Someone to act as your ‘cheerleader’ – inspire you.”
- “Also a mentor can give you realistic expectations. (Don't think you can finish that book in 4 weeks!)”
- “Sometimes a mentor is a sounding board--a good mentor asks more questions than answers them.”

A good mentor does all of these things and more. It is instructive (and entertaining) to review this [list of bad mentor behaviors](#).



Yoda image courtesy of
jorenI/Vecteezy.com

Sadly, it is Yoda who is singled out as a bad mentor. Apparently, a good Jedi does not necessarily an excellent mentor make. Are your current mentors/advisors like Yoda? If so, you might want to find additional sources of wisdom. While somewhat lighthearted, the article does highlight key characteristics of a good mentor:

- Helps set concrete goals and helps you reach your goals
- Listens well and communicates clearly and openly
- Gives honest feedback without ever being demeaning
- Does not micromanage (teaches you to fish, doesn't fish for you)
- Helps identify a Mentee's strengths and make the most of them
- Is not threatened by the Mentee's talents or ambitions
- Encourages the Mentee to take risks

A great Mentor is often one that devotes time and energy to thinking about how to be a great Mentor.

A recent post on the blog “Tenure, She Wrote” is titled, “[What Kind of Mentor Do I Want To Be?](#)” In this excellent essay [Acclimatrix](#), an assistant professor at a research university in the northeast, writes a thoughtful treatise on the kind of advisor/mentor she wants to be for her new lab. If only every science trainee had such a dedicated person guiding the start of their career.

“I want to be a PI that holds my students accountable for their actions and pushes them to improve even as I’m flexible enough to accommodate economic difficulties, family trouble, or health and mental problems that get in the way. I’d like to be validating without being coddling, to listen without being taken advantage of, and to respect my students as developing colleagues even as I reinforce the necessary power dynamic between advisor and students.”

CHOOSING A GOOD MENTOR FOR SCIENTISTS

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A scientist-in-training will spend 10 or more years with a small number of formal advisors learning how to be a scientist. It is shocking how little pre-work most PhD students and postdocs do to ensure the advisors they choose will be ones that help them succeed after the training period. While there are many aspects to choosing the right labs (see my [webinar](#) on this topic), for this second entry in the “Mentoring for Scientists Series”, let’s focus on how to choose an advisor/principal investigator (PI) that will also serve as a good mentor.

DIFFERENT TYPES OF MENTORS FOR GRAD SCHOOL VS. POST-DOC

Choosing an advisor to complete a successful PhD is different from choosing a lab for postdoctoral work. However, selecting a lab with a PI who is a good mentor is important in both cases. As a PhD student you need to learn how to be a scientist. Your PI should be the kind of mentor that will teach you how to: interpret data, solve research problems, develop general technical proficiency, communicate your work, maintain ethical standards and interact professionally with other scientists. The specific research area is not as important as choosing a supportive, positive role model.

By contrast, as a postdoc, you should choose a field that you may want to work on in your future career, so the research topic will be more important. In addition, it is crucial that you choose an advisor that will support your growth in your science career. Will you be given opportunities to learn and practice successful grant writing, lab budgeting, equipment acquisition, public speaking and personnel management? If you are thinking about a non-academic path, will the PI support this path and help you pursue any career alternative?

HOW CAN I FIND OUT IF AN ADVISOR IS A GOOD MENTOR?

You have to ask a lot of questions. Personality and style conflicts are a common reason for scientists to change labs – do as much as you can to ensure a good fit in advance. When a lab is interviewing you, you are also interviewing the lab to find a good “fit” and to ensure the PI will be a good role model and teacher. Do you admire her management style? Does he have ethical behavior? Does the lab encourage diversity? Knowing your own priorities will help in determining a good fit.

Here are just a few suggestions for determining whether an advisor will be a good mentor:

- Spend time with the potential advisor and don't be shy about asking hard questions.
- Talk to as many lab members as possible. Try to get them in a setting out of the lab (coffee, lunch or beer) and in 1:1 conversations. This creates a level of familiarity and confidentiality to ensure more honest answers.
- Ask people who work in the labs next door for their opinions. They will often have good observations and be less inhibited in sharing concerns.
- Ask alumni of the lab. Most labs have websites listing alumni and it is easy to use publication records, university websites, [ResearchGate](#) and LinkedIn to find past lab members. Most scientists love to talk about their past lab experiences and will be willing to talk by phone. Don't use email to get information if you can help it.
- Observe as much as you can in person. Rotate in the lab, if possible. Attend a lab meeting. Spend some time hanging out with members of the lab. It is a warning sign if the PI does not welcome you to visit and spend time with everyone.

Additionally, if you are looking for more resources to help you choose a good mentor, make sure to check out the next chapter, “Choosing a Good Mentor for Scientists – Resources and Tips”. This list includes questions to ask your potential advisors and other related resources.

DON'T IGNORE WARNING SIGNS

If lab members, neighbors or alumni give you information about the PI that concerns you, don't just brush this away. Many scientists think, "Oh, but that won't happen to me – I am different." Unfortunately, a bad mentor can be bad news for anyone. Try to speak to them more than once to get a full picture and listen for hints at the same concerns from multiple people. Listen to what they say, and what they don't say. Scientists that are having a good experience will be quick to say so, but scientists that are struggling may hedge on their answers to your questions. Consider reading [Toxic Academic Mentors](#) by [@drmellivora](#), an excellent blog post about workplace bullying featured on the always interesting [Tenure, She Wrote](#) blog. Unfortunately, academic bullies are hard to stop – the best thing to do is not go into their labs in the first place.

THE GOOD NEWS

There are many excellent mentors out there. With some good pre-work you can find a lab that will deserve your hard work and an advisor that will be a lifelong partner in developing your career in science.

CHOOSING A GOOD MENTOR FOR SCIENTISTS RESOURCES AND TIPS

Originally published to blog.addgene.org by Joanne Kamens | Jan 16, 2014

For More Reading:

- **Addgene Blog:** *Choosing a Good Mentor for Scientists*, by Joanne Kamens
<http://blog.addgene.org/choosing-a-good-mentor-for-scientists>
- *Choosing a Lab and Applying Successfully*, compiled by Maya Schuldiner
<http://www.osti.gov/eprints/topicpages/documents/record/1021/1057687.html>
- *Choosing the Right Research Adviser*, by Richard M. Reis
<http://chronicle.com/article/Choosing-The-Right-Research/46388/?iframe=true&width=100%25&height=100%25>
- *How to Choose a Good Scientific Problem*, by Uri Alon
<http://download.cell.com/molecular-cell/pdf/PIIS1097276509006418.pdf?intermediate=true>
- *What I Wish I Knew Before I Entered Grad School*, by Girija Goyal
<http://dmsbulletin.hms.harvard.edu/?p=557>
- *How to Get the Mentoring You Want: A Guide for Graduate Students*, University of Michigan
<http://www.rackham.umich.edu/downloads/publications/mentoring.pdf>
- *How to Pick a Graduate Advisor*, by Ben A. Barres
<http://download.cell.com/neuron/pdf/PIIS0896627313009070.pdf?intermediate=true>
- *Professor/Grad Relationships: Maximizing the Mentoring Potential*
<http://gradresources.org/profgrad-relationships/>



SOME QUESTIONS TO ASK WHEN CONSIDERING A LAB

The questions are divided in suggested categories but can be used for anyone who might provide insight. You should ask many of these questions to both the PI and to the people in the lab. Make sure their answers match. Don't be afraid to bring a list of written questions and to take notes for some of your discussions, although this might not seem right if you are chatting over a beer.

Ask the PI

- How do you see as your role as an advisor?
- What makes a successful student/postdoc in the lab?
- How many students and post-docs have you had? What are they doing now?
- Is the lab successful in getting publications accepted?
- What is the funding/grant situation like in the lab?
- What are lab meetings like? Try to attend one if you can.
- How often will I meet 1:1 with you? Are these meetings scheduled or informal?
- Will there be “dotted line” relationships that I need to know about?
- Will I have my own project? Will I have help designing my project (s)?
- What is the process of writing a journal article like in this lab?

Ask the Lab

- What makes a successful student/postdoc in the lab?
- Are you happy here? Do you like the lab and the department?
- Do you like talking to the PI about science? About non-science topics?
- How big is the lab now? Has it grown or shrunk over time? Are there new people coming in at all times?
- Who will really be training me most of the time? The PI or a post-doc?
- What are 1:1 meetings with the PI like? Do meetings with the PI get cancelled a lot?
- Do you get a lot of personal attention from the PI? Is the PI accessible? Can you walk into the PIs office to ask a question (may or may not be important to you, but you should know what to expect)?
- Is the PI very hands-on, hands-off, or micromanaging?
- How does the PI react when you make suggestions? When things are not going well with your project?

Ask the Lab (cont.)

- Does the PI have connections to scientists in industry? Support the pursuit of varied career alternatives?
- Do you get to attend meetings and conferences?
- Do people work on their own schedule; is the culture of flexible? Do people have outside interests?
- Do lab members complete their stays successfully in reasonable time frames?
- What is the atmosphere in the lab? Do people play music or is it very quiet?
- Is there good collaboration on projects? Do lab members socialize outside the lab?

Ask Alumni

- Would you choose this lab again? Why or why not?
- What do you wish you had known before you joined the lab?
- What are you doing now? Was the PI helpful in getting you to this position?
- Are you still in touch with the PI?
- Was there anything about the PI that really drove you nuts?
- Did the PI help you develop your projects or expect you to do this on your own?
- Was the lab administration handled well or did you have to interrupt your research to address issues?
- Did the PI support your move out of the lab or make it hard for you to move on?
- Have lab alumni gone on to non-academia careers successfully? Did the lab head support this path?
- Does the PI have favorites or is everyone supported fairly?

Ask the Neighbors

- What do you think about the culture in that lab?
- Do the scientists there seem happy?
- Do you know the PI at all? Is the PI in that lab accessible and helpful?
- How do you think the PI is thought of in the department? In the field?

WILL YOU BE MY MENTOR? FINDING AND ASKING FOR MENTORING SUPPORT

Originally published to blog.addgene.org by Joanne Kamens | Feb 4, 2014

“Learning is not attained by chance, it must be sought for with ardor and attended to with diligence.”

- Abigail Adams, 1780

WHO SHOULD I BE LOOKING FOR?

Be on the lookout for friends or colleagues that have the training or skills you want to learn. Mentors can be senior to you or peers you admire. If you see someone who gives a great talk, ask them for advice on speaking. If you see someone with a great professional presence, approach them for advice on what makes them that way. Is there a senior person whose career path you are interested in following? Someone you admire for their insight and way of expressing it in meetings?

The more people you meet, the more potential mentors you will identify. Finding potential mentors is one of the many reasons to always be growing your network. If you don't feel that you are an expert networker (or if you just aren't doing it at all yet) watch my [webinar, “Not Networking 101-Building Relationships for Success”](#). Choose 1-2 tactics to try. One of my favorites is making the pledge to have lunch or coffee with someone I don't know very well at least twice a week. I have done this with people I work with and people from outside my work for almost 20 years. It is good to be a bit random because you never know which relationships will take off, or who your new contact will connect you to. Sometimes, it is not who you know but who knows about you.

I found some other great tips for finding mentors in this recent blog [5 Strategies for Finding Your Ideal Mentor](#). One of the best was to notify your network that you're on the hunt for career advice. Your family and friends know you well and might have good ideas for who you should connect with.

MENTORS AT HOME AND AWAY

We should all have a “posse” of advisors who can help us in different ways and in diverse areas. It is helpful to have mentors from your current organization but also important to build relationships outside your organization. The mentor in your own workplace is able to:

- Help you identify specific skills you need for your current position
- Understand your interpersonal challenges if they know some of the people you work with
- Give more informed feedback (for example, they may be able to hear you present or see your work product in action)
- Can help you learn the local “ropes” and become an insider faster



A mentor that works elsewhere is able to:

- Help identify the skills you will need to make a change
- Provide perspective on core values at another company/department
- Give more candid feedback and be able to discuss more confidential topics
- Broaden your network

TAKE ADVANTAGE OF FORMAL PROGRAMS

A formal mentoring program can be a great way to get started with mentoring. Read this Catalyst Report [“Making Mentoring Work”](#) to learn about what makes a good mentoring program. If your organization has a mentoring program, consider tapping into it and helping make it work by being an educated mentee. Other opportunities:

- Try virtual mentoring at [Mentornet.net](#). This is an online database of mentors you can tap for email discussions. It is also a great place to practice your mentoring skills. Online mentoring can work if both parties are diligent about replying and thinking about good questions and answers.
- Professional networking groups will often have mentoring programs. The Healthcare Businesswomen’s Association ([www.hbanet.net](#)) hosts an excellent group mentoring program in many of its chapters. Find out what other groups have going on locally.
- Your university probably has an alumni directory. Alumni who enter their information in these searchable databases are usually offering their contact information so you can tap them for advice. As a future alum, these are people you can “cold call” and ask for some of their time.
- There are many professional coaches who charge for their advice and time. Consider this option but be cautious and make sure to choose one that comes highly recommended from someone you trust. A good coach can make a big difference, if you can find one.
- Create your own peer mentoring circle. This type of program has many advantages and I am seeing a lot of success at universities around the country with groups who are piloting this. *Watch for my upcoming mentoring post in which I describe how to organize a successful peer mentoring circle.*

ASKING SOMEONE TO BE YOUR MENTOR

Mentoring is a “loaded” word. If you ask someone to be your mentor, it may sound like a big responsibility or commitment. Start by asking them to have coffee. This is much less threatening! If they say no, don’t worry about it. It is a compliment to ask someone to share their wisdom and they might just not have the time. Thank them anyway and move on.

If they say yes, be prepared with questions and topics to discuss. The mentee is responsible for leading the discussion and for being “coachable”. That means the mentee needs to be open to change and constructive suggestions and feedback. The best thing to do to make your mentor want to keep working with you is report back with progress. Tell them how their advice made a difference, helped you make a change for the good or resulted in a leap in your skills.

If a first meeting goes well, you can say, “This was really helpful, perhaps you wouldn’t mind doing it again next month?” Some mentoring relationships grow naturally out of friendships or work interactions. Watch for the people that are already teaching you and see if there are other ways they can help you grow. Mentoring relationships can last for an hour or for a year. Some click and some do not. These are all normal outcomes. If you have a broad range of mentors you will always have people you can turn to for help and advice.

FORM YOUR OWN PEER MENTORING GROUP: A HOW-TO GUIDE FOR SCIENTISTS

Originally published to blog.addgene.org by Joanne Kamens | Feb 18, 2014

I have been thinking a lot about Mentoring for over 10 years. Many successful scientists describe having a “posse” of mentors as one key to their success. But how do you find these elusive teachers, supporters and advisors? I tried to start a more formal mentoring program at my company, but there weren't enough senior people willing to step up and be matched with the many interested mentees. So I experimented with a group mentoring format where 1 mentor met with a group of mentees to get more “bang for the buck”.

While working on this project, I read the book “[Every Other Thursday: Stories and Strategies from Successful Women Scientists](#)” by Ellen Daniell. In “Every Other Thursday,” Daniell describes a group of 7 women scientists who met every other Thursday for 25 years. They helped one another navigate career changes and overcome barriers by sharing broader perspectives and holding one another accountable for their development plans. They all found the support of the group to be intrinsic to their success. Their stories made it clear to me that, executed correctly, the group mentoring format could work wonders.

I have now seen the formation of hundreds of mentoring groups through my work with the renowned [Healthcare Businesswomen’s Association \(HBA\) Boston Chapter](#) and the [Massachusetts Association for Women in Science \(AWIS\)](#) mentoring programs. The groups in these programs typically consist of 1-2 mentors and 3-5 mentees who meet together for an 8 month formal program. After the formal program ends, some 50% of these groups continue to meet regularly, providing ongoing support, advice and accountability for development goals. These programs also serve as a great first-time mentoring experience. They make mentoring less mysterious and train the participants in skills useful for future mentoring relationships.

ADVANTAGES OF THE GROUP MENTORING FORMAT

- Adding peer advice increases the diversity of input and perspectives
- Provides a good mechanism for accountability that makes mentoring effective
- Goal setting is easier with more perspectives contributing to the process
- Senior people (of which there are never enough, especially in underrepresented groups) reach multiple mentees efficiently
- Allows all group members to lead and learn at the same time
- Broadens the network of the participants
- Can be a lot of fun!



ADVANTAGES OF THE GROUP MENTORING FORMAT

In my travels speaking to grad students and postdocs I have started to talk to trainees more about peer mentoring. They want to find mentors to help them develop their skills and to hold them accountable for their development plans. However, they find it awkward to ask someone for the time commitment of a formal mentoring relationship or there aren't enough senior mentors available to go around. My advice has been to find 5 interested peers and form your own peer mentoring circle. In a Peer Mentoring Group all participants act as both mentors and mentees. Because the participants are at a similar development stage, they have a lot to learn from each other. Some have taken my advice and I recently heard from peer groups meeting at both the Fox Chase Cancer Center and Brandeis University.

FIVE EASY STEPS TO FORMING YOUR OWN PEER MENTORING GROUP

- 1. Find 5-8 colleagues that you think might be interested** and willing to commit to the group. The group can be one gender and career stage (e.g. all women, all men, all postdocs, all grad students) or mixed for one or both of these criteria. If you can, include people from different labs, departments or organizations as it brings a diversity of perspective. Sometimes it is helpful to find peers that share a similar direction or problem. For example, a group of people who are all interested in making a transition.
- 2. Schedule your first meeting** and get organized. Discuss your general areas of interest and what you want to cover during the year. Suggest that each person bring 3 topics and write them on a board to see which ones get the most hits. Commit to a meeting schedule and meet regularly no matter what, even if one person can't make it. One of the biggest group mentoring predictors of success is actually managing to get together. If you all work at the same place, a 1-2 hour lunch on a regular schedule might work. If not, perhaps a 3 hour breakfast once a month. All participants must commit to making the meetings a scheduling priority (and last minute lab emergencies are no excuse).

FIVE EASY STEPS TO FORMING YOUR OWN PEER MENTORING GROUP (CONT.)

- 3. Assign each meeting a leader** from the group in a rotation. The leader for that meeting is responsible for choosing a topic and leading the discussion. This is a chance to practice leadership and communication skills. The leader also provides materials such as pre-reads, videos or exercises to be completed in preparation for the meeting or to be read or watched during the meeting. Scientists do better with process, so don't just get together and chat. Have an agenda and get everyone ready for the discussion with resources. One of the most common questions I get is, "What are we going to talk about?" There are an infinite number of ideas on the internet, but [start by downloading my handy list of suggestions](#).
- 4. Get started. Have regular meetings.** Experiment with the process. Have each person write a [Development Plan](#). Set concrete goals with input from the group to make the plan better. Track your goal progress as a group. Practice your job talks for one another (trainees never get to present formally often enough) and give honest, critical feedback for improvement. Go to a science or career seminar together and meet to debrief on the topic (career) or presentation style (science). Have a potluck dinner. Invite guests from a lab, career or industry of interest – learn about their career paths and get their advice. Attend a local networking event together and help each other practice meeting people – compete for fastest to set up a coffee date or most cards collected. The next blog in this series will have more ideas on what to do once you are in a mentoring relationship.
- 5. Celebrate your successes** and support each other as you transition to the next stage in your careers! Stay in touch...this group will be the core of your network for years to come.

Need more help to form your own peer mentoring group? Check out the next chapter, "***Peer Mentor Groups for Scientists***", which includes more resources to help you form a mentoring group.

PEER MENTOR GROUPS FOR SCIENTISTS – RESOURCES AND TIPS

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Topic
Mentoring and Career Online Resources
Mentoring Resources and Tips
Leadership Tools
Leadership and Diversity
Refine Your Communication Skills
Perfecting Your Personal Brand
Career Development
Development Tools for Women



MENTORING AND CAREER ONLINE RESOURCES

General Resources

- www.CoachforGrowth.com
- **Center for Creative Leadership** www.ccl.org
- **Harvard Business Review** articles (may require fee) <http://hbr.org/>
- **The Mentoring Group:** www.mentoringgroup.com
- **Center for Coaching and Mentoring** www.coachingandmentoring.com
- **Stanford Executive Briefings DVD Programs** (consider watching one with your group as a trigger for discussion) www.executivebriefings.com
- **The Keirsey Temperament Sorter** www.advisorteam.com/user/ktsintro.asp
- **Thomas Kilmann Tool** to assess primary conflict resolution mode (misc. websites)
- **Myers-Briggs personality type assessments:** www.humanmetrics.com
- www.Mindtools.com
- **Soundview Executive Book Summaries:** <http://www.summary.com/>
 - No time to read the whole book—Let Soundview distill it into an article for your group to share and discuss

Scientists' Blogs

- blog.addgene.org
- bitesizebio.com
- scienceonline.com
- nature.com/naturejobs
- <http://www.benchfly.com/blog/career-development-resources/>
- thesiswhisperer.com
- tenureshewrote.wordpress.com
- **Study Hacks:** <http://calnewport.com/blog/>
- blogs.scientificamerican.com
- **50 popular science blogs:**
http://www.nature.com/news/2006/060703/multimedia/50_science_blogs.html

MENTORING RESOURCES AND TIPS

Mentoring and/or Sponsorship

- *Every Other Thursday: Stories and Strategies from Successful Women Scientists*, by Ellen Daniell
- *The Career Compass: Mentoring to Point You Toward Maximum Professional Growth*, by Hayley Norman
- *The Go-Giver*, by Bob Burg
- *Be Your Own Mentor: Strategies from Successful Women on the Secrets of Success*, by Sheila Wellington
- [Sponsors: A Key to Ongoing Career Advancement at the Senior Level](#), by Jo Miller, CEO of Women's Leadership Coaching Inc.

Mentoring: Choosing a Good Mentor for Scientists

- **Addgene Blog:** [Choosing a Good Mentor for Scientists](#), by Joanne Kamens (one of a series)
- [How to Pick a Graduate Advisor](#), by Ben A. Barres
- [Choosing a Lab and Applying Successfully](#), compiled by Maya Schuldiner
- [Choosing The Right Research Adviser](#), by Richard M. Reis
- [How To Choose a Good Scientific Problem](#), by Uri Alon
- [What I Wish I Knew Before I Entered Grad School](#), by Girija Goyal
- [How to Get the Mentoring You Want: A Guide for Graduate Students](#), University of Michigan
- [Professor/Grad Relationships: Maximizing the Mentoring Potential](#)

LEADERSHIP TOOLS

Leadership – What Does Authentic Leadership Look Like?

- *What Got You Here Won't Get You There: How Successful People Become Even More Successful*, by Marshall Goldsmith, with Mark Reiter
- *HBR's 10 Must Reads: On Leadership* (Articles on Leadership from the Harvard Business Review, can be purchased at HBR individually-table of contents)
 - What Makes a Leader (*this is a classic, must-read*)
 - What Leaders Really Do
 - The Work of Leadership
 - Why Should Anyone Be Led by You?
 - Crucibles of Leadership
 - Level 5 Leadership: The Triumph of Humility and Fierce Resolve
 - Seven Transformations of Leadership
 - Discovering Your Authentic Leadership
 - In Praise of the Incomplete Leader
- *Seven Habits of Highly Effective People*, by Stephen Covey
- *5 Steps to Professional Presence*, by Susan Bixler and Lisa Scherrer Dugan
- Recommended--*Women and the Labyrinth of Leadership*, by Alice Eagly and Linda Carli Harvard Business Review (HBR) reprint #R0709C

Situational Leadership / Role Playing

- [How Good Are Your Leadership Skills?](#) [Mindtools.com](#) Quiz Activity
- [Role play ideas, some about leadership:](#)
- *Coaching for Leadership: [The Practice of Leadership Coaching from the World's Greatest Coaches, 2ed](#)*, Center for Creative Leadership
- [The differences between managers and leaders](#) by Ilya Pozin
- [Top 5 Leadership Blind Spots](#), by Alan Sockwell and Brad Westveld

LEADERSHIP AND DIVERSITY

General Resources

- [Fire, Snowball, Mask, Movie: How Leaders Spark and Sustain Change](#), by Peter Fuda and Richard Badham (*online version has interesting video content to watch with your group*)
- [Leadership Insights for Engineers, Scientists and Computer Professionals as Leaders](#), by K Graham
- [Why Women Should Lead Boldly](#)
- [Women in Power: Yes, They are Different From Men](#), by Mark Koba
- Women and the Labyrinth of Leadership, by Alice Eagly and Linda Carli, Harvard Business Review reprint #R0709C
- [Changing Companies' Minds About Women](#), by Joanna Barsh and Lareina Yee
- Women's underrepresentation in upper management: New insights on a persistent problem, by Jenny M. Hoobler, Grace Lemmon, Sandy J. Wayne *Organizational Dynamics (2011) 40, 151–156*

REFINE YOUR COMMUNICATION SKILLS

Group Dynamics and Engaged Listening – A Key to Good Communication and Conversations

- *The Lost Art of Listening, Second Edition: How Learning to Listen Can Improve Relationships* by Michael P. Nichols PhD
- [Improving group dynamics](#)
- [Listening Skills](#)
- [Interpersonal Communication Skills – 5 TIPS](#)
- **SHORT VIDEO:** [Coaching Skills-Engaged Listening](#)
- [The Hard Science of Teamwork](#)
- *The Wisdom of Teams: Creating the High-Performance Organization*, by Jon Katzenbach and Douglas Smith

Negotiation Skills

- **Book suggestion:** (a classic) *Ask for It* by Babcock and Laschever
- *A Woman's Guide to Successful Negotiating: How to convince, Collaborate & Create Your Own Way to Agreement*, by Lee E. Miller & Jessica Miller
- *Women Don't Ask: Negotiation and the Gender Divide*, by Linda Babcock and Sara Laschever
- *No: The Only Negotiating System You Need for Work and Home*, by Jim Camp

How to Have Difficult Conversations

- **Activity:** What is your conflict management style? Take the Thomas Kilmann conflict style quiz and discuss. Free version and more about interpreting this test are available online. Here is one link that might work: <http://www.bluffton.edu/courses/bcomp/301sup/thomas.htm>
- *Talking from 9 to 5: Women and Men at Work* by Deborah Tannen EXCELLENT
- *Crucial Conversations*, by Kerry Patterson, Joseph Grenny, Ron McMillan, Al Switzler
- *Difficult Conversations: How to Discuss What Matters Most*, by Stone, Patton and Heen
- **Activity:** Role playing-preparing for difficult conversations

PERFECTING YOUR PERSONAL BRAND

Personal Branding

- **Classic article at Harvard Business Review** “What’s Your Story?” by H. Ibarra and K. Lineback
- **Book:** *What Got You Here Won’t Get You There*, by Marshall Goldsmith
- **Exercises to explore personal branding**
 - <http://www.coba.unr.edu/faculty/jstrauss/personal.htm>
 - **Recommended for groups:** <http://www.delni.gov.uk/personal-branding-exercise.pdf>
- [Tips for Managing Your Personal Brand at Work](#)
- [How Credible are You?](#)
- [Caregiver or Hero—Which One Are You? The Archetypal Roles of Women in Science and Academia](#)
- [Check the Drama at the Door](#)
- [What Makes You Unique](#)
- [You, The Brand](#)

Visibility

- [5 ways to beat the self-promotion paradox](#), by Jacey Fortin
- *How to Toot Your Own Horn Without Blowing It*, by Peggy Klaus
- *How to Say it for Women: Communicating with Confidence and Power Using the Language of Success*, by Phyllis Mindell

Building Confidence to Meet Competencies

- **Great Discussion Starter:** ["The trouble with bright girls"](#)
- ["Make yourself an Expert"](#)
- [No more Ms Perfect](#)
- [How I Cured my Imposter Syndrome](#)
- **TED Talk:** [Your Body Language Shapes Who You Are](#) – by Amy Cuddy

CAREER DEVELOPMENT

Lattice vs. Ladder Career Paths

- [Up the Ladder, How Dated How linear](#)
- [CAREER PATHS: Mapping, Ladders and Lattices](#)
- [Mass Career Customization Building the Corporate Lattice](#)

Transitioning to Industry/Soft Skill Development – What are Soft Skills?

- *The Hard Truth about Soft Skills*, by Peggy Klaus
- Vitae Research development framework for careers outside academia
http://www.vitae.ac.uk/CMS/files/upload/Vitae-Employability-Lens_May12.pdf
- From academic solos to industrial symphonies (Nature Biotech article) Gwen Acton, Alicia Gómez-Yafal & Emily Walsh
- There and Back Again (Nature Bioentrepreneur article) John Boyle
- A PhD Is Not Enough! A Guide to Survival in Science Peter J. Feibelman
- A Fair Deal for PhD Students and Postdocs (eLife article 2013) Henry Bourne
- So What Are You Going to Do With That?: Finding Careers Outside Academia Susan Basalla & Maggie Debelius

Priority Setting

- *Breaking the Mold: Redesigning Work for Productive and Satisfying Lives*, by Lotte Bailyn
- *The 3 Big Questions for a Frantic Family*, by Patrick Lencioni
- *Sleeping with Your Smartphone: How to Break the 24/7 Habit & Change the Way You Work*, by Leslie A. Perlow

Emotional Intelligence

- *Working with Emotional Intelligence*, by Daniel Goleman
- [Emotional Intelligence \(EI, EQ\) tests](#)
- *Working Relationships: Using Emotional Intelligence to Enhance Your Effectiveness with Others*, Bob Wall

CAREER DEVELOPMENT (CONT.)

Building Confidence to Meet Competencies

- **Great Discussion Starter:** ["The trouble with bright girls"](#)
- ["Make yourself an Expert"](#)
- [No more Ms Perfect](#)
- [How I Cured my Imposter Syndrome](#)
- **TED Talk:** [Your Body Language Shapes Who You Are](#) – by Amy Cuddy

Identifying Strengths

- Science Careers myIDP – Independent Development Plan <http://myidp.sciencecareers.org/>
- *Strengthsfinder 2.0*, by Tom Rath (book and online activity if you buy your own copy)
- *Strengths-Based Leadership*, by Tom Rath and Barry Conchie
- *Now, Discover Your Strengths*, by Marcus Buckingham and Donald Clifton

DEVELOPMENT TOOLS FOR WOMEN

Women's Development

- [Is Executive Presence Sexist?](#)
- [The Problem with the Female Boss Problem](#)
- *How Remarkable Women Lead: The Breakthrough Model for Work and Life*, by Joanna Barsh, Susie Cranston, and Geoffrey Lewis
- *It's Not a Glass Ceiling, It's a Sticky Floor: Free Yourself from the Hidden Behaviors Sabotaging Your Career Success*, by Rebecca Shambaugh
- *Nice Girls Don't Get the Corner Office: 101 Unconscious Mistakes Women Make That Sabotage Their Careers*, by Lois P. Frankel
- *Going to the Top: the New Road Map for Success from America's Leading Women Executives*, by Carol Gallagher with Susan Golant
- *Hardball for Women: Winning at the Game of Business*, by Pat Heim
- *Standing at the Crossroads: Next Steps for High-Achieving Women*, by Patricia Ohlott and Marian Ruderman
- *Success on our Own Terms: Tales of Extraordinary, Ordinary Business Women*, by Virginia O'Brien
- *Drive: The Surprising Truth About What Motivates Us*, by Daniel H. Pink
- *Pitch Like a Girl: How a Woman Can Be Herself and Still Succeed*, by Ronna Lichtenberg
- *Manning Up* by Kay Hymowitz

ADD A LITTLE FORMALITY

Originally published to blog.addgene.org by Joanne Kamens | March 6, 2014

Just getting together and chatting with another person about their career path is a great start to a mentoring relationship, but if you don't take this past the chatting stage you will rarely make any change in your skill sets or activate the helpful accountability that is one major advantage of working with a mentor. The responsibility of arranging meetings and setting the direction in a mentoring relationship falls on the shoulders of the Mentee. A Mentor will be more effective if the Mentee has done the self-reflection necessary to identify areas that need work or growth. Here are some ideas for making your meetings productive:

- Discuss logistics if appropriate: How often will you meet? How does the Mentor prefer to communicate between meetings (email, phone, etc.)?
- Make agendas for your meetings, take informal minutes on what was covered and learned, especially noting action items that are identified.
- Keep a journal to record topics, plans, findings, and progress over the course of an ongoing mentoring relationship (in a book or online).
- Mentee: Make a list of topics/skills you are interested in exploring. Mentor: Make a list of topics/skills in which you have expertise or knowledge. Where do these intersect?
- Work with resources: Choose books or articles on pertinent topics to read before your meetings and discuss these in person. See the extensive resource list in Chapter 6 of this eBook.
- Use an activity to start a discussion. The Forced Choice Analysis (see Chapter 8 of this eBook) is a fun example and you can find it in our Mentoring for Scientists Guide. You can use it to clarify and discuss values. The activity is just the start – it is the discussion after that will lead to learning.

FORCED CHOICE ANALYSIS

Originally published to blog.addgene.org by Joanne Kamens | March 6, 2014

Forced Choice Analysis is a prioritizing tool in which comparison is made with each item on the list to every other item on the list—forcing a ranking.

To see how it works, make a list of 8-10 things that you must do today.

- Look at the first two things on your list and ask yourself which is more important. Then made a mark next to the one you chose.
- Then look at the first and third on the list and ask the same question and place a mark next to your answer. Keep going, comparing the first on the list with everything else on the list, one at a time, until you've reached the bottom of the list.
- Now go back to the second thing on the list and ask yourself the same question comparing it to the third, then fourth etc. Then go to the third and do the same and keep comparing pairwise until you have compared each set of items.
- Count up the slash marks and you now know which are the top priorities of what you need to do today.
- Now, think about doing it again, but instead of giving a mark to the one that was more IMPORTANT, give a mark to the one that was MORE FUN. This activity will help you think about what parts of your job you really like and what you want to do more of in any future career.

Force Choice Tool

Things I need to do today	Slash marks	#

IDENTIFY YOUR VALUES WITH FORCED CHOICE ANALYSIS

Values guide our day-to-day choices. We can pursue only a finite number of values simultaneously. Some change and evolve as we mature, while others remain constant throughout our lives.

When our top values are aligned with our day to day actions, we feel in sync, productive and motivated, and we are less likely to experience stress, inner conflict, and burnout.

When our values match our organization’s values, we feel engaged, energized, and committed.

When our values are aligned with our job, we benefit in the same way.

It is helpful to look at our top personal and professional values so we can understand how they complement and are aligned with those of our organization and our work.

Because our values sometimes exist below our level of awareness, it is important to bring them to a conscious level. So in doing this exercise you will:

- Bring your most important values into your consciousness, and
- Clarify your top ten values.

Follow this process to identify your key values:

1. Please read the enclosed values list. It is not inclusive so feel free to add to it.
2. Now check or circle 10 values that are the most important to you now. Your first reaction is probably your truest response.
3. When complete, list them on the enclosed Top Ten Values table.

Suggested Values List

What is really important to you in your life right now, personally and professionally?

Accountability	Environment	Relaxed environment
Education	Excellence	Service/Helping Others
Self-reliance	Integrity	Marketability
Work/Family Balance	Flextime	Autonomy
Being the best	Formality	Low Pressure
Status	Financial security	Making a Difference
Collaboration	Power and Influence	High Pressure
Competition	Respect	Creativity
Control	Harmonious Relationships	Independence
Intellectual Challenge	Pride in Work	Ethical Standards
Decision Making	Initiative	Being treated fairly
Learning	Innovation	Competence

IDENTIFY YOUR VALUES WITH FORCED CHOICE ANALYSIS (CONT.)

Force Choice Analysis Identifying Your Top Values Tool

List your top 10 values and use Forced Choice Analysis to prioritize

My Top 10 Values	Slash marks	#

Forced Choice Analysis Identifying Your Top Interests Tool

List your top interests and use Forced Choice Analysis to Prioritize

My Top 10 Interests	Slash marks	#

SET GOALS WITH A MENTOR

THE SECRET OF ACCOUNTABILITY

Originally published to blog.addgene.org by Joanne Kamens | March 6, 2014

To make a mentoring relationship really productive, the most important step you can take is to set goals to work on together and track progress at every meeting. It can take many mentoring meetings to hone the goals and to make them “SMART.” SMART goals are Specific, Measurable, Attainable, Relevant, and Time-bound. It is a good idea to take larger goals (e.g. Figure out what I want to do after I get my PhD) and break them down into smaller, actionable steps (e.g. Meet 10 PhDs with interesting careers, find a summer internship, etc.). It is helpful to work together on setting SMART goals using a Development Plan template. A Development Plan or mentoring journal will help a Mentee track progress, adjust expectations, and record milestones in reaching goals. The more time and thought you put into setting goals, the more progress you will make in reaching them. Of course, you won’t reach all the goals you set, but the process of working on them is where growth happens.

Mentors bring more than their knowledge and teaching to help a Mentee reach goals. One of the most important contributions made by a Mentor is to help the Mentee feel a sense of accountability to complete action items and make progress. To illustrate this point, consider that I try to exercise every morning, but the temptation to skip the gym is strong. There are a few women that I see at the gym every day. If I skip, I get a bunch of text messages asking me, “What happened? Where are you?” My gym posse holds me accountable for attending and sometimes it is only the knowledge that they will be watching out for me that gets me out of bed and into my running shoes.

BE A MENTOR TO BECOME A BETTER MENTEE AND FINAL TIPS FOR SUCCESS

Originally published to blog.addgene.org by Joanne Kamens | March 6, 2014

One of the best ways to become a productive Mentee is to become a Mentor yourself. If you think you have nothing to give, think again. Everyone has knowledge to impart. An undergraduate can mentor a high school student, a graduate student can mentor an undergraduate, a postdoc can mentor a graduate student – you get the idea. There are many advantages to being a Mentor:

- Learn other perspectives
- Develop coaching skills
- Encourage your creative thinking
- Enhance leadership skills
- Support inclusion, diversity, and open communication
- Feel valued by giving back

FINAL TIPS FOR SUCCESS

Make mentoring meetings a priority. Schedule meetings or calls regularly and don't cancel, so that you drive progress with regular accountability checks. Focus on implementation of your goals and respect the time your Mentor is giving by following up on plans. Make a commitment to put time and energy into your mentoring relationships. You will only reap rewards if you put in the effort.