

# Sponsoring, Mentoring, and/or Guiding Cultural Diverse Young Scientists and Engineers

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Partnership Meeting  
February 7th

# Why am I here today?

- I was part of WIST Steering Committee and was asked to write a focal point article about mentoring young scientists and engineers.  
<https://blogs.inside.anl.gov/focalpoint/2011/01/24/diversity-mentoring/>
- I strongly believe in mentoring. I have been on both sides of the relationship and have equally benefited.



Dr. Giselle Sandi (Chemistry Division), with David Bourdonnay, a student from Houston Community College in Texas, working on a project that focuses on the synthesis and characterization of novel materials used in rechargeable batteries.



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# Why do I believe in mentoring?

- As I was vacationing this past summer with my family on the beautiful beaches of Costa Rica, I heard a familiar voice coming from behind the palm trees. I turned around and saw Professor Rodriguez, a good friend of mine from the University of Costa Rica. It was a joy seeing her after so many years.
- I worked in her analytical chemistry laboratory and was her teaching assistant in several classes. **Most importantly, she was someone whom I could respect and trust, a role model.** She helped me to become an instructor of analytical chemistry and soon after put me in charge of the coordination of all the analytical chemistry laboratories of the chemistry department, managing about 25 people and I was only 23 years old.
- **She trusted me, offered guidance when asked, and always respected my independence.** She is one of many mentors I have had the privilege to know throughout my professional and personal life.



# Who is a mentor?

## A mentor is:

- Someone who takes a special interest in helping another person develops into a successful professional.
- A teacher and sponsor who enhances and facilitates skills and intellectual development.
- A host and guide, who welcomes an individual into a new occupational and social world.
- One who acquaints the student with the values, customs, resources and role players of the world.
- An exemplar, providing role-modeling behavior.



**An adviser or supervisor might or might not be a mentor, depending on the quality of the relationship**

# Effective Mentoring

- An effective mentoring relationship is characterized by
  - **mutual respect**
  - **trust**
  - **understanding**
  - **empathy**
- Good mentors are able to share life experiences and wisdom, as well as technical expertise.
- They are good listeners, good observers, and good problem-solvers.
- They make an effort to know, accept, and respect the goals and interests of the mentee.

**The relationship must be based on a common goal: to advance the educational and personal growth of the mentee**

# Who is responsible for the relationship to work? Both!

## Mentor

- M** **Monitors** mentee's progress throughout the entire relationship.
- E** **Encourages** the mentee to engage in the research plan that has a clear set of expectations and high standards.
- N** **Nurtures** relationship with mentee by providing guidance and direction.
- T** **Teaches** professionalism, ethics, and problem solving.
- O** **Offers "Obi-wanisms"**<sup>1</sup>, which includes sage advice, praise and positive reinforcement, patience, setting of high standards, role model to emulate.  
<sup>1</sup>"Obi-wanism" is a slang term for a particularly wise saying. Defined by Merriam-Webster online: Merriam-Webster.com.
- R** **Respects** mentee's priorities (personal and professional), time, wants/needs, and ideas.
- S** **Shares** experiences by offering suggestions for success and guiding mentee.
- H** **Honors** the mentee by using time wisely and creating lines of open communication.
- I** **Instills** integrity in mentee.
- P** **Promotes** professional development including career and life skills.

# Who is responsible for the relationship to work? Both!

## Mentee

- M** **Makes** it happen by developing a plan of action with mentor's advice and accomplishing the plan.
- E** **Engages** actively in the research plan with the support of the mentor.
- N** **Nurtures** relationship with mentor by accepting guidance objectively.
- T** **Trusts** mentor's judgment and tolerates constructive criticism.
- O** **Open** to receiving the advice, praise, standards, and examples offered by the mentor.
- R** **Respects** mentor's advice, constructive criticism, time, experience.
- S** **Seeks** advice by identifying challenges and articulating needs.
- H** **Honors** the mentee by using time wisely and creating lines of open communication.
- I** **Instills** integrity in himself/herself.
- P** **Progresses** by practicing what he/she has learned providing feedback to mentor and persevering in personal goals.

# The Need for Postdoctoral Mentoring

- **Common misconception:**
  - Postdocs require little or no mentoring because they have more experience than undergraduate or graduate students and they should know what they want and how to get it.
- **Reality:**
  - Postdocs, who might have scant supervision, ill-defined goals, and poor access to a community of peers, tend to incur greater risks of isolation and stagnation than graduate students.

**A good mentoring relationship is crucial to the success of postdocs as they develop original research ideas and move toward greater independence and maturity**

# Mentor's Roles

## ▪ The Mentor as Career Adviser

- Over the last 2 decades, the proportion of PhDs entering traditional academic research and teaching has dropped from over 60% to less than 40%; thus, most new PhDs today find work outside academia.
- The mentor should be prepared to discuss realist career options with the mentee and emphasize the need to be flexible.
- In many cases, the most useful function of mentors is to introduce postdoctoral student to their own contacts, who might be able to offer or point to desirable positions.

# Mentor's Roles

- **The Mentor as Skills Consultant**

- Advice and guide the mentee to acquire non-academic skills such as administration, management, planning, and budgeting; people skills, leadership, teamwork, and creative thinking.

- **The Mentor as Role Model**

- The image of you as a person will last longer than your words or professional achievements.
- The power and value of the image will depend on the efforts you have made in building honesty, trust, and good communication throughout your mentoring relationship.

# Argonne's Postdocs Lab-wide Mentoring Program: Current Status

- In October of 2010, Lab Director Eric Isaacs announced the implementation of a Lab-wide mentoring program for postdocs.
- Guidelines were written based on the input received from staff, postdocs, and management.  
[http://www.dep.anl.gov/Postdocs/resources/postdoc\\_mentoring.htm](http://www.dep.anl.gov/Postdocs/resources/postdoc_mentoring.htm)
- Each programmatic division was to provide to DEP an implementation plan and to appoint a coordinator who oversees the program internally. I am the coordinator for CSE.
- Main players in this initiative were the Postdoctoral Society of Argonne, DEP, and Laboratory Management (Office of the Director).

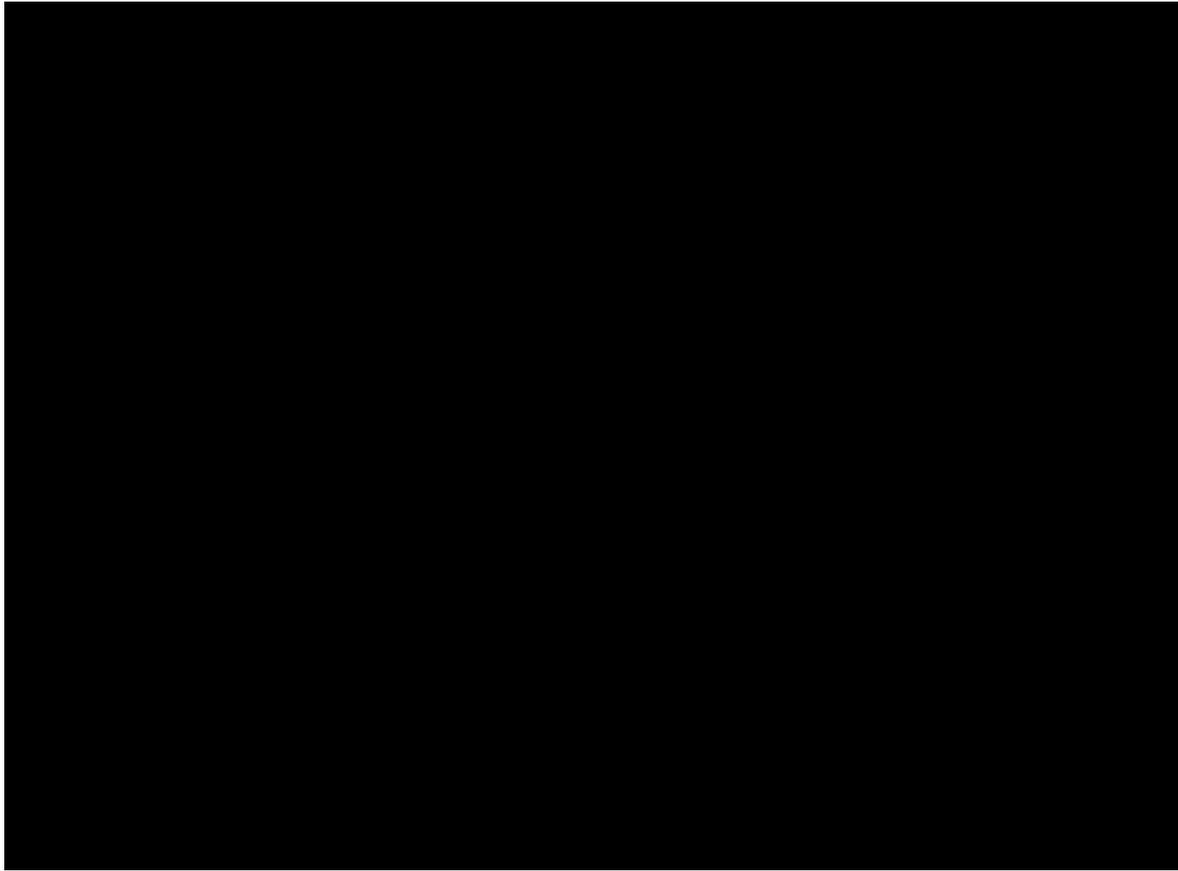
# What do we need to focus to succeed?

- Each Division needs to define clear goals for the program, based on their own culture and experiences.
- Who will follow up? Have Divisions already appointed coordinators?
- Will some training be necessary? Workshop? Online?
- Defining expectations from the very beginning is a must, for both mentors and mentees.
- **Be very clear that this program is not an avenue for conflict resolution.**

# Be aware of situations like that



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# Other Aspects of the Program to Think About

- The role of management should be defined:
  - **The most direct way for institutions to improve the quality of mentoring is to reward good mentoring.** How are Divisions going to reward mentors (and coordinators)?
  - How are we going to quantify “success”?
- I offer my humble opinion:
  - All appointed Division Coordinators could get together soon to discuss how is the program proceeding in their division and what are their immediate plans. This meeting will provide an opportunity to get to know each other, compare notes, and brainstorm. Moving forward, they can meet twice a year.
  - Create an institutional award for distinguished mentors, similar to a Pacesetter award. Nominations can come from postdocs or management.
  - Incorporate mentoring and advising effectiveness in the performance appraisals

# How are we going to quantify “success”?

- [Lab postdoc evaluation form \(ANL-699\)](#).
  - **Potential issue: Forms are filled out just by postdoc and mentor and supervisor just signed.**
- Track the progress of former postdocs to provide information about the career experiences of “graduates”
  - Create alumni databases. Each Division office should maintain the “whereabouts” of their alumni and share this information with DEP and Lab Management.
  - Invite them to speak during the postdoctoral research symposium (I launched it in 2008)

# Gender and Cultural Issues: We must be aware of it

- Argonne, like many other National Labs, has a professional and cultural diverse workforce.
- Mentors should aim to understand cultural and/or gender differences and work with the mentee to overcome potential barriers. If necessary, mentors should connect the mentee with someone who can provide more appropriate guidance.
- The Association for Women in Science (AWIS) has just released a new book on mentoring: ***Getting the Most out of Your Mentoring Relationships: A Handbook for Women in STEM***, by Donna J. Dean, PhD



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# Good Resource for Postdocs and Postdoc Mentoring

- **National Postdoctoral Association**

<http://www.nationalpostdoc.org/home>

- **Argonne is a sustainable member and anyone with an Argonne's email account can become a member at no additional cost and access all their toolkits and resources**