How to Survive and Thrive in a Research Group

Rebecca Anderson, Ph.D.
UCSC Undergraduate Research Coordinator
Website: ugr.ucsc.edu
E-mail: rlanders@ucsc.edu

Fundamental Questions About Research Groups (RG)

- What are they?
- Who can be in them?
- Where are they found?
- What can they do to help me?
- How can I succeed in one?

What is a Research Group?

- Informal group of people investigating topic(s) or theme(s)
- Led by Professor(s)/Principal Investigator(s) (PI)

Who can be in a Research Group?

- Leader(s): Professor(s) or PI(s)
- Research Scientists, often with Ph.D.’s
  - Including industry or international visitors
- Post-doctoral scholars/fellows (with Ph.D.’s)
- Graduate students (earning a Masters or Ph.D.)
- Staff and technicians (various degrees)
- Undergraduates
  - Can be supervised by any of the above
  - Can be technicians and/or do independent projects or senior theses

The Importance of Titles

Research Groups are Hierarchical

“Professional titles are not simply for ‘show.’ A title tells you a great deal of information concerning the level of experience, professional reputation, and the responsibilities that an individual has within an organization.”

(WebGURU, http://www.webguru.neu.edu/lab/research-team)
The Professor/PI can be:

- Mentor
- Career Adviser
- Monarch
- Dictator
- President
- Treasurer
- Coach
- Cheerleader
- Advocate
- Therapist
- Friend
- Foe

Mentoring Style

- Typical manner that a mentor interacts with group member
- Don’t take it personally!
- Mentoring Style Activity
  Adapted from Entering Research, 2010

Where are Research Groups?

In addition to academic institutions:

- Non-profits
- Government
- Industry

Turn to the person next to you and come up with an example for each category.

Research Groups at…

Non-Profit Organizations

- Monterey Bay Aquarium Research Institute
- Nature Conservancy
- Howard Hughes Medical Foundation

Industry Research Groups

- Biomedical
  - Genentech
  - Santa Cruz Biotech
- Information Technology
  - IBM Labs
- Product Development
  - Cosmetics
  - Semiconductors
  - Food
- Automotive

Research Groups at…

Government Agencies

- National Science Foundation
- National Institutes of Health
- NASA
- Center for Disease Control

Industry Research Groups

- Biomedical
  - Genentech
  - Santa Cruz Biotech
- Information Technology
  - IBM Labs
- Product Development
  - Cosmetics
  - Semiconductors
  - Food
- Automotive
How do Groups Differ?

- Structure
  - Language spoken
  - Number of people
  - Number/range of topics studied
  - Techniques and procedures
  - Social and professional interactions
- External influences
  - Culture of department, institution, or company
  - Funding availability
  - Status in academic/industry community

What can Research Groups do?

**Professionally**
- Meet weekly to provide feedback to members on projects or presentations (group meeting)
- Read and discuss current scientific literature
- Senior members train and mentor junior members
- Collaborate on
  - Projects
  - Grant applications
  - Scientific papers
- Past members can act as an informal career network

**Socially**
- Form a social group
- Have group related events, like dinners or parties
- Explain the group’s culture
- Explain how to manage the personality quirks of members
- Provide emotional support

Sticky Situations

**Situation 1:** Someone in your research group gives you a new methodology that he or she says is better than the one given to you by your mentor. What do you do?
Adapted from Entering Research, 2010

**Situation 2:** Your mentor expects you to know everything and you are in over your head. The other students in the group are no help. What do you do?
Adapted from Entering Research, 2010

How can I Succeed in a Research Group?

- Be responsible
- Reply to emails promptly
- Be punctual
- Listen to instructions, take notes, and follow directions
- ASK QUESTIONS if you don’t understand
How can I Succeed in a Research Group? (cont.)

- Understand the group’s culture
- The PI’s mentoring style
- Who each person is and his/her responsibilities
- Who you report to
- Respect the group’s hierarchy

More Resources

- Informational
  - WebGURU- Guide to Research for Undergraduates
  - Pathways to Science
- Amusing
  - Piled Higher and Deeper (Ph.D.) comics
  - Saturday Morning Breakfast Cereal

For More Information:

- Visit UCSC Undergraduate Research Opportunities website, ugr.ucsc.edu
- Information on finding and joining a research group at http://ugr.ucsc.edu/join_a_lab
- Join the list-serve on the website

Please fill out the evaluation and leave it up front.

Thanks!