

## Great advice for beginning scientists, in 160 characters or less

Megan Frederickson  
Associate Professor, Ecology & Evolutionary Biology  
University of Toronto

1. *If something bugs you about a fact or theory, it doesn't necessarily mean you don't understand it - it could be that the fact or theory is wrong.*
2. *In science experiments, replication is crucial but also tedious.*
3. *The stereotype of a scientist in a white lab coat holding a pipette is misleading. Science can be done by anyone, anywhere.*

Jay Rosenheim  
Professor, UC Davis, Entomology and Nematology  
UC Davis, Entomology and Nematology

1. *Put aside the fancy experiments, and spend some time simply observing your study organisms.*
2. *Choose your research question carefully.*
3. *Don't expect any initial experiment to work. Instead, see it as an opportunity to learn from your mistakes. It will work the 2nd or 3rd try.*

Katharina Ullmann  
Crop Pollination Specialist  
Xerces Society for Invertebrate Conservation

1. *Remember that there are many different types of careers in the sciences - academia, non-profits, industry, etc.*
2. *Talk to your professors and TAs to seek out experience doing research.*
3. *Make time to explore your different interests - both inside and outside of the sciences.*

Paul Ginsberg  
Lab technician - Turelli lab  
UC Davis, Evolution and Ecology

1. *Starting in a lab can be intimidating. Asking questions is the best way to keep yourself from getting overwhelmed, and to learn from people in your lab.*
2. *Keep your ultimate goals in mind. It is important to maintain perspective and remember how your work contributes to your research goals.*
3. *Seek out help. You will run into problems when you try new experiments. Oftentimes, someone around you has had the same problem and can help.*

Marjorie Weber

Center for Population Biology Postdoctoral Fellow (soon to be faculty at Michigan State University)

U.C. Davis (soon to be MSU)

1. *It is not about being smart or working all the time. Success in science is about persistence, creativity, and loving what you do.*
2. *Don't fight the rollercoaster: there will be good times and bad times. Don't try to push away the bad times. It is all part of the ride.*
3. *Prioritize fun everyday. Science (like most careers) is a pie eating contest where the prize for winning is more pie. Enjoy the pie.*

Maureen Stanton

Vice Provost - Academic Affairs

Professor- Evolution & Ecology, UC Davis

1. *Are you suited to be a scientist? If you are drawn to the unknown and excited rather than intimidated by all of the things humanity doesn't understand, you ARE.*
2. *As you proceed in research, don't be afraid to expose the soft underbelly of your ideas and interpretations early and often. Get feedback!*

Rick Karban

Professor

UCD

1. *This is a career that you'll love. Seek out supportive people. Don't lose track of yourself, your professional goals, and especially your personal goals.*
2. *Be willing to fail, say dumb things. Research shows this generates the best ideas. Ignore the premium others place on sophistication.*
3. *Find things that are fun and exciting. When you do, you'll work harder and enjoy what you're doing.*