For most of us humanoids, “a life” is a melange of friendship, love, loyalty, consideration, compromise, kids, a profession where you excel and find joy, hobbies, reading books, exercise, laughter, and eight hours of sleep a night. Can you find it in the life sciences? I think so.

The pathway begins with graduate school. Choose a research advisor who’s passionate about science, not too distracted by companies or administration, with a lab that’s happy, hard-working and productive, where folks get along well, and where graduates have gone on to “have a life.” There, choose a research project with an early “decision point” (not when it’s done, but when you know whether it’ll work), of general interest in biology, and at the heart of the lab’s direction. Develop some novel assets as a scientist: learn to enjoy criticism when offered in a positive spirit; the critic is helping you to hone your ideas, and this can actually be an avenue to developing friendships. Read with “an attitude,” not only critical but also appreciative. For each article, ask yourself what different direction you’d take in your lab. From this reading, from gazing wide-eyed at histology texts, and through late night bull sessions with friends, build a fantasy “stable” of hobby-horse ideas, and take ‘em out for frequent rides! Find a friend to be your partner in this fantasy game—it’s the groundwork for realities to follow.

Should you stick with it? Well, do you love bench science, teaching, and/or reading? If not, switch!
What should you accomplish in grad school? Publish quality papers telling a coherent story. Learn to present science clearly, for audiences at different levels, with confidence and charm, orally and in writing.

Your 20’s, strive to find your passions, personal and professional. If you do love it, work hard in the lab (I like 6 a.m. to 6 p.m., five days a week; arrive knowing the experiments you’ll do that day), but evenings and weekends are for dinner, family, friends, reading (science and novels), music, and hikes. What should you accomplish in grad school? Publish quality papers telling a coherent story. Learn to present science clearly, for audiences at different levels, with confidence and charm, orally and in writing. All the while, build the stable of hobby-horse ideas for your own future research.

Of organism, scientific problem, and technical approach (genetics, enzymology, structural biology, or informatics), keep one but change two between grad school and postdocship. Change universities! Seek a productive lab doing exciting research where the postdocs go on to jobs you’d like. Ask your graduate department faculty about the personality and reputation of prospective postdoc advisors. Spend a few hours reading recent lab papers, write a serious and warm letter with a few new project ideas, include your CV and publications, and apply to one lab only at a time (and, tell this to the lab chief). During postdocship, develop a creative but practical plan for your own lab, built on the technical approaches you’ve mastered as a student and fellow but embarking into a new area, chosen from your “stable” of exciting ideas. For example, during graduate studies of the enzymology of yeast membrane trafficking, you may dream of understanding how Sec proteins work in neuronal networks. Your postdoctoral studies of worm apoptosis then teach you worm genetics and physiology, and you establish your own lab to unravel the connections and functions of the ~300 worm neurons, pioneering in worm enzymology, cell culture, and other frontier areas.

How to interview, for postdocships and for that dream job? Read a paper, and have questions and ideas, for each scientist you’ll meet during the interview. Be confident but not arrogant; give a dynamite talk.

Postdocing. It’s for everyone—your salary almost doubles, you sample another region, or country and culture, and no “hoops” of tests to jump through! Think about it early (by the end of year three of grad school), and plan to complement, not extend, your graduate training. Of organism, scientific problem, and technical approach (genetics, enzymology, structural biology, or informatics), keep one but change two between grad school and postdocship. Change universities! Seek a productive lab doing exciting research where the postdocs go on to jobs you’d like. Ask your graduate department faculty about the personality and reputation of prospective postdoc advisors. Spend a few hours reading recent lab papers, write a serious and warm letter with a few new project ideas, include your CV and publications, and apply to one lab only at a time (and, tell this to the lab chief). During postdocship, develop a creative but practical plan for your own lab, built on the technical approaches you’ve mastered as a student and fellow but embarking into a new area, chosen from your “stable” of exciting ideas. For example, during graduate studies of the enzymology of yeast membrane trafficking, you may dream of understanding how Sec proteins work in neuronal networks. Your postdoctoral studies of worm apoptosis then teach you worm genetics and physiology, and you establish your own lab to unravel the connections and functions of the ~300 worm neurons, pioneering in worm enzymology, cell culture, and other frontier areas.

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during the interview. Be confident but not arrogant; give a dynamite talk. Ask each person about their work and spend most of the time talking about their science. Pay attention, ask germane questions, establish common areas of interest. Show enthusiasm, and that you’ll “pull your oar.” Say “please” and “thank you,” and above all Never Negotiate the Job you Haven’t Been Offered.

**Say “please” and “thank you,” and above all Never Negotiate the Job you Haven’t Been Offered.**

What careers lie ahead; in biotech and pharmaceutical companies, doing science of fundamental importance that also creates useful products; in academia, blending teaching with basic science, at research institutes if teaching is not for you, at liberal arts colleges or high schools if teaching is your passion, and possibly in a life of letters and ideas, be it law, business, administration, or journalism. The prime directive is that you must do what you’re good at and will find fulfilling (usually, the same thing). Let no one tell you otherwise.

If you do start your own lab, in academia or industry, remember that you’re the best damn postdoc you’ll likely see for a decade or more, and ruthlessly keep yourself at the bench! Seek one project, leading to one lovely paper, each year, and success will crown your efforts.

Are there special considerations for women in science? There are several. One is that the burdens of childbearing and early childrearing fall disproportionately on women. Furthermore, some folks are still being told 1950’s fairy tales about women’s “supportive roles” by their mom and dad. Does your Significant Other truly love you for you, and stand ready for the difficult give and take of a successful relationship? Find friends and loved ones with the right attitude. Above all, don’t drop out, don’t quit. Half the graduate students are women, but fewer of the postdoc applicants, and fewer yet of the job applicants. When offered a job, check how women have fared at that institution, and childcare policies and facilities if relevant. Be among those who stay with it, if you too find that science is a joyful part of your life.