

An occasional column, in which Mole, Caveman and other troglodytes involved in cell science emerge to share their views on various aspects of life-science research. Messages for Caveman and other contributors can be left at mole@biologists.com. Any correspondence may be published in forthcoming issues.



The leap I – headfirst

In December 1901, this ad appeared in *The Times* newspaper in London (or may have – an original clipping has never come to light): ‘Men wanted for hazardous journey. Small wages. Bitter cold. Long months of complete darkness. Constant danger. Safe return doubtful. Honour and recognition in case of success.’ It was for Ernest Shackleton’s expedition to traverse the South Pole. Over 5000 applied for the 200 positions. And not one sent a CV.

At the moment, I’m en route from Lisbon to Sydney, traveling from one meeting to another. Jet lag and airline problems notwithstanding, it’s been a smooth ride, but I can tell we’re going to get some chop. And I realize that this could be an allegory for my biomedical career – exhaustion, SNAFUs, luck and whirlwind adventure, with some smooth cruising now and then. But I knew all

that when I got in (or thought I did); it was in the job description. And of course, it doesn’t involve any 800 mile trips in a life boat – generally.

For some of you reading this, it may be time to ask one of the most important questions of your life. For others, you probably know someone who has to ask it (and you can help them). And for the rest, it’s either too early or too late. It’s this: what do you want to be when you grow up?

Yes, indeed, this is Mole’s Guide to Getting a Job. Before I begin, let me point out straight away that there are no promises, and I’m not going to get you the job you want, or even a job. But what I *can* do is make some suggestions so that you don’t fail to get a job not only that you’re well suited for but that is best for you.

There are a lot of different jobs in

biomedical science, and first we must make sure you choose wisely. The wrong choice will lead to anger, frustration, misery, and the loss of thousands of lives (okay, probably not that). The right choice will potentially mean a rich and fulfilling life – it is of course only the *beginning*, but that doesn't make it any less important.

Why think so hard about getting a job? Because the sooner you do this, the more choices you'll have if you fail. The only thing worse than not getting the job you want, much worse really, is to *get* the job you want and only find out years later that you're not good at it. By which time you'll be incapable of starting afresh, and you'll have to scrape by with marginal performance in the hope that nobody will notice until it's time to retire. This is not the life you want.

The key to choosing the right job lies in two interconnected but not necessarily identical things: what you like to do, and what you're good at. Think hard and honestly about these. Nobody needs to know but you, but if you lie to yourself there will, as my grandmother used to say, be tears before bedtime (maybe not tonight, but some bedtime in the future). You *do not* have to enjoy every aspect of the job you do, but enjoying some of them is essential, and you *do* have to be good at them. Some of them are obvious, and some are not.

(Disclaimer: To avoid the he/she, his/her dilemma, I am going to use these interchangeably. Don't get confused; these categories apply to all seven genders.)

The Life Academic – Research

The Mole-let who chooses this life path *loves* her field of expertise, has a solid scientific background, and is simply bursting with ideas. He can't wait to get his own lab and work on those ideas, and she isn't going to be at a loss for things to do. This job is only for those who cannot imagine doing anything else, because it is thankless, heartless, biting and painful. It's also probably the most fun thing in the world. He has to be relentless in seeking financial support, submitting and resubmitting (and re-submitting) papers and tireless in pushing the envelope and thinking at the cutting edge. If hearing

about a new finding is a thrill, but you wish you'd done it yourself; if new results are so exciting that you'd postpone a date with your favorite pop-star to analyze them, then this career could be for you. Much time will be spent doing things administrative – sitting on committees, deciding the fate of biosafety applications and the like. If you actually *like* one or more of the latter, then this career is *not* for you. But if you hate such things but would do them so you could run your own lab and work on the projects you want to, then we may have a match. *If*, that is, you are very good (or can become very good) at analyzing, writing about and speaking about your findings, and coming up with new idea – *lots* of new ideas.

Oh, and there's teaching. You'll be told that you should avoid this, because it will take up too much of your time. Don't listen to this. The Mole-let who will become successful in the Life Academic will teach because this is the best way to brainwash the next generation to believe her scientific world-view and will send them out into the world to convince others. (This does not apply to teaching Biology 101 – avoid this at all costs.) Besides, by teaching courses your senior colleagues detest, you make yourself sufficiently useful that they may have the tiniest qualm about letting you leave (this only works in very limited circumstances, and that's for another time).

Do not select this career option if you like expensive cars, nice clothes, or want a vacation house in Maui. You won't make that sort of money, and you're going to be spending all your time at work anyway.

The Life Academic – Teaching

There are many positions in the Life Academic that do not involve actively doing cutting-edge research but make a profound contribution. Teaching is one: it shapes minds for the future. For this, you should have extensive experience in teaching and a degree in education, since each new teaching job (that is, college jobs that pay you in return for teaching rather than research) has hundreds to thousands of applicants. That is not to say you can't get one of these jobs, but don't count on it, even if you have the credentials. And if you don't, there'll be disappointment ahead. So, if you are

saying, "Hey, I don't want to do research forever, but I can always teach," it might be a good time to test the waters or reconsider. These are among the most difficult jobs to get. But for good reason: they may pay poorly, but you might get tenure. What more could you ask for?

The Business Life – Research

The Mole-let who chooses the Business Life in research *loves* the bench and does not want to give it up. She is *good* at getting clear, clean results, and enjoys doing such work for the joy of a job well done. He doesn't particularly mind what is being worked on (within reason), since forces outside her control may pull the plug on the project at any moment. The successful Mole-let is absolutely loyal to her employer and capable of believing in the corporate mission. This is essential (and sincerely meant), since any cynicism in this regard spells doom. In this career, you have the potential to make contributions that genuinely affect people's lives, since what you will work on may well find its way to the patient (or 'consumer' as we like to call them). Whether in big pharma or boutique biotech, your bench research can make a difference.

While you won't necessarily have to write papers or grants, do not be fooled into thinking that this job does not involve writing. Progress reports, research plans, summaries, memos, and more will fill all the free spaces in your crowded calendar. Job security will depend on your loyalty, your ability and, oh yes, the long-term prospects of the company. In return, it is not unlikely that you will make much more money than I do.

The Business Life – Business

Maybe you are thinking that you've learned enough about science, and you'll now seek a corporate job. Or maybe you'll start your own company. If you do the latter and are successful, then you don't need anything you might read here. Your dedication is astonishing, and a little unnerving. Or maybe you're just crazy – most new companies crash and burn, and only those who are exceptionally gifted at starting companies can pull themselves together to do it again. The others seek employment in the service industry. If, alternatively, you want to go into the

business side of an existing business, stop reading this immediately and go to business school. Scientists pretty much only get to these jobs from the research track, and that's rare.

The Business Life – Publishing

There is a career path for scientists that makes a terrific contribution to science and indeed can shape the future of scientific progress. The Mole-let who will become an editor loves to read, has a keen grasp of a number of disparate fields, and is willing to stay in the shadows (while promoting the best science out there). It is likely that they are

also very good looking and have a great sense of humor. It is a largely thankless job, a difficult one, and extremely valuable. You will be paid only a fraction of what you are worth, and the best that anyone will say about you is that you are 'fair.' But you will shape your field.

Did you choose? Or was it 'none of the above'? There are other paths: patent lawyer, popular science writer, university administrator, sports star (okay, that has nothing to do with science – I think). Maybe you got your PhD to see if you could, and you are ready to look for something outside science. That is fine too.

But listen to Uncle Mole. Now that you've chosen, you have to ask yourself, are you good enough to do this job? If the answer is "yes", then you are either very, very good, or delusional. If the answer is 'no', then don't do it. But if the answer is "there's nothing else I want to do this badly", then you're going to do this anyway.

So let's do it. Let's get you a job.

(to be continued...)

Mole

*Journal of Cell Science 119, 2169-2171
Published by The Company of Biologists 2006
doi:10.1242/jcs.02990*

Commentaries

JCS Commentaries highlight and critically discuss recent exciting work that will interest those working in cell biology, molecular biology, genetics and related disciplines. These short reviews are commissioned from leading figures in the field and are subject to rigorous peer-review and in-house editorial appraisal. Each issue of the journal usually contains at least two Commentaries. JCS thus provides readers with more than 50 Commentaries over the year, which cover the complete spectrum of cell science. The following are just some of the Commentaries appearing in JCS over the coming months.

Roles of the centrosome *Michel Bornens*

Non-apoptotic functions of caspases *Bruce Hay*

Mechanotransduction *Chris Chen*

Dorsal closure *Daniel Kiehart*

Cargo-selective adaptors *Linton Traub*

Filopodia *Richard Cheney*

Cancer stem cells *Max Wicha*

Spir proteins *R. Dyche Mullins*

Golgi fragmentation *Jennifer Lippincott-Schwartz*

Nuclear actin *Pavel Hozak*

Yeast apoptosis *Marie Hardwick*

p120 catenin *Albert Reynolds*

Non-centrosomal MT networks *Greg Gundersen*

p53 outputs *Karen Vousden*

Endomembrane evolution *Joel Dacks*

Although we discourage submission of unsolicited Commentaries to the journal, ideas for future articles – in the form of a short proposal and some key references – are welcome and should be sent to the Executive Editor at the address below.

Journal of Cell Science, Bidder Building, 140 Cowley Rd, Cambridge, CB4 0DL, UK
E-mail: jcs@biologists.com; <http://jcs.biologists.org>