

# Great Expectations

## Going over to the Dark Side

*The Great Expectations series is about transitions in the lives of individual biochemists and molecular biologists. Tom Gonda worked since 1979 on the molecular biology of haemopoiesis, oncogenesis and leukaemia, most recently as an NHMRC Principal Research Fellow at the Hanson Centre for Cancer Research. In May 2001, he accepted the position of Chief Scientist with the Adelaide biotechnology company, Bionomics Ltd. Tom write about his impressions of both “sides” of science and biotechnology.*



Tom Gonda  
(corporatised but not scientifically reconstructed)

If I were some kind of celebrity, the reader might be satisfied with a purely personal account of why I did something, what I thought, what I felt and so on – celebrities are inherently “interesting”. So when your Editor asked me to write about my thoughts and experiences in moving from academia to the biotech industry, I knew immediately that he wanted something more than just me telling the reader about myself. I assume that he hoped there would be some generalities that come from my story that might help or inform others who might be thinking of doing something similar. The trouble is, there is only one of me (fortunately for the human race), I have had only one career in academia and have worked in only one biotech company. So what I write is a hard-to-resolve mixture of my own thoughts and feelings, the peculiarities of my own situation, and some more general features of “academia versus biotech” that people may be looking for. I’ll try to avoid too many specifics of my own circumstances as these won’t help others very much (and in doing so, I might keep myself out of trouble too!).

When I accepted the position of Chief Scientist with the Adelaide biotech company, Bionomics Ltd, in May last year, it’s fair to say that almost all of my friends and colleagues were at least very surprised and in many cases quite shocked. Most of them had me pigeon-holed as left-wing, as a staunch defender of academic, pure, and curiosity-driven research, as well as a critic of “commercial

science”. To tell the truth, they were right then and to a large extent, still are.

### Pros and cons

So, why did I do it? What’s it like, really? What have been the “pros” and “cons”?

To answer the first question — “why?” — I can only say here that I came to recognise that I really needed a change. Not because I’d lost interest in the research I’d been doing; far from it, in fact, because the thought of giving it all up was one of the biggest “cons” in the list. But in many ways, I found myself almost craving a fresh start. I felt somewhat envious every time someone left our department or institute to start up a new lab, so I started looking around. I looked at a couple of academic jobs and shortly after putting in an application for one of these, I saw the advertisement for the Bionomics position. With very little further information I thought “well, why not?” and put in an application for this job too. I should say, though, that I did actually know a bit about Bionomics. This was because Mathew Vadas, one of the Company’s founders, is the Head of the IMVS Division where my Hanson Centre (now “Institute”) lab was (and still is; see below). Thus it was impossible not to know a bit just by being there. Moreover, I had a very, very minor role in the original, pre-float version of Bionomics (somewhat akin to the role of some authors whose name appears on papers basically because they walked past the lab at the right time...).

Well, I was offered the job and that’s

when it got really hard. Bionomics wasn’t really interested in the fields — haemopoiesis and leukaemia — in which I’d worked for over twenty years. So eventually, it would mean a complete break from the area that I knew best and in which maybe I’d established some degree of standing. Joining Bionomics would of course also mean dismantling my lab and, to a degree, “deserting” the people who worked with me. On the other hand, there was of course the temptation of a better salary! My decision was made significantly easier by Bionomics (i.e. our CEO) allowing me to spend a significant amount of my time maintaining my Hanson Institute lab, and the NHMRC continuing much of its funding for the following year and a half.

In the end, though, it was the opportunity of doing something unexpected and different, of taking on a new challenge, that really came to appeal to me and swung my decision. There was also one other important factor. This was the realisation that, despite the fact that the sole purpose of a biotech, pharmaceutical or any other company is to make money for its investors, the product of such a biotech or pharmaceutical company can be something that really can make a difference. The purists do need to be aware that, like it or not, new and better drugs aren’t usually made by academic research labs, though they often spring from such places. A look on the label is enough to tell you that drugs are made by... drug companies! So with a bit of

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idealism, maybe people in the biotech/drug industry can do something useful too. I hope I get to find out. *En passant* I might add that I am aware that certain drug companies sometimes behave in an appalling and unethical manner.

## Fun and hectic

That's probably more than enough about my own motivations and rationalisations. So what's it been like? There are two almost contradictory answers that spring to mind – "fun" and "hectic". With regard to the latter, I was struck by a question that Chris Jutner – whom I know from our overlapping time at the Hanson Centre – asked me the first time we met after I'd made the move. Chris is currently Vice President of Clinical Affairs and Executive Director at Bresagen Ltd, and has extensive experience in the biotech industry. The first thing he said to me was "Were you prepared for how busy you are?", not "Are you very busy?" or anything similar. So I gathered it's par for the course. It's not that I was sitting around wondering what to do with myself in my previous position – far from it. However the pace and the number of different things to be dealt with at any one time are a bit different.

On the other hand, the variety also makes it fun – there's always something new happening. One day – or hour – I might be talking hard science, and the next being involved in negotiations with another company. This business does make you look at the big picture. The problems and issues are often multi-dimensional, including of course science, management, commercial imperatives and intellectual property. Challenges at a scientific level have certainly been there, such as having to understand fields that are quite new to me sufficiently well to be able to make decisions and recommendations about what the company should do.

## The unreconstructed scientist

Can one still be a "real scientist" in a biotech company? I'd say definitely "yes". I don't think that a biotech company can survive for any length of time if it's not based on good science. As hard as it is to turn even the best science into successful "products", there is no way it can be done with poor science. So I'd say there is plenty of scope for creative, dedicated and skilled scientists in the biotech industry. Not everyone wants to get onto

– or stay on – the "run and fund your own lab" treadmill; one major benefit of the growth in biotechnology is that it provides a real alternative career path. However, it would be naïve and foolish of me to suggest that working in the biotech industry and in an academic lab are always the same, although in a discovery-based company they can sometimes be very similar.

Biotech companies have to make decisions based on all of the criteria I mentioned above (i.e. scientific, organisational, commercial and intellectual property). They usually have to be very focussed in their goals, and work to clearly defined plans and tight schedules. Sometimes I feel these plans and schedules take on an importance that exceeds their value, because in making them, one often has to assume things that are unknowable. In other words, as any scientist soon learns, unknown territory – which is what the researcher in academia or industry frequently enters – is by definition unpredictable. To tell the truth, though, I also think that despite these problems, adopting some of the approaches used in industry wouldn't do many academic labs too much harm. This extends also to the perceived ruthlessness of industry in axing unproductive projects; while commercial pressures may force termination that is scientifically a bit early, the converse doesn't do anyone much good. [Fortunately, I've never had to drop the axe on a major project, but I have no illusions that I'll never have to do so.] I suppose the other drawbacks for a scientist are that you can't always follow your own curiosity and interests as much as you'd like or even as much as academic funding allows. To someone with a variety of scientific interests, though, the diversity and even sudden changes in direction can be stimulating and challenging. Biotech projects sometimes require a lot of repetitive, brute force work, which might be spurned in other environments. Often, this is precisely what delivers the goods. For example in Bionomics' case, major advances in the understanding of epilepsy have been made by mutation screening of multiple genes in hundreds of DNA samples. (But I shouldn't preach too much about the virtues of this kind of work because I've never really had to do it myself!)

## Corporate culture

What else is different? What is the corporate culture like? Well, for someone like me who's more-or-less run his own

lab for a long, long time, there are some big differences. The first one is that unless you're the CEO (and even CEO's have Boards to report to), you have a boss. This is a strange situation for people like me although of course it's the natural order of things for 95% of the workforce. I mean, as a lab head, University academic or similar, you may have a department head and/or institute director above you, but they don't really "tell you what to do" as far as your scientific work is concerned. How you cope with this is a person-by-person and situation-by-situation issue, but anyone going into industry should at least be aware of it. Do you have to wear a business suit every day and worry constantly about share prices? Well, I don't do either, and from my limited experience I doubt that the environment at Bionomics is too unusual in these respects.

## Is the dark side really that dark?

So how should I conclude? There is and always will be a place – or many places, I hope – for curiosity-driven research which isn't likely to make money. But it's just this work that fuels the biotech industry and every bit as importantly, trains its scientists. It has always annoyed me to listen to those who think that you can go straight to the financial benefits of a strong biotechnology sector without supporting the basic research it relies on. So, I don't feel there is anything inconsistent in strongly supporting basic research while pointing out there are other equally worthwhile things for a scientist to do in the biotech industry. I say this from both a personal perspective (based on an admittedly short time in industry) and from the broader perspective of the industry also giving a scientist the chance to really make a difference.

Would I advise other scientists – younger or otherwise, for that matter – to go over to the "dark side"? Well, it would depend on the job, the company, your longer-term plans, and your current situation. What you experience may well be different – not necessarily better or worse – depending on the level or career stage at which you make the change. As an aside, I think talented younger scientists have the chance to advance much more quickly in industry, where ability and performance are often rewarded earlier. To answer the question, though, I'd say – as it becomes easier to move back and forth between "sides" – give it a try!