



BACR Interview #1: Biostatus Limited.

In the first of a series of interviews with key personnel from companies founded by BACR members, Nick Miller speaks to the founders of Biostatus (www.biostatus.co.uk), a company which is commercialising some of the discoveries of BACR members Laurence Patterson and Paul Smith.

NM: For those who are not familiar with Biostatus, could we have a short summary of what the company does and aspires to be?

BIOSTATUS: We should answer this partly by making clear what we do not want to be. Although we have successfully developed and marketed novel molecular probes, specifically fluorescent DNA probes, we have no intention of becoming a reagent company with an extensive catalogue of reagents. For example, Molecular Probes (Invitrogen) has over 3200 reagents in its catalogue, the majority of which account for only a very small proportion of the company's turnover. We will not go down that route; instead we are focussing on a small number of novel probes with broad market application, for example the DNA probes developed by Paul Smith and Laurence Patterson.

NM: The strategy of avoiding 'me too' products in favour of novel probes suggests that correct choice of which products to take through commercial development is key, as novel products almost by definition are higher risk than 'me too' products, because the market for them is untested. How do you make those choices? For example, do you place more emphasis on identification of an existing market demand, or do you feel that marketing push may be sufficient to drive sales for a novel product in your market?

BIOSTATUS: It's not either/or, it's not a question of focussing either on existing market needs or on pushing a clever product at users and creating a demand – you need to consider both in parallel. Biostatus benefited from the market knowledge of Paul Smith and Laurence Patterson, who knew from personal experience what the probe world needed and how such probes are used in drug discovery, and from the technology developed by Laurence and Paul, which was ideally positioned to fill those market needs. In brief, it is essential to have a good understanding of the market. Let us give you an example of that. Most people probably are unaware that the corporate vehicle that eventually became Biostatus originally was called Santorini Ltd, and was a sock company importing very high quality cotton socks from Greece. The Santorini sock was better quality than those of competitors, and was the leading brand in Greece. Santorini thought that at an appropriate price its product would take over the market. But the company was not aware of some important market idiosyncracies. In particular, in Greece they wash clothes in cold water and dry them in the sun. The Santorini sock is good for these types of conditions – the dyes used do not fade in strong sunlight, and the cold wash does not cause shrinkage. Use the same socks in Europe, where warm washes and hot tumble drying is the norm, and the Santorini sock shrinks badly. So the lesson is that the product must fit the market – the Greek sock market demands colour fastness in strong sun, the European market demands shrinkage resistance at hot temperatures. It is simply not enough to have a great product. Some University technology transfer offices could benefit from this lesson.

NM: That story touches on the actual genesis of Biostatus – can we talk a little on how the company actually came into being?

BIOSTATUS: After Santorini, Stefan was looking for a new venture to get involved in, and was very interested to hear about the technology developed by Laurence Patterson and Paul

Smith. Their work had resulted in a patent being taken out on some novel anthroquinone chemical compounds with unusual characteristics in terms of fluorescence signature and cell/nucleus penetration. The patent was held by a University and was about to lapse. We thought that the patent represented a commercial opportunity that we were well-positioned to exploit. We had protracted and occasionally painful discussions with the University technology transfer office, and eventually persuaded them to assign the patent to Biostatus. Assignment rather than licensing was important to us, as complete ownership of the intellectual property allows us to be masters of our own destiny. It was a sticking point in negotiations, but the technology transfer office eventually realised that it was this deal or nothing, and the latter would have meant them getting no return on their investment in the patent to date. Essentially the Biostatus founders bought the patent with their own money, so there was a tangible, personal commitment from the founders. The assignment of the patent to Biostatus was the critical moment at which the company became a viable proposition.

NM: But there's more to building a business than just a patent – IP on its own won't create revenues.

BIOSTATUS: Absolutely. A great technology does not inevitably lead to a great business. Also, elegant and clever ideas are not necessarily commercial winners – often simple ideas are the best. However, it is important to create and protect intellectual property in order to achieve a monopoly position. This in turn requires a very good team in the University, particularly with regard to the ability to recognise the commercial potential of ground-breaking technology, and then to capture and protect the IP to secure that technology. Using IP to achieve a monopoly position in a market requires a good understanding of the market, but unfortunately this understanding often is not there in technology transfer offices. It's a shame Universities don't invest more at this stage of technology development, for example by bringing in good business people or by close liaison with outside businesses.

NM: So you started the company without any external investment; but presumably since then you have had to seek venture capital?

BIOSTATUS: Actually no. We are very unusual among biotechs in that we have not had to bring in the VCs, and Biostatus is now a self-funding entity.

NM: Many biotech CEOs would love to be in the same position, but very few manage to pull it off. Can you tell us about the advantages and disadvantages of avoiding venture capital during the early growth of a company, and comment on the breadth of applicability of this model?

BIOSTATUS: The primary disadvantages in the early years were psychological, in that at partnering conferences you were nobody unless you were burning huge quantities of somebody else's money. This attitude has changed somewhat since, and even biotech investors are remembering fundamental commercial principles, like the purpose of a company is profit. But at the time it was difficult, and you needed a degree of objectivity and common sense to carry on. Sometimes we had to sit down and rationally appraise what we were doing, but whenever we did this it became clear that yes, we had a real business making real money. Without external investment it was hard work and we had to focus on cost containment as well as sales. For example, the Biostatus office is not a swanky building on a science park, but an outbuilding in my garden. Not glamorous; but effective, and sound commercial sense. So the disadvantages were the psychological ones, perception etc, and to some extent the necessity to 'bootstrap' the company. Although 'bootstrapping' is an excellent exercise in cost control and efficient use of resources, it may mean that for a while salaries are less than they would be if you were working for a company sitting on a cash pile. It also means that you can't grow the company as quickly as you might, and some activities have to be delayed until the cash has been generated to support them. The advantages of not seeking external capital are obvious; you are not selling part of your company to others, and therefore you are not decreasing the extent of your control of the company, and you are retaining all the value that you create by means of your own hard work. Also, you can avoid being messed around by investors who sometimes play time-wasting games in order to squeeze a bit more out of you. As to the breadth of applicability of this model, it has to be

said that very few biotechs will be in a position to have products to sell from day one, and therefore most biotechs probably will need to seek external investment of some form in order to get the company to a stage at which it is self-financing. Companies that seek to develop drugs almost certainly will need venture capital. Biostatus was very unusual in that it could be profitable from Year 1. Having said that, we have taken full advantage of non-dilutive sources of external capital, ie grants, and we have been quite successful in this context, eg we have received SBRI grants. In summary, it's preferable to avoid venture capital funding if possible, but most biotechs will find it difficult to do so.

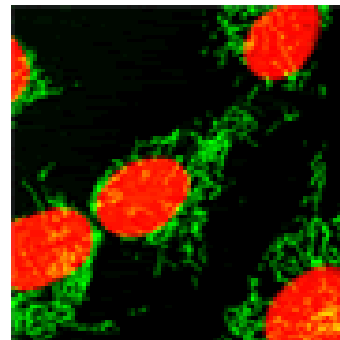
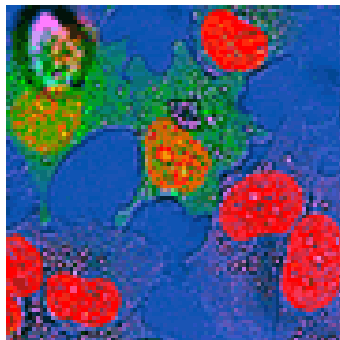
NM: Some BACR members doubtless are considering their next move in terms of career progression. Is Biostatus recruiting at present?

BIOSTATUS: We are looking mainly for people who want to get involved in the commercial side of things, particularly competent sales and marketing individuals who also speak the language of science – this is an invaluable combination.

NM: Could any of the Biostatus technology be applied to a therapeutic?

BIOSTATUS: Therapeutics do not fall under the Biostatus remit. The ideas we have for therapeutics will be taken forward in a different commercial vehicle. However, we do see the potential for Biostatus probes to contribute to clinical diagnostics.

A DNA probe (DRAQ5) in action – live cell penetration



NM: Finally, dher BACR scientists may wish to explore the commercial potential of their research. What advice would you give to them; for example, what would you have done differently if you had your time over again?

BIOSTATUS: We would certainly not have wasted so much time talking to VCs and regional development funds. These people were a mammoth distraction, resulting in us wasting about six months of our time, and a fair amount of money. However, most biotechs will be obliged to go down this kind of route. We have no regrets; but those who are thinking of going down a similar route should be aware that it is hard work, and should not expect a rapid return on their investment of effort – you need to be prepared for the long haul.