

THE FIRST WORD

SCRABBLE

In the game of Scrabble, the trick is not so much what you know (though that is part of it) or the letters you hold (though that, too, is part of it). The trick is knowing how to develop the board and where to place your most valuable resources for the greatest possible return.

That occurred to us in mid-August as we cowered under a conference table, trembling through the visit of a scholarly, urbane, genial, and most dread don, to whom we have owed a book chapter for a very long time. After exchanging the obligatory unpleasantries (watch this space for numberless subtle plugs for the volume), we settled into a discussion of entrepreneurial academics—who still, our visiting professor argued, cannot understand that there is far more to commercializing biotechnology than a shaker flask full of epoch-making science.

Why, he asked us, doesn't *BioTechnology* do a better job of preparing these hot-house flowers for the rigors of the real world? Why not more on management decision-making? Why not more on the necessity of fitting products to markets? Why not more on the aggressive intelligence needed to break into a market and create a niche of your own.

Er, thanks. Well, we've tried to make *BioTechnology* a tool for technical decision-making—to help those in the field gauge their options and the competition. (Once one ranges beyond the technical issues associated with biotechnology, one strays into the land of the MBA, territory staked out by Forbes, Barrons, and the Financial Times. And anyway, over the coming months, we will expand our coverage of biotech marketing and management.) For the rest of it...well, we thought we *had* been preaching the gospel of the driving market. If the message hasn't gotten through, it's worth repeating:

Great science doesn't make great products. Too often in the early days of biotechnology, companies would dash off to patent office and press room with a new molecule and say, essentially, "Look at this neat stuff. It will make a blockbuster drug as soon as we figure out what it really does."

Figure out *first* what the market needs, and then assemble the technology you need to make it—in a form your customers can use, at a price they can afford, and with the sort of performance that will let them choose your product over competitors with an easy conscience.

Or, as one process-developer put it, "The really clever person thinks from the injection bottle backwards."

Think systems, then. A recent close involvement with the clinical laboratory market has driven that lesson home. Biotechnology is, without a doubt, transforming the diagnostics industry, from traditional clinical laboratories to the hospital bedside, to doctors' offices to over-the-counter in-home tests.

But the business is complex, with regulations that harshly punish errors on the one hand and imposed price structures that make competitive cost-per-reportable-result the *sine qua non* of market acceptance. The diagnostic developer's first question cannot be, "What is the best assay I can make?" Instead, the manufacturer must ask, "In what form and at what price can I take the chance of tossing this product into the shark pool?" The result is stunningly imaginative combinations of artificial intelligence, finely honed electrical and mechanical design, sometimes mind-boggling sample-handling, and some very good molecular biology.

And none of these elements would be worth a nickel without the others.

In general, recourse to dictionary definitions is the hallmark of amateur writing. But, since the dictionary is the official arbiter of Scrabble, perhaps we can indulge in it once. "Scrabble," it says here, "to scratch or claw about clumsily or frantically...to struggle by or as if by scraping and scratching."

Which just goes to show that scrabbling is more than a game. There is something of the fight for survival in it.

—Douglas McCormick

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