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Why pharmaceutical companies should teach scientists to be *ENTREPRENEURS*

Conventional wisdom says that big employers do not want anything to do with entrepreneurs as employees. The last thing a human resources director wants to see on a resumé is that a candidate started a business and failed. The suspicion is that these candidates are only looking for a temporary safe haven. Never mind the stigma of failure (despite what skills that may develop); this is a person who will only use your phones and computers to work on the next idea, and will jump ship at the first chance to chase the next entrepreneurial opportunity.

By Dr Jeffrey P. Kiplinger

There are, however, some very good arguments to be made for openly welcoming and developing entrepreneurs within a big corporation. These arguments may be particularly significant in the pharmaceutical industry, in light of the industry push to advance R&D power through external alliances and acquisitions with small biotech companies. In recent years, many of the major companies have begun to explore ways to expand their access to innovation through networks and consortia[1]. It may be a good time to re-examine mechanisms for driving innovation internally as well.

Creating an entrepreneurial mindset among employees can encourage innovation, develop new skills and foster excitement where motivation is low. Employees who learn to run their groups or departments as business units will make the larger organisation much more efficient, and through feeling more effective never see the need to leave the larger company.

As corporations look for new investments, many are creating venture arms to capitalise young companies with potential synergies in science and technology. Where better to look for ideas with strategic importance than at business plans developed inside?

Corporate mergers and acquisitions often result in consolidation, downsizing and redundant departments within the new organisation. Embedding an entrepreneurial bent in those departments can yield spin-offs instead of lay-offs, and will certainly prepare employees for changes in ways that following a narrow career path could never do.

Drug discovery organisations employ scientists and professionals with backgrounds in cutting-edge technologies who are accustomed to generating

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research ideas. These individuals usually do not have the foundation of business skills necessary to put an entrepreneurial idea into practice. Companies hire them for their specific expertise, sometimes accumulated through many years of working in a narrow discipline. Academic training in the sciences, more than in other fields, provides depth but not breadth of knowledge.

What skills are missing? Project management, accounting and finance, planning and forecasting, negotiation and leadership. Companies frequently sends managers and directors to 'training' courses that offer instruction in leadership and project management skills. These skills are supposed to help a new manager, already accomplished at evaluating the scientific merit of a team or a project, learn to turn more attention to the role of science in the larger business. The focus on project management and leadership skills for managers is valuable to an organisation structured around teams, but the jump to running groups as 'businesses within the business' requires a change in the way each individual looks at his role.

"We have to teach these things because our business is evolving," says Antoine Tirard, Global Head of Learning at Novartis. "We are constantly transforming the pharmaceutical research organisation, and the direction now is toward smaller 'business units' – not only internal businesses, but also organised around our many external collaborations. We need to develop people to lead these programmes."

Business guru Tom Peters's book, The Circle of Innovation (Knopf 1997), devotes a chapter to the concept of turning your department into a professional services firm. Peters suggests (actually, he preaches) focusing on the client, marketing, projects, portfolio, R&D, incentives, training and bringing in outside service suppliers – all techniques and tools used by small businesses in normal operations. Could these be operating principles in a lab, or project team, or department within a drug discovery organisation?

Imagine that every supervising scientist, technologist or manager began to look at his or her group's contribution in terms of the bottom line. Some possible positive results include:

- More objective criteria develops for reviewing contributions, projects and performance – at the bench and management level.
- A wider understanding of organisational goals develops as group achievements can be rewarded when they impact the organisation.
- Collaboration to achieve goals can be encouraged by rewarding success – the best win-win collaborators will achieve more with their groups.
- Groups must appropriately divide resources between research and project work or face performance failure; both are necessary for ultimate business success.
- Talent for business is made more visible in scientists, allowing an organisation to identify valuable leaders in a new way.

Recognising that a group within a company can be run as a professional services firm, and learning how to implement a plan to make it function that way, is empowering. Scientists with this experience have gone on to found new companies, sometimes with their former employers as customers. Why wouldn't a large organisation want some control over the development of these creative individuals and their valuable offspring businesses?

Universities, especially those with strong science and technology programmes, now recognise and calculate the investment value they derive from nurturing and shepherding their entrepreneurial faculty. Campus biotech incubators are becoming commonplace, venture capital firms are closely allied with universities to get early access to new ideas and universities extract value from control of all intellectual property resulting from on-campus work. It seems that universities are searching for a mix of value-generating approaches; the traditional approach of bringing in grants and tuition revenues combined in some proportion with the production of faculty and student start-up businesses.

Developing a culture of new enterprise creation within a biopharmaceutical firm may not only yield a valuable venture portfolio, but may also offer a large company new flexibility in mergers, acquisitions and reorganisations. These situations often result in lowered productivity as goals are reset and changes are slowly implemented[2]. Employees with an entrepreneurial bent are, by nature, among the most impatient in a period of flux. A company that nurtures these employees during their tenure may discover a new partnership opportunity, rather than an unexpected loss of talent, if a key contributor leaves for a start-up. More importantly, though, creating an environment in which entrepreneurial leaders run internal service organisations sets up a turnkey start-up opportunity when a company needs to trim a redundant or over-large department.

Novartis found itself in just this situation following the merger that created the company

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from Ciba-Geigy and Sandoz. One of the least pleasant tasks in the combination of two technology giants is choosing which redundant groups to eliminate. Dr Juerg Meier, who heads the Novartis Venture Fund, points out the Fund's success in both improving the Novartis bottom line, and in retaining the company's best ideas: "In the five years since (the merger), the Novartis Venture Fund supported 91 start-up companies, most of them spin-offs or management buy-outs from Novartis. It is very satisfying to see how many people, and also technologies, developed successfully in small entrepreneurial start-ups, which otherwise were redundant and out of the focus of the ever-changing mother company. This process continues here; it is part of our effort to stay competitive in today's tough business environment."

Nurturing an entrepreneurial culture

The way scientists look at their jobs in a large biopharmaceutical company is a product of the prevailing culture. It is a culture influenced by history, science, innovation and the pride that comes from working in an industry viewed as a valuable application of science to mankind. It is also a culture influenced by size, where one's scientific specialisation often becomes one's job description, where performance appraisals and salary increases are confined to a narrow distribution by corporate policy, and where goals coming from the top are frequently lost in translation by the time they arrive at the bench.

If it is an organisation's desire to take maximum benefit from its creative and innovative people, then addressing the common needs and desires of this group of employees is paramount. It is important to minimise the depersonalisation of the big organisation and nurture the underlying culture of creativity and scientific pride. The talented, innovative, creative part of the corporate workforce is driven to contribute, and to see their contribution, to the larger organisation. Ask a young and motivated employee in a 20-person biotech just how he contributes to the corporate goal and you will get a very clear answer.

To establish a new way for employees to look at their role in a big company requires fundamental changes.

Teach entrepreneurial skills to those who want them. Anything from seminars on how biotechs get funding to accounting classes will attract a scientist who dreams of starting a business. Offer these things in an openly encouraging manner, and soon you will have more employees who think this way. Create an entrepreneur initiative office, and start behaving like you are really interested in getting companies going.

Start each event by openly declaring: "We've brought in this speaker today because we value the entrepreneurial spirit of our staff. We hope if any of you decide to start a business you will come to our office for help". Blatantly suggest that the corporation hopes to make money off the best start-up ideas; no one with a business idea is ever shy about their interest in profit. Universities have been very successful with this approach.

Offer assistance to those who want to begin a business plan. Bring in consultants to help; at least until you build up some internal expertise in bootstrapping small companies. Allow people to find their own education opportunities (classes, outside seminars, workshops) and, if you already pay for other forms of continuing education, pay for these as well. Establish a policy that, just like other continuing learning goals that employees should pursue, learning entrepreneurial skills is a valid use of (some) company time.

Set group goals as if they are business goals. Make sure that, from the top down, an experienced employee can trace his lab's accomplishments through the value chain to see how they benefit the CEO. Make anyone who writes in management-speak or techno-speak go back and rewrite. Do not stop until everyone knows what everybody else means.

Make understanding the impact of what a group plans to achieve a part of the goal-setting process. In business terms, make groups investigate the market for what they produce. Work to place a fair value on the product by understanding the customer and the alternative products. Set goals for R&D – new stuff that will enter the product stream in the future, making the group's contribution more valuable. Train managers to help everyone understand their work as a 'product'.

Be prepared for the opportunities that will arise. Plan ahead to have tools for entrepreneurs in place when new business ideas start popping up. Let the entrepreneur initiative office work with employees to help construct business plans, conduct market research, find and set up a facility.

Allow employees to use internal legal or business advisors to develop strategy, define freedom to operate and even to patent new technologies. Set up an equitable fee arrangement, or defer fees in exchange for future equity, or retain ownership of all property with the intention of granting licences later.

Instruct the corporate legal department to

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2 www.centerwatch.com/newsreleases/6-7-2000.html
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provide mechanisms whereby employees can gain patent licences and rights. Maintain a flexible negotiating stance, but make sure everyone understands that the business interests of the parent organisation are important. Allow entrepreneurs to negotiate the best deal they can within these limits.

Manage expectations, but not too hard. A programme like this will create excitement and interest, and perhaps some unrealistic expectations. Entrepreneurial skills are real-world skills, and in the real world new knowledge guarantees nothing but the licence to look for ways to use it. Be up front about how the company expects to benefit from this investment and effort, and never give the impression that what you are offering is just a new employee benefit or feel-good programme.

To return value from the investment you make in these employees, teach line managers to leverage new business skills among their staff so that that their efforts contribute to developing groups into business units – in setting goals, in creating and managing project portfolios, in planning marketing and R&D efforts, in defining cross-department project collaborations.

More like a biotech company

Large pharmaceutical companies have always realised the value in relationships with small companies. Big companies contribute parts of their massive R&D budgets and technology resources, and receive the benefit of working with an agile and motivated (hungry, in fact) idea developer. A twist of irony is that Big Pharma has the money and power to hire the best talent, and yet so frequently turns outside to find the creative and agile scientists.

AT Kearney, the international executive consulting company, notes that the emergence of the biotech industry has changed the way that Big Pharma must leverage its human capital. "Today, companies are aggressively competing for the best minds with academic institutions that are becoming more business oriented, and demanding a fair economic share from their intellectual property. To compete effectively, pharmaceutical companies must develop more attractive career paths for young researchers. Leading companies will offer [a career] development path in R&D [to match] the entrepreneurial spirit of a start-up biotech firm with the tremendous intellectual and financial horsepower of a multi-billion dollar company."[3]

"An optimist would have to believe that the labour market is an efficient market," says Novartis's Tirard. "We may lose some new scientists now to the lure of the small company research environment, but we will reposition ourselves to capture them again. The challenge is to create the right working environment in the big companies, and we will meet it."

Experimentation is the process of science. Novartis and its peers are experimenting with business structure and the working environment. The goal is to recruit, retain and leverage the talents and adaptability of the people who make up the business. As big companies reinvent themselves around the small, innovative and agile small company model, they should consider the role and potential value of the entrepreneur. DDW

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