
Pharmaceuticals: The case for outsourcing R&D



By Jane Williams

Drug companies world-wide are under pressure. The rise of generics, looming patent expirations and the expanding innovation gap are creating cost pressures from every direction. Could outsourcing R&D be one way to ease the pain? One former industry sales executive thinks so.

Pharmaceutical companies spend more than US\$200 billion on research every year producing between 20 and 25 new drugs. It's an increasingly expensive exercise and one that is ultimately paid for by society. Industry watchers want drug-makers to cut research budgets, noting internal R&D groups have been notoriously unproductive and expensive to maintain. **Bernard Munos**, a 30-year executive with Eli Lilly, has spent the past decade studying pharmaceutical innovation and says the drug industry is hitting a crisis point with a lack of quality research focusing on too much incremental and not enough breakthrough innovation. Plainly said: drug companies are not making money fast enough with new products to cover the cost of researching. Outsourcing, claims Munos, could change that.

CEOs must let go

Pharmaceutical companies need to change their business models and embrace risky innovative ideas, outsourcing where necessary and taking a long-term view on their specific areas of focus, Munos told INSEAD Knowledge at the INSEAD Healthcare Alumni Summit in Berlin in October. Instead of chasing improvements to blockbuster drugs, large pharma companies should concentrate on breakthrough research. And, to assist innovation, CEOs without a science background need to get out of the way and let scientists run with their work and see where research takes them.

“I think you need direction and an area of focus. CEOs have the prerogative to set those areas, but they should stop there and let the scientists decide what the solutions to those problems are going to be,” Munos says. “We’ve recently seen some excesses of planning that have been very destructive to innovation where the CEO of the industry or commercial division will go to the payers and ask ‘What sort of drug are you willing to pay for?’ They come up with a profile and take that to the scientists saying ‘Go ahead, make this.’ This sounds nice in theory but in practice it doesn’t work; drug discovery is not the same as drug design.”

The DARPA example

A more productive method for spending research dollars, he says, is the one used by the U.S. DARPA (Defense Advanced Research Projects Agency), a military entity that sponsors revolutionary, high-payoff research which has led to ground-breaking discoveries well beyond the defense industry: GPS, night vision and sensors.

“DARPA is perhaps the most innovative research engine ever designed,” Munos told Knowledge. “The agency realised all the weapons that have really made a difference did not come from programmes set up specifically to create them, they came from somewhere else. It came to the conclusion that in large organisations, short-term priorities will always tip the scales toward marginal innovation at the expense of major change.”

DARPA now has about 130 scientists working for it with a research budget the size of a mid-sized pharmaceutical firm, he says. “In 50 years they have changed the world: the way we live, the way we work, the way we communicate, the way we entertain ourselves. We (the pharma industry) are spending 20 times as much as DARPA every year and we can’t even change

healthcare,” Munos adds.

Less process, more action

Munos attributes DARPA’s success to its small number of processes. “They have two levels of hierarchy: programme managers – the mad scientists – and a few bosses, that’s it. They are empowered to take whatever decision they want without having to refer to anyone.”

“When scientists approach DARPA with an idea, the key question they are asked is ‘Is this idea disruptive and why?’ If we ask the same question in the pharmaceutical industry, ‘Is this drug disruptive, is it going to change therapy?’ ... we could save ourselves tens of billions of dollars a year funding drugs that ultimately are going to make a difference,” he argues.

Apple, he says, is another example of what innovation can deliver. “Apple followed innovation where innovation took it. It was very pragmatic. Every time it saw an opportunity and ventured into it, it ended up transforming an industry which was not its original focus. The pharmaceutical industry used to have that pragmatism but I think it has lost it.”

Rise of the small researcher

The concept of outsourcing smaller research projects - mostly early-stage research and work improving and replicating existing drugs - is not new. There are now about 1,000 smaller contract research organisations worldwide capturing about 20 percent of the pharmaceutical industry’s R&D budget. A Morgan Stanley study released last year said this practice is expected to increase.

The study predicts that companies will continue to make substantial cuts to spending on early-stage drug research with a high probability of failure, and re-allocate the funds to in-licensing drugs once that have shown some chance of success.

“We’re going to see a turnover in the industry,” Munos told Knowledge, noting it is the companies which embrace change that will survive. “We’re going to see a few big pharma firms retaining their prominence and a number of big pharma disappearing due to lack of innovation.”

Taking their place will be new companies which are small but creative.

“These are companies which can use innovation networks to produce and increase their innovation and work on a shoestring,” he says. “They are willing to take on risks because they have nothing to lose.”

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