AN AUDIENCE WITH…

Daniel Vasella

Chairman and Chief Executive Officer (CEO), Novartis, Basel, Switzerland. Daniel Vasella, M.D., was appointed Chairman of Novartis in April 1999, having served as CEO and executive member of the Board of Directors since the merger that created Novartis in 1996. Vasella has been awarded The CancerCare Human Services Award, the Harvard Business School's Alumni Achievement Award, the Appeal of Conscience Award and the AJ Congress Humanitarian Award. He has been honoured with the Ordem Nacional do Cruzeiro do Sul (Brazil) and holds the rank of Chevalier in the Ordre National de la Légion d'Honneur (France).

What do you think are the most important factors for the success of innovative R&D?
The most important factor is the people. It starts with the leaders in R&D — how good they are in leading the organization and setting the direction, and how respected they are as scientists and leaders so that they can attract the best talent. We used to think that the talent would come to us, but that is not always true. We have to be where the talent is, and that is why we recently decided to invest US$1 billion in an R&D centre in Shanghai, China. Now, we have three major pharmaceutical research centres in Asia, Europe and North America. This allows us to gain access to the human capital worldwide and strengthens our diversity. In addition, we have ensured that our research centres are in close proximity to academic institutions, such as the Massachusetts Institute of Technology and Harvard in Boston, USA, to have an exchange of ideas.

Another factor is the openness of the organization, so that new knowledge can permeate through and be absorbed by Novartis worldwide. Large organizations such as Novartis tend to become complex, so we work hard at keeping the processes simple to enhance communication and minimize bureaucracy. Also, our geographic spread poses a challenge to effectively working together and communicating regularly. To overcome these challenges, we have invested in integrated technologies and innovative communications tools so that our scientists can work together in real and virtual space. For example, our computer-aided drug design team has developed a design, analysis and collaboration tool that enables Novartis scientists anywhere in the world to explore their ideas virtually, share them with each other and test them in the laboratory through an automated process.

Last but not least, you need to invest money, and we have been spending about 20% of our sales on R&D. This is among the highest such proportion in the industry, but I think it is well spent.

Which of the areas of R&D that Novartis is pursuing are you most excited about and why?
Firstly, we look at areas of high unmet medical need and secondly, we look at the technical feasibility of pursuing an area — that is, if we have a good scientific hypothesis to support research in that area. The ideal situation is to have a combination of high medical need and high feasibility. Of course, if the problem is simple then it has probably already been identified and pursued by others; the challenge then is to determine whether we have any particular competitive advantages before we engage in the task.

One conceptual approach that has been logical and promising, and has started to deliver, is research by Mark Fishman [President of the Novartis Institutes for BioMedical Research] and his team. They are studying molecular signalling pathways in the body to find new druggable targets — in essence, to identify nodal intersections in these pathways that could be either blocked or activated. This type of approach is rooted in the principles of systems biology in recognizing that signalling pathways play an important part in many diseases, and that there could be many therapeutic benefits from the inhibition or activation of a single node. The area that we are most familiar with is, of course, oncology. However, there are other areas of high unmet medical need that we are exploring for which the technical feasibility poses an even greater challenge. For example, we still know little about the pathophysiology of central nervous system disorders such as Alzheimer's disease, so it is much more difficult to have a rational research approach in this field.

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In addition, to target the right patients, we have formed a new molecular diagnostics unit. It is currently an adjunct to the therapies, but it will become a business eventually. In this area, the main challenges are regulatory hurdles, because regulatory agencies have not kept pace with the potential for the co-development of a drug and an associated diagnostic. We need more dialogue with these agencies because co-developing drugs and diagnostics will eventually mean better quality treatments, improved predictability and lower costs by treating people in a rational way.

How is Novartis responding to the need to show the value of innovative therapies to achieve reimbursement — for example, in an increasingly cost-contained environment?
It is important to take the concerns of payers seriously, and to work with both the agencies and the key customers (such as hospitals) to understand their needs. Then you need to ensure that your clinical trials aim to answer the questions that these parties have so that you can gain reimbursement. For example, in the UK, the National Institute for Health and Clinical Excellence (NICE) would only reimburse the use of Lucentis [ranibizumab, a humanized monoclonal antibody fragment that binds to vascular endothelial growth factor] for one eye, which would mean that a patient would become blind in the other eye. We found a way to work with NICE to cover the costs of Lucentis for both eyes, which makes a great difference for the patients. In general, there is not one route or one recipe for working with reimbursement agencies; we all need to continuously learn how to best serve patients.

Bethan Hughes