

Vertex Pharmaceuticals: R&D Portfolio Management

1. Which two projects would you approve for advancement in development? Why?

I would choose VX148 and VX950. Apart from the pros listed below, VX 148 nearly finished Phase II despite the probability of success was 40% only, also, the success rate for phase III was relatively high. In one word, it was a safe choice with pretty high (90%) profit margin, low remaining development costs and low annual expense.

VX-950 is the second best option that can be approved from the remaining three. First, the remaining development cost was lower than remaining two projects and project margin was not low (82%). Second, the development of VX-950 was considered as strategic purpose as it could help Vertex make a difference with other companies.

Candidate	Stage
VX148	Nearly end of Phase II in Oct. 2003
VX702	Phase IIa
VX765	Preclinical study
VX950	Preclinical study, will begin Phase I in early 2004

Candidate	Pros	Cons
VX148	Except for psoriasis, it has the potential to treat a number of diseases. Low target risk. Large market with unmet medical needs. Would get Vertex to the market the quickest. Low mechanism risk	Least scientific sizzle. The market already existed. Have substitute, average molecule risk. May cause land war.
VX702	The drug was proved well tolerated in patients. Cheap and easy to make. Has lots of promise if oral drug could be covered.	Prone to have toxicity issue. Most other companies failed to develop it. With more unknown.
VX765	Could be taken orally and has excellent market potential. Has the largest possible financial return. No other candidate on the market now. Has novel targets.	Reduce influence on committees and lose rights to sales force. Impact on Aventis partnership. Relatively high manufacturing costs at development stage. Potency was yet to determined and has proper dose problem. With more unknown. May cause land war. Takes long to get to market.
VX950	Large unmet medical needs. Leverage existing relationship to sale product. Help Vertex make a difference with other companies. Could sell drug to doctors using a specialty sales force. Has novel targets.	Complex and costly to make. May need to find a partner. Takes long to get to market.

2. Would you license out the others or keep them as a back-up? Why?

I would keep them as a back-up as Vertex had already put resource to these projects. In addition, the remaining two projects were also profitable (90% profit margin). The company should delay them and restart the development processes later on when the company obtains enough resources. Moreover, a company should always have plan B and it would be ideally for Vertex to consider these two candidates as back-ups.

3. What criteria would you use to make the decision?

In order to make a decision, I have considered both quantitative and qualitative approaches. First, I listed the pros and cons for each candidate mentioned in the case study. And I also took a close look at detailed evaluation of each candidate with respect to their given financial information and their chances of success.

4. What additional information do you think Boger needs to make the decision?

In order to maximize the value of portfolio, there are a lot of financial indexes Boger could consider to make the decision, such as IRR, NPV and EBIT. Despite the financial ones, strategic importance is another criterion shouldn't be ignored. In addition, competitors' information, substitutes' information, product life cycle, etc. are also essential.

5. Would you rely more on quantitative analysis or qualitative approaches to make this decision?

I equally treat quantitative analysis and qualitative approaches. When I am trying to make a decision, I find it might be subjective when evaluating portfolio qualitatively. While the quantitative analysis could be not precise all the time. So, I would say they are equally important.