Freemark abbey winery case

The total revenue IS 12 x 1000 x 107. 5% x $2. 00 = 325800. E can calculate the expected outcome based on conditional probabilities of each case or we can build a decision tree with a " decision" node at the beginning and " chance" nodes on the branch corresponding to the decision of not harvesting. The optimal decision for Jaeger Is not to harvest; the expected revenue Is $39780. Figure 1 : Jaegers decision tree Page 1 Barr Bijouterie Mega Pharmacy and Micro Pharmacy In this analysis I use the following assumptions: I.

If both Megaphone and Macrophage develop the drug, Macrophage will sue with 100% chance (unless it ells the rights to Megaphone or agree to sell the rights on the license). Macrophage's own predictions. Ill. Market for the compound in the USA is of the same size as Europe and Japan combined (given Megaphone's anticipated market structure). Lb. Macrophage anticipates $900 million of sales at peak worldwide, of which $450 million In the US and $450 million overseas. Macrophage will receive 75% of sales in the U. S. And only 10% from sales overseas. V.

A firm receives profit for the 10 years after if launches its product in 2003, starting from year 2004. During first OFF and reaching the peak in 2008. Since all numbers are in constant dollars, the total sales equal to the sum of sales in each year. If Megaphone decides not to buy rights or license from Macrophage, there is 50% chance of successful Phase 2 and 80% chance of successful Phase 3 (conditional on success of Phase 2), and 100% of success in FDA Review. Thus, Megaphone has 40% chances that the the compound will be approved. If it passes Phase 2, Phase 3, and Review, Megaphone will spend $52 million.

Total Megaphone's anticipated sales of the compound are equal to 100 200 + 300 + 400 + 500 + 500 + 500 + 500 + 500 + 500 = 4000 million, total revenue 75% x 4000= 3000 million, if Megaphone is the only supplier. If both Megaphone and Macrophage are on the market, the anticipated revenue is only a half: $1 500 million. Total Macrophage's anticipated sales in the US are equal to $3660 million, and the revenue is $2745 million; anticipated sales overseas are equal to $3660 million and the revenue is $366 million, thus, 3111, if Macrophage is the monopoly and 3111/2 if it has to share the market with Megaphone. If Megaphone doesn't buy the rights, it has 4% that Macrophage's compound is not approved and 36% chance that it is approved. If it is approved, there is 50% (18% unconditional) that Macrophage will prevent Megaphone to market its product, and 50% (18% unconditional) chance that both companies will be on the market. The expected profit is =$359. 2 million. If Megaphone buys the rights, then it has 40% chance that the compound is approved. He expected profit is $1169. 2 million. Thus, Megaphone are willing to pay up to 1169. - 359. = 810 million SUDS to buy the rights. If Macrophage doesn't sale the rights, it has 4% chance that they will have the monopoly over compound sales, 18% that they will sue, lose the case, and share the market, and 18% chance that they will sue, win, and have the monopoly. Macrophage's anticipated profit is 933. 61 > 810 million, I. E. There is no value that Megaphone can offer and Macrophage will accept. 2) Suppose that Megaphone is able to buy the license from Macrophage.

To simplify the calculations we assume that in this case, 10% of al sales of the compound overseas will go to Macrophage, which won't face any

additional costs. Megaphone's profit will be equal to 75% of the remaining sales in Europe and Japan. Macrophage will also know that Megaphone anticipates the sales in Europe and Japan combined to peak at $250. Megaphone will not pay any royalties associated with the sales in the US, but Macrophage can also market their product. We also assume that if Macrophage fails to approve the compound, it anticipates that Megaphone will also fail with 100% probability.

Page 2 Megaphone anticipates $2850 million in revenue if Macrophage does not market their product in the US and $2100 million if it does. Macrophage anticipates $1572. 5 if it shares US market with Megaphone and $3111 million if Megaphone fails to revenue if they have a license is $839. 2 million, Macrophage's expected revenue, if Megaphone has a license, is $659. 74. Thus, Megaphone is willing to pay up to 839. 2 - 359. 2 = 480 million, while Macrophage will accept if it is at least 933. 61 - 659. 74 = 273. 87 million. Any amount in (273. 87, 480) million will satisfy the conditions.