**Questions for the Aqua Bounty case**

Case write-ups due on Thursday, April 23, at 8:20pm

*See the syllabus for guidance on how to prepare the case write-up. The write-up should be in a form of consulting report, do not use a Q&A format.*

In the case analyses you should take the perspective of an external consultant to the decision maker(s) in the case. The group write-up should consist of a short executive summary that outlines the recommended course of action and a brief description of the logic for the conclusion. The bulk of the write-up should consist of a presentation and defense of the logic that leads to the recommendations. Do not forget to cite the pros and cons of your recommendation(s). Each write-up should be limited to three pages of text (typed, 1.5 spaced, 12 font with reasonable margins) and no limit to the number of pages of supporting tables, graphs and spreadsheets. For each case, I will provide discussion questions, but these should be used solely to help start your group analysis. The actual write-up should not be in the form of answers to those questions. Also, do not spend time reiterating information given in the case. I am more interested in your analysis and solution to the problem. Assume that I have read the case and adequately understand the issues. Also, bring a copy of your case write-up with you in class as you will be expected to contribute to the class discussion based on your written answers.

1. What are the principal sources of uncertainty facing Aqua Bounty? Does it make sense for the firm to launch an IPO now? (**2 pts**)

2. Baseline revenues and projections for AquAdvantage’s revenues and costs are given in Exhibit 5. Note that they will be realized only if FDA approval is received for the product. If FDA approval is received, the company estimates that there is an equal chance of each of three commercialization scenarios occurring. Under the “low” scenario, revenues would be 75% lower than under the baseline; under the “high” scenario, revenues would be 75% higher than under the baseline; the baseline scenario is given in Exhibit 5. In all three scenarios, COGS would be 20% of revenues, and annual SG&A costs of £4 million plus 5% of revenues will be incurred. Product commercialization costs will be the same in all three scenarios, as shown in Exhibit 5. (**4 pts**)

1. Build a simple cash flow model for AquAdvantage’s, assuming that FDA approval is received. Use this to calculate the value of the product line under each of the three scenarios. Assume that Aqua Bounty will face FDA approval costs (associated with its regulatory trials and submissions) of £2.5 million per year for the first three years. Assume no interest payments as the firm’s debts will be paid in full using proceeds from the IPO. The firm has a tax rate of 35% and unlevered cost of capital of 14%. For each scenario, calculate:
2. The PV of the product commercialization costs
3. The PV of the free cash flows from the product line, not including commercialization costs and FDA approval costs. *(Note that the FDA approval costs and the product commercialization costs will create Net Operating Losses, which can be carried forward for up to 20 years, and which create tax shields when the firm is profitable. That’s why, I would suggest you first calculate the FCFs taking these costs into consideration, then add the costs back to the FCF.)*
4. What is the value of the AquAdvantage product now (in year 2005) based on real option valuation? **The real option is the option to commercialize the product if FDA approval is obtained; the FDA approval is NOT a real option.** Use the B-S option valuation spreadsheet (BS option pricing.xlsx) that is posted on Blackboard. Think carefully about what is the exercise price and what is the value of the underlying in this real option.