**Pymaceuticals Inc. Drug Screening Analysis**

Over a 45-day treatment period, 250 mice were treated with 10 different drugs, including placebos, in order to screen for an effective treatment for squamous cell carcinoma (SSC). From this thorough drug screening, three conclusions were drawn:

**Conclusion 1: Capomulin has the greatest potential as a viable drug for SSC.** As shown in all four of the graphs from the study, this drug has produced positive results over other drugs. In the graph depicting tumor response, Capomulin enabled a decrease of tumor size and volume. This is supported by the graphs depicting tumor change over time. There was a 19% decrease in the tumors in mice that were treated with this drug and those mice had a greater survival rate than those who were treated with other drugs, evidenced by the survival during treatment graph.

**Conclusion 2: No drug is completely effective in reducing metastatic sites over time.** Mice that were tested with Capomulin had the lowest metastatic change compared to the other drugs, Infubinol, Ketapril, and the Placebo. On average they had one or less than one site where there was metastatic change. On the contrary, the mice group who were given the Placebo generally had two or more metastatic sites as the treatment period progressed. This result was on par with Ketapril, which had a slightly lower average, but became equal with the Placebo group in the final days of the treatment period.

**Conclusion 3: Ketapril is the one of the least effective drugs in treating SSC.** While it did not contribute to a lower survival rate of mice like those that were treated with Infubinol, Ketapril was the least effective in reducing tumor size and volume over time. As stated in Conclusion 2, mice treated with Ketapril trailed the Placebo group in having two or more metastatic site develop. In addition, it had the largest growth in tumor volume among the group of drugs studied; mice treated with this drug had on average a 57% increase in their tumors, compared to 51% from the Placebo, 46% from Infubinol, and a 19% decrease with Capomulin. Survival rates for the Ketapril group decreased dramatically after about ten days. Although there seemed to be a slight increase in survival between Day 15 and Day 25, eventually the rate decreased. It is the only drug to have had that kind of change, before finally decreasing. This slight increase warrants further investigation, in order to eliminate potential contamination or other variables that may have led to the increase in the survival rates for a short time.