**Work the past few weeks:**

**-** Didn't fully solve the NMR puzzle but pushed forward

**-** Formed gels at all variable levels, chose malemide to Furan ratios (0.5:1, 1:1, 2:1) and did these ratios for both the high mw and low mw HA gels.

**-** Gel formation time vastly differed with low mw low ratio taking close to 18-36 hrs to form a gel that did not dissolve in PBS while high mw gels formed in 3-4 hrs (taking a closer look at gel formation with the second round of swelling experiments.

**-** After gels were formed a preliminary run was performed of swelling with the two gels at each level that had been used to prove gels would form.

**-** Swelling was analyzed and showed an unexpected trend the hypothesis would expect swelling to decrease as the M:F ratio increased but the data indicated the opposite trend

**-** This was also different from the paper who found a decrease in swelling from the low to mid range but that swelling increased from mid to high because of a higher PEG concentration in the gels.

**-** My hypothesis was based on the concept that as gels get stiffer they will swell less. This data will either be confirmed or appear more confusing after rheometry experiments next week.

**Work for this week:**

**-** Perform larger scale swelling study on the High molecular weight with n=5

**-** Look at Flory Rhener calculations