**RISE Talks Series**

Who? Neal C. Connors, Ph.D.

What? Feedstock Chemicals from Biomass (and the Art of French Cooking)

When? 12:00-1:00 on Thursday, November 6

Where? Hall of Sciences, Room 326

All of the materials (fibers, coatings, plastics etc.) that are part of our daily lives are made from just a handful of feed-stock chemicals derived from petroleum. Can functional replacements of these petroleum-derived feedstock chemicals be identified and produced from the almost 1.3 billion tons of dry biomass (equivalent to ≈1.5 billion barrels of petroleum) generated in the United States? In 2004, the DOE published a report describing a group of 12 replacement chemicals that can be produced from biomass. Among them, using synthetic biology approaches in Kristala Prather’s Lab at MIT, glucaric acid and 3-hydroxybutyrolactone can conceivably be produced by glucose fermentation of engineered *E. coli* strains. In addition to an overview of feed-stock chemicals that can be produced from biomass, I will discuss the contribution of Drew students to the glucaric acid and 3-hydroxybutyrolactone projects.