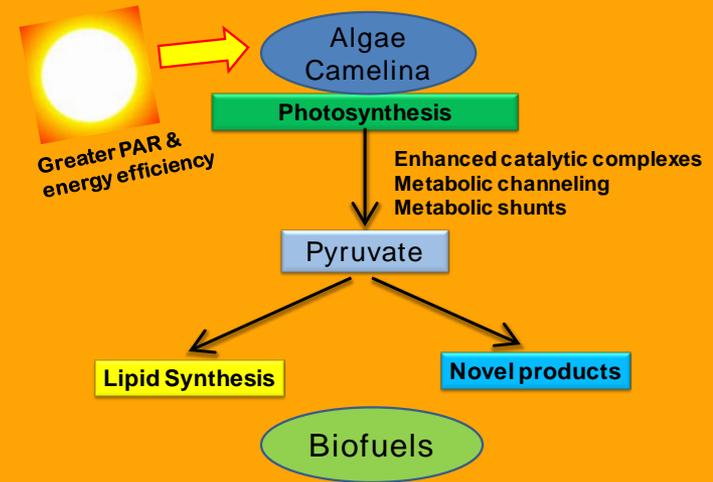


The objectives of the **Center for Advanced Biofuel Systems** are to increase the thermodynamic and kinetic efficiency of biofuel production systems using rational metabolic engineering approaches coupled with the expression of enhanced enzyme catalytic complexes.

### Center for Advanced Biofuel Systems



## RESEARCH PLAN AND DIRECTIONS

To achieve our objectives we will: 1) employ novel protein catalysts that increase the thermodynamic and kinetic efficiencies of photosynthesis and oil biosynthesis in algae and the oil seed crop, camelina, 2) engineer metabolic networks to enhance flux and channeling towards lipid synthesis, and 3) engineer novel metabolic networks for biofuel production.