Synthesis of 11-cis-retinol and Its Incorporation into FeO Nano Particles

Sheng Lin, (Dr. Jon Rainier)

The light sensitivity of 11-cis-retinoid makes it an ideal chromophore. Since retinoids are not synthesized in human, eyes have evolved a unique recycling mechanism for generating 11-cis-retinal at retinal pigmented epithelium (RPE). The goals of my research are to synthesize 11-cis-retinol, attach it to phosphoric acid derivatives, and bind this complex to FeO Nanoparticles directly in order to deliver 11-cis-retinol as a therapeutic for eye diseases like macular degeneration and Leber’s Congenital Amaurosis (LCA).