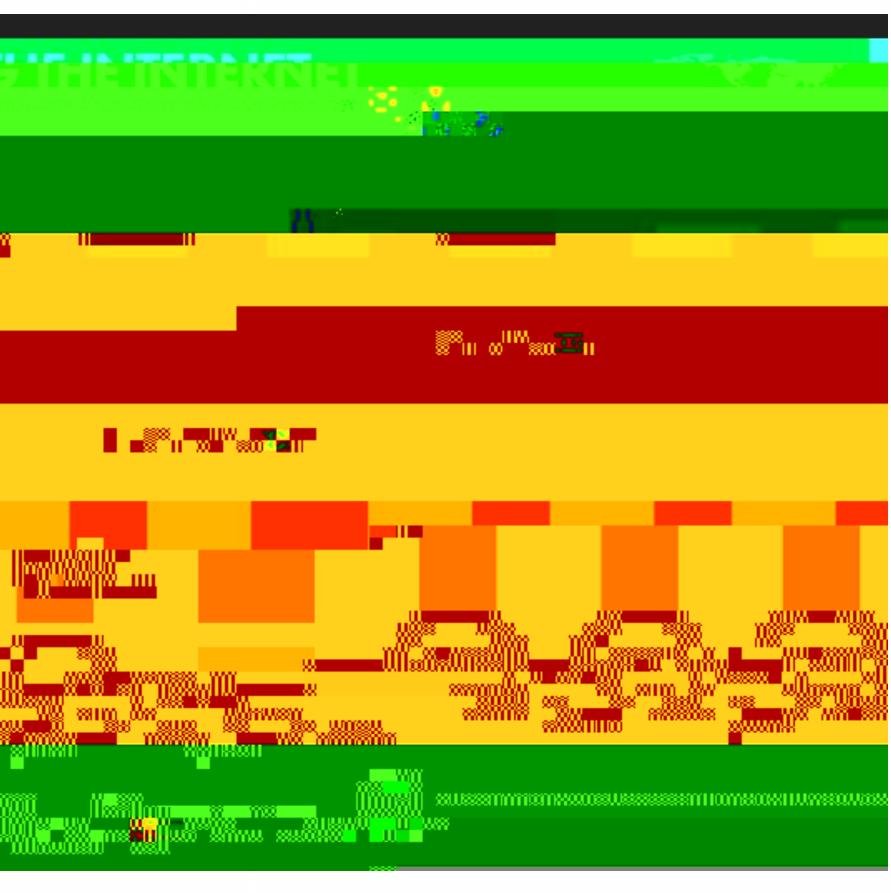
To examine the effect short wavelength artificial blue light has on melatonin, cortisol, and insulin as the mechanisms of hormonal health • To examine the effect short wavelength artificial blue light has on the circadian rhythms for sleep, behavior, and metabolism. RESPENTICING

## Group Advisor: David L. Pauer, MNO a Anderson, Joana Balliu, Zachary Fine, Nawar Yared



- by average 16 minutes.
- Exposure to Blue Light before bed 4.5 to 7.2 times per night.
- Short wavelength blue light 60 minutes before bed led to maximum of 80% Melatonin suppression.
- hours.
- Can cause metabolic changes at night which increased peak blood glucose levels and insulin resistance.
- Irregularities in circadian rhythms can result in worsening of depressive patterns and diet.



Results • Exposure shortened REM cycles of sleep increased sleep disruptions from average • Induced phase shifts in circadian rhythms, leading to early release of cortisol by 2 hours and delayed suppression by 3.6

disorders and anxiety from poor sleep