



**Cornell University**  
**College of Human Ecology**

**Department of Human Development**  
**Adam K. Anderson, Ph.D.**  
**Email: aka47@cornell.edu**  
Martha Van Rensselaer Hall  
Ithaca, New York 14853-4401

March 20, 2018

Dear colleague:

My research studies factors that influences the human brains capacity to process information, including perception, attention and memory. One line of work examines the impact of color on brain function. Research suggests color can influence various aspects of cognition beyond perceiving color. In our own lab, we have been examining the role of different wavelengths on the ability to learn and the brain region supporting attention to and memory for learning. Using functional magnetic resonance imaging (fMRI), we have found that an individual's brain has unique color tuning, whereby certain wavelengths can facilitate or impair attention and learning. This opens the possibility that individual-specific color filters may be used to impact brain function for the better.

On the basis of these findings, we are currently conducting research specifically related to Irlen Syndrome and the impact of colored filters on visual stress. Our preliminary FMRI examinations of individuals with Irlen Syndrome, with and without prescribed Irlen color filters, revealed quite dramatic effects on the visual system as well as higher brain structures involved in learning. Consistent with a reduction in visual stress, the filters reduced the over activity of the visual system during visual stimulation and word reading.

As other researchers have identified specific irregularities in subsystems of the visual system in individuals with Irlen Syndrome, we are also conducting a more systematic mapping of the different components of the visual system during reading. Our analyses and data collection are ongoing to better characterize the neural bases of Irlen Syndrome and the beneficial effects of the prescribed color filters on the observed brain changes and associated cognitive symptoms.

Given our evidence of the impact of color on brain function in healthy individuals, we are very encouraged to see its useful application to individuals diagnosed with Irlen Syndrome.

Yours sincerely,

A handwritten signature in black ink, appearing to read "AKA", with a long horizontal flourish extending to the right.

Adam K. Anderson, PhD  
Associate Professor  
Human Neuroscience Institute  
Department of Human Development