LIGHT4HEALTH:

How Does Light Impact Health?

WE USE LIGHT TO CONTROL HOW WE PERCEIVE AND ENGAGE with environments in which we live, work and play. In turn, light affects our endocrine system and circadian rhythm and impacts our emotions, focus and performance. And the practical purposes to which we apply light are expanding dramatically. Light Research at Jefferson addresses a wide spectrum of questions on how we do—and could—use light, and how light affects human psychology and physiology. It includes both deep, field-specific investigations and interdisciplinary work engaging faculty from architecture and interior design to engineering and material science to basic bioscience and clinical care.

It also extends to education: Jefferson is a key partner in Light4Health, an international collaboration to develop an innovative health research-based academic curriculum in lighting design education. The project is underwritten by Erasmus+, the European Union's program that promotes infusion of research-based discovery back into education to address emerging societal needs. Jefferson's collaborators include universities in Denmark, England, Germany, Russia and Sweden.

Light4Health's researchers and design practitioners are developing a transdisciplinary curriculum on the intersection of lighting design and health research—integrating methods and tools from neurology, photobiology and neuroendocrinology, and findings from research in neurobehavior, psychophysiology of perception and behavioral, cognitive and environmental psychology.

Lyn Godley, associate professor of industrial design, is the project's principal investigator at Jefferson. She brings to bear both substantial design expertise and a talent for nurturing young designers—as well as a track record of developing innovative, cross-disciplinary curricula that link multiple design fields with business, engineering and science. Godley's key partner on the project is **George Brainard, PhD**, professor of neurology and widely respected director of Jefferson's Light Research Program—which, among its many projects, is working with NASA to develop and test lighting solutions to the disruption of sleep and circadian rhythms that astronauts experience during space flight. ■