



Icahn
School of
Medicine at
Mount
Sinai

*Light and Health
Research Center*

Lighting and Health Research Center

Partnership Package

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Why join the LHRC?

Partner with independent experts!

Partnering with the LHRC will position your enterprise on the cutting edge of lighting science backed by an internationally respected name in research and education. Because we are an independent third party that neither manufactures nor sells lighting products or services, we must partner with the private and public sectors to make the world a better, healthier place.

Take the inside track in a growing market!

You'll have an edge on your competitors by capitalizing on the science behind light's benefits for the health of people and the planet. You'll be on the inside track for innovative product and program development. You'll be better positioned to deliver superior products and services in a dynamic healthy buildings marketplace that's expected to see revenues of [\\$70 billion by 2030](#) in the commercial sector alone.

We're in it for the long haul!

The LHRC's faculty and staff have a long, proven record of providing manufacturers, non-governmental organizations, and government agencies with the foundations for change. At Rensselaer's Lighting Research Center, we established the world's first research and graduate education center dedicated to lighting. The LHRC is committed to extending this impactful tradition of bridging science to applications in a constantly evolving lighted environment.

We have a consistent yearly roster of high-value research projects!

The LHRC receives funding from a wide range of sponsors including government agencies, companies, foundations, not-for-profit organizations, and other entities. Current funding commitments equal approximately \$8.5 million. Some examples of our current projects include:

Funder	Project	Amount
National Institute on Minority Health and Health Disparities	Supporting health equity with bias-free pulse oximetry	\$2,842,533
National Institute of Occupational Safety and Health	Filtered eyewear to prevent light-induced melatonin suppression while maintaining visual performance and alertness in night-shift working nurses	\$2,677,066
National Institute on Aging	Using light therapy to improve sleep and cognition in older adults with mild cognitive impairment	\$3,866,363
National Institute on Aging	Investigating the use of light to improve sleep, mood, and insulin sensitivity in people with Alzheimer's Disease and type 2 diabetes	\$4,138,838
National Cancer Institute	Investigating the use of circadian-effective light to improve outcomes for cancer patients undergoing stem cell transplants	\$4,285,680
US General Services Administration	Implementation of Design Guideline for Promoting Circadian Entrainment with Light for Day-Active People	\$249,779
European Commission	Improving citizens' health and wellbeing by better understanding the impacts of outdoor lighting	\$120,000
New York Farm Viability Institute	Amplifying the Power of Natural UV Light to Manage Fire Blight in New York State Orchards	\$124,957
US Department of Agriculture	Advanced UV LED Technology to Reduce Fungicide Use in Organic Farming	\$116,070
National Institute of Occupational Safety and Health	Coordination of vehicle lighting and markings for improved safety of frontline service workers	\$419,920

Why join the LHRC

We are respected in our field and known for high-profile publications!

Partnering with the LHRC will keep you on the same page as our research team, which has published 28 articles in widely read and respected, peer-reviewed journals and professional trade publications over the past year. Some examples of our publications include:

Author(s)	Title	Publication
Mariana G. Figueiro, John D Bullough, Allison Thayer, Rohan Nagare, Mark S. Rea	Supporting visual and non-visual lighting design without increasing discomfort glare or electrical power density	<i>Lighting Research & Technology (in press)</i>
Mark S. Rea , Andrew Bierman	LED spectra are the likely source of the systematic bias in pulse oximeter readings for individuals with darker skin pigmentation	<i>British Journal of Anaesthesia (2023)</i>
Mariana G. Figueiro and David Pedler	Cardiovascular disease and lifestyle choices: Spotlight on circadian rhythms and sleep	<i>Progress in Cardiovascular Diseases (2023)</i>
Jonas Kobbert, Anil Erkan, John D. Bullough , and Tran Quoc Khanh	A novel way of optimizing headlight distributions based on real-life traffic and eye tracking data part 3: Driver gaze behavior on real roads and optimized light distribution	<i>Applied Sciences (2023)</i>
Jonas Kobbert, Anil Erkan, John D. Bullough , and Tran Quoc Khanh	A novel way of optimizing headlight distributions based on real-life traffic and eye-tracking data part 2: Analysis of real-world traffic environments data in Germany	<i>Applied Sciences (2023)</i>
Jonas Kobbert, Anil Erkan, John D. Bullough , and Tran Quoc Khanh	A novel way of optimizing headlight distributions based on real life traffic and eye tracking data part 1: Idealized baseline distribution	<i>Applied Sciences (2023)</i>
Mark S. Rea , Andrew Bierman, Allison Thayer , Charles Jarboe, Mariana G. Figueiro	Standard observer watts: Evaluating the efficiency of circadian-effective luminaires using a standard observer methodology	<i>Lighting Research & Technology (2023)</i>
Mark S. Rea	The law of reciprocity holds (more or less) for circadian-effective lighting	<i>Lighting Research & Technology (2022)</i>
Mark S. Rea, Rohan Nagare , Andrew Bierman, Mariana G. Figueiro	The CS-Oscillator model: Improvements to Kronauer's model of the human circadian pacemaker	<i>Frontiers in Neuroscience (2022)</i>
Nicholas Skinner, Mark S. Rea, John D. Bullough	Effectiveness of the field application of UV-C for cucumber downy mildew control	<i>Journal of Horticultural Sciences (2022)</i>
Sonali S Dasari, Maddison Archer, Nihal E Mohamed, Ashutosh K Tewari, Mariana G Figueiro , and Natasha Kyprianou	Circadian rhythm disruption as a contributor to racial disparities in prostate cancer	<i>Cancers (2022)</i>
Priya Kaur, Nihal E. Mohamed, Maddison Archer, Mariana G. Figueiro , Natasha Kyprianou	Impact of circadian rhythms on the development and clinical management of genitourinary cancers	<i>Frontiers in Oncology (2022)</i>

Become a partner!

Lighting Research Partnerships

\$30,000/year or \$25,000/year for a 3-year commitment

What has been researched and where is it going next? – Being a *Lighting Research Partner* gives you a seat at the table; allows you to collaborate and provide direction on research initiatives, and pool resources with other Partners to conduct cutting-edge pilot research to leverage larger grant opportunities from state and federal sponsors.

Partner with one of the research programs:

Research program	Director	Program mission
Light for Human Health	Mariana Figueiro	To better understand the lighting characteristics (i.e., amount, spectrum, timing, duration, and distribution) required for the circadian system and to develop effective applications for maintaining healthy circadian rhythms to improve the symptoms and lives of those living with Alzheimer’s disease, depression, jet lag, or sleep disorders
Light for Transportation Safety	John Bullough	Evaluate lighting for the promotion of visibility, comfort, safety, and security for vehicles and road networks, as well as airplanes and runways
Light for Energy Efficiency	Jennifer Brons	Maximize the effectiveness of lighting while minimizing its negative collateral effects on people and the environment
Light for Plant Health*	Nick Skinner	Develop sustainable plant disease management solutions using the latest lighting and UV technologies, apply research results in practice for a greater understanding of their applicability, and educate stakeholders on the use of lighting and UV technologies to control plant diseases

View more details about the *Lighting Research Partnership* agreement on page 6.

*Membership to join the *Light for Plant Health Partnership* is \$20,000/year or \$15,000 for 3-year commitment

Lighting Education Partnership

\$5,000/year

Director: Dan Frering

How do we broaden educational outreach? – Being a *Lighting Education Partner* affiliates your organization with the LHRC and provides support for outreach education initiatives such as social media outreach, webinars, and other educational programs aimed at key end-users and decision makers. Two series currently deployed include [A View from Mount Sinai](#) and [Let’s Talk About Light and Health](#).

View more details about the *Lighting Education Partnership* agreement on page 7.

Lighting Research Partnerships

Lighting Research Partnerships are a collaboration of manufacturers, government organizations, codes and standards bodies, architects, specifiers, facility managers, physicians and others to fund cutting-edge research to improve the health of people and the planet.

MISSION

To conduct basic and applied research that will provide objective information to advance practical applications of lighting technologies to promote health, sustainability, safety, and well-being.

GOALS OF THE PARTNERSHIP

- Conduct pilot evaluations, demonstrations, and research projects to develop practical lighting devices and applications.
- Showcase new developments in the field to key audiences with particular emphasis on developing quantitative lighting specifications to advance the health of people and the planet.
- Develop collaborations among Partners and LHRC researchers to advance mutual interests and priorities.

BENEFITS

- Affiliation with an internationally respected name in research and education. Your company name and a link to your website is placed on LHRC's website and listed in LHRC outreach and communication materials.
- The LHRC appoints a lead researcher to work with your key people to answer questions, provide information, and discuss shared interests in research and education.
- Ability to provide input into the research direction of LHRC programs.
- 20% discount on our education programs. We can also develop custom-designed training to suit your needs.
- An exclusive invite to the LHRC's Online Partners Day Event, held annually, where we present our latest research results for you and your company employees, customers, and invited guests.
- Advance notice of conferences or technical meetings attended by LHRC faculty and staff, and opportunities to meet and discuss research ideas and priorities.

CONTRIBUTION

Lighting Research Partners are active in supporting the research and education strategic plan. *Lighting Research Partners* provide \$30,000/year to the program; a 3-year commitment to the program is \$75,000 (\$25,000/year)*. *Lighting Research Partners* serve as an advisory board to identify potential new research and educational directions. They work alongside the Mount Sinai Light and Health Research Center leadership to advance public policy and public awareness.

*Note that contribution to the Light for Plant Health Partnership is \$20,000/year or \$15,000/year for 3-year commitment

Lighting Education Partnership

Education in the lighting market chain has traditionally focused inward on those in the lighting industry and specification communities, with the goal of pushing new lighting products into the market. To create interest and excitement in what lighting can do to enhance the wellbeing of people and the planet, we need to create a market pull by focusing education toward lighting end users. The *Lighting Education Partnership* is a collaboration among businesses, organizations, government agencies, and other entities interested in promoting meaningful and effective education to all segments of the lighting market chain, but focused on end-use decision-makers to create a vibrant lighting industry based on benefits and the value that lighting provides.

MISSION

To develop and deliver high-quality educational programs that will expand understanding of the value of lighting among end-use decision makers, while providing technical information to assist lighting, building, and other professionals to use light more sustainably to provide the greatest benefit to the wellbeing of people and the planet.

GOALS OF THE PARTNERSHIP

- Broaden the stakeholders in lighting.
- Work with *Lighting Education Partners* to design, develop, and deliver educational programs that will broaden understanding of the value of lighting to a wide range of audiences.
- Offer continuing education opportunities in key areas related to lighting including light's effects on human health and well-being, lighting and safety, transportation, energy-efficiency, lighting and plant health, and the impacts of lighting on the environment.
- Engage a wide range of stakeholders interested in the effective use of light to participate in education and training programs.
- Provide professional development opportunities in lighting to underserved communities, women, minorities, and others currently underrepresented in the lighting industry and the practice of lighting.
- Assist professionals involved in lighting and related fields to advance in their careers through participation in education and training in lighting.
- Offer quality, engaging education in lighting through a variety of modalities including online, in-person, practical, workshop, and field-based programs.
- Host periodic conferences, symposia, seminars, and meetings that will include presentations, posters, discussion groups and other activities to promote the mission of the *Lighting Education Partnership*.

BENEFITS

- Participation in the Light and Health Research Center's (LHRC's) annual *Partners Day* conference.
- Receiving regular updates on LHRC educational activities.
- Being listed as a *Lighting Education Partner* on the LHRC web page. Input into the education and training activities offered by the LHRC.
- Discounts on registration for education and training programs offered by the LHRC.

CONTRIBUTION

Lighting Education Partners are active in supporting the education and training programs offered by the LHRC. *Lighting Education Partners* provide a minimum of \$5,000 per year to the program. A representative from each *Lighting Education Partner* organization serves as an advisor to the education program at the LHRC. *Lighting Education Partners* work collaboratively with the faculty and staff of the LHRC to deliver high-quality education and training opportunities in lighting.