

New clinical study probes how light fights psoriasis

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Bright lights. By studying psoriasis patients treated with narrowband ultraviolet light in a light box (above), researchers hope to learn how phototherapy fights the skin disease at the molecular level.

Ultraviolet light is a proven treatment for psoriasis, one of humanity's oldest known diseases. Sunshine can also beat back the chronic autoimmune disorder of the skin. But explaining light's therapeutic effects has been difficult. "We know it works, but we want to know how," says Michelle Lowes, an assistant professor of clinical investigation in the Laboratory for Investigative Dermatology at Rockefeller University. "Does it target the pathways that we think are

important in the disease?”

A new clinical trial under way at the Center for Clinical and Translational Science in The Rockefeller University Hospital will literally shine light on the disease in hopes of finding out. Researchers, including Lowes and Clinical Research Nurse Practitioner Patricia Gilleaudeau, have recruited the first of what will be 20 patients who will visit the hospital three times a week for up to four months to receive narrowband ultraviolet light B (UVB) treatment. Patients will give skin and blood samples as the treatment takes its course, giving the scientists the possibility to study what is happening at the molecular level as the skin gets better.

UVB therapy is known to kill off [T cells](#), which are partly to blame for the inflammation caused by the disease. For years, Lowes has been systematically accounting for the cell types and proteins involved in the disease. She is specifically interested in whether UVB targets a pathway involving two immune system proteins called cytokines, which she believes may disrupt certain types of T cells and another specialized group of immune-directing [dendritic cells](#). “If we can define the mechanism of action we may potentially have new therapeutic targets for [psoriasis](#) and other diseases,” says Lowes, the recipient of a 2008 Doris Duke Charitable Foundation Clinical Scientist Development Award, which is supporting the study.

Doctors often recommend UVB therapy if standard ointment treatments fail and if patients would rather avoid a systemic immunosuppressive drug regimen that has been developed more recently. Patients receive the treatment, brief blasts of UVB, standing inside an upright cabinet whose inside is lined with fluorescent tube lights. The duration of the light exposure increases over the course of the treatment.

In addition to providing free treatment to the study participants,

Gilleaudeau consults with the patients and their families and directs them to resources for getting the equipment they need to administer the treatment at home. “We try to help them continue with treatment after they leave whenever we can,” says Gilleaudeau, who will staff a table for The Rockefeller University Hospital May 3 at the National Psoriasis Walk for Awareness in the New York Botanical Garden. “We want to help.”

Lowes hopes to have some preliminary results in about a year. “We are excited about studying this commonly used therapy for psoriasis with modern methods, and hope that this will lead to a better understanding of this complicated and common skin disease,” she says.

More information: Clinical study: [Narrowband UVB Phototherapy in the Treatment of Psoriasis Vulgaris](#)

Provided by Rockefeller University ([news](#) : [web](#))

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