

# The Chronicle

of **SKIN** & ALLERGY

PRACTICAL THERAPEUTICS and CLINICAL NEWS from the WORLD of DERMATOLOGY ■ AUGUST 2019

## Options for Tx of psoriasis continue to increase

■ New pathways under investigation, even as many patients achieve PASI 90 on some of the biologics now available

see page 4

### Diagnosis

## Melanoma: Patients concerned about ingredients in sunscreens

■ And new gene expression assay may reduce need for biopsies

by LOUISE GAGNON,  
Correspondent, The Chronicle

**P**atients may be concerned about the ingredients of sunscreens and potentially confused regarding the need to acquire Vitamin D through UV exposure to maintain bone health, according to Canadian dermatologists interviewed by THE CHRONICLE.

“There are concerns about sunscreens and the environment,” said Dr. Jason Rivers, medical director, Pacific Derm, Vancouver, and clinical professor, Department

of Dermatology and Skin Science, University of British Columbia.

“There are concerns about whether we should be using sunscreens that contain agents like oxybenzone because these agents are having an effect on the environment.”

There is science suggesting



Dr. Jason Rivers

that oxybenzone can seep into the ocean and ultimately bleach coral reefs. Hawaii plans to put into effect a law that would ban the sale of sunscreens containing oxybenzone and octinoxate. This issue was recently explored extensively in the literature (*J Am Acad Dermatol* 2019 Apr. 4).

“This needs closer scrutiny,” said Dr. Jennifer Beecker, assistant pro-



Dr. Jennifer Beecker

### Comorbidities

## Depression may increase risk of developing vitiligo

■ New research indicates that vitiligo may present following a depressive episode

by JOHN EVANS,  
Senior Editor, The Chronicle

**W**hile it has been known that patients with vitiligo are at elevated risk of depression, there has also been anecdotal evidence of an association in the opposite direction—vitiligo appearing after a depressive episode.

In an effort to confirm and study this bidirectional association, a team of researchers from the University of Calgary—led by Dr. Isabelle Vallerand, a dermatology resident and epidemiologist at the Cumming School of Medicine, University of Calgary—examined records from The Health Improvement Network database, following incident major depressive disorder (MDD) and referent cohorts until the development of vitiligo. The findings were published in *Journal of the American Academy of Dermatology* (May 2019; 80(5):1371–1379).

Using extensive data from The Health Improvement Network database allowed for the study of a very large sample—more than 400,000 in the MDD cohort and approximately six million in the referent cohort—and to follow some of those individuals for as long as 26 years.

“We had data not only on whether patients had vitiligo or



Dr. Isabelle Vallerand



Dr. Ryan Lewinson

### Melasma

## Photobiomodulation may be effective in Tx of melasma

■ Home-use IR light devices could reduce risk of UV-induced hyperpigmentation

by JOHN EVANS, Senior Editor, The Chronicle

**F**indings from a small pilot study suggest that pulsed photobiomodulation with infrared light can significantly improve dermal melasma, and possibly also precondition the skin to be more resistant to future ultraviolet (UV) exposure.

Please turn to **Melasma** page 14→

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## Melasma: Microdermabrasion plus IR light provides benefit

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Unlike static benign pigmented lesions like lentiginos and seborrheic keratosis, melasma is a dynamic pigmented disorder in which hormonally-triggered unstable hyperactive melanocytes are at play.

"I see close to 500 patients with melasma every year as part of my busy laser practice," said the study's author, Dr. Daniel Barolet, in an interview with THE CHRONICLE OF SKIN & ALLERGY. "Actually there is not much we can do [to treat melasma] because the pig-

mentation is located so deeply in the dermis. When using medicated creams, it does not reach the hyperpigmentation. Also, you have to avoid pigment-specific lasers since they can exacerbate melasma."

Dr. Barolet is a dermatologist in private practice in Laval, Que., who specializes in laser

and other light-based therapies since 1991, and is a faculty lecturer (Dermatology Service, Department of Medicine) at McGill University School of Medicine. He is the director of RoseLab Skin Optics Research Laboratory, dedicated to cutaneous laser research.

To try and address this difficulty of targeting dermal hyperpigmentation, Dr. Barolet used a combination approach. First, microdermabrasion was utilized to remove dead cells from the surface of the skin, and to mechanically mobilize inflam-

matory cells. Then the pigmented area was illuminated with non-thermal infrared (IR) light of a wavelength that could penetrate to the depth desired to reach the pigment.

In the split-faced pilot study, published in the *Journal of Clinical and Aesthetic Dermatology* (Apr. 2018; 11(4):28-34), seven patients with bilateral dermal melasma that had not responded to other treatment received the combination treatment in a controlled form weekly for eight weeks. The patients were followed out to 12 weeks.

"We did the microdermabrasion on both sides first, and only one side was illuminated with the infrared light. But the patient could not realize which side was treated [with the light], because infrared light is not perceptible by the human eye," he said.

"We were able to show some significant results [in pigment reduction] on the treated side."

### Combination approach used

Beyond the improvements in current melasma hyperpigmentation, though, he said that some of the improvements seen over the full duration of the study were due to the treatment making the skin more resistant to future UV exposure—thereby lowering the risk of recurrence.

In the paper, Dr. Barolet noted that prior in vitro research suggests that fibroblasts exposed to near-IR light incurred protection against future UV damage through down-regulating the tan-response-associated p53 cell signalling pathway.

"We did the study in the summer, and since we were doing a weekly treatment to treat the hyperpigmentation, we were also building up a certain resistance in the skin."

If this preconditioning is indeed occurring, it opens up the possibility of small, inexpensive, home-use IR light devices for melasma patients to reduce their risk of UV-induced hyperpigmentation.

"Since melasma does not cover a very large surface, patients could have small units at home and do treatments every two days," he said.

The next step is to try and replicate these findings in a larger population.

"We are planning to do a study with 30 patients, and do a regular treatment at the beginning of every week, and then every two weeks for six months," he said. "Also, we plan to do skin biopsies, and do markers on these biopsies to see what [the combination treatment] does histopathologically."

That study is also planned to trial a combination of different IR wavelengths, to reach pigment at different depths within the dermis. "So you are going at several levels to reach additional hyperactive melanocytes," he said.



Dr. Daniel Barolet

## Please consider making a gift to

### Camp Liberté



Camp Liberté was created by a group of dermatologists dedicated to offering children with moderate to severe skin conditions an opportunity to enjoy a summer camp experience. With locations in eastern and western Canada, Camp Liberté hosts more than 40 children per summer at no cost to parents, thanks to the support of generous donors.

Our camps are fully equipped and staffed with volunteer dermatologists, residents and nurses to care for children with a wide range of skin conditions, including severe atopic dermatitis, epidermolysis bullosa, and alopecia areata.

### How Can You Help?

A gift to Camp Liberté provides Canadian children with skin conditions an opportunity to grow in confidence and self-esteem through a multi-cultural outdoor camping experience in a fun, safe, bilingual, environment.

Donations are used to cover the costs associated with medical supplies and children's camp experience. A charitable tax receipt will be issued for all donations.

"We are so incredibly proud of what Camp Liberté has been able to accomplish for young patients. Children return from camp better equipped to take an active role in their own treatment, and with a new perception of their skin condition. This, together with the feeling that they are not alone in their experience, leads to a newfound confidence."

—Dr. Danielle Marcoux, Camp Liberté Society President

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Dr. Danielle Marcoux, Camp Liberté Society President, pictured with a camper

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Camp Liberté,  
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Chronicle Companies is pleased to support Camp Liberté with monetary and in-kind donations through Sandi's Fund, established to honour our late friend and colleague, Sandra Gail Leckie, RN. Sandi was a nurse, pharmaceutical industry executive, and health educator who had a lifelong affinity for children and children's charities.

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