AAD
# DermWorld meeting news
A Publication of the American Academy of Dermatology | Association
**Saturday** • March 9, 2024

See Exhibit Hall floor plan and exhibitor listing.
**PAGES 12-14**

# Genetics and environment affect hair loss in women

## Effective medical and supportive treatments are available.

Every day can be a bad hair day for patients with female pattern hair loss. Most often experienced as frontal accentuation, it begins as a widening of the hair's part and progresses to thinning hair on the top and crown of the scalp.

In Friday's session, F007 – Hair Loss in Women, Elise A. Olsen, MD, FAAD, a professor of dermatology at the Duke University School of Medicine in Durham, North Carolina, presented an overview of the key features of female pattern hair loss, including a miniaturization of dermal papillae effected hairs, a shorter anagen phase, as well as a longer resting state, decreased hair density, and hair loss in a cicatricial pattern.

"The most important thing is for clinicians to make the right diagnosis of female pattern hair loss, which can be made on clinical grounds alone in most cases," Dr. Olsen said. She outlined the pharmacology of effective treatment strategies, including topical and low-dose oral minoxidil, 5-alpha reductase inhibitors, such as oral finasteride and oral dutasteride, topical finasteride, and oral antiandrogen medications.

### Common causes

Central centrifugal cicatricial alopecia and frontal fibrosing alopecia are common causes of female pattern hair loss. Why do they happen? Amy J. McMichael, MD, FAAD, professor of dermatology at Wake Forest School of Medicine in Winston-Salem, North Carolina, discussed whether genetics or the environment are responsible.

"Evidence shows a genetic association that may be driven by the HLA-B*07:02 gene," Dr. McMichael said. Recent data suggest that topical Janus kinase (JAK) inhibitors may be an effective treatment for frontal fibrosing alopecia. "That's why we need genetic profiling. It can tell us how to treat our patients," Dr. McMichael said.

### "Your hairstyle shouldn't hurt."

Dr. McMichael also weighed in on the effect of sunscreen and hair relaxers in the pathogenesis of alopecia.

"There's no direct association between sunscreen and frontal fibrosing alopecia," Dr. McMichael said. "I tell my patients, 'Don't stop wearing sunscreen,' but with chemical relaxers, we can't say for sure. Mechanical tension from tight braiding can be a factor with traction alopecia. To help your patients avoid this condition, tell them, 'Your hairstyle shouldn't hurt,'" Dr. McMichael said.

### Algorithm is gonna get 'cha

Jerry Shapiro, MD, FAAD, professor and director of disorders of the hair and scalp at New York University's Grossman School of Medicine in New York, presented a treatment algorithm for frontal fibrosing alopecia in patients with active disease, which included tacrolimus in cleanser, plus clobetasol solution and minoxidil solution or oral prednisone. The treatment choice is dependent on whether the disease is slowly or rapidly progressing, he said.

### Options for stability

"Early intervention can potentially avert scarring and secondary complications," Dr. Shapiro said. "I can stabilize the condition in 70% of people, but you have to tell people there's a 30% chance that things may not work. It's also important for patients to know that when treatment is effective, it can take 10 months to see results," he said.

Dr. Shapiro also warns his female patients who have frontal fibrosing alopecia to avoid the use of chemical sunscreens and facial moisturizers with gallates, fragrances, linalool, and avobenzone/oxybenzone. Dr. Shapiro said there may be a link between the disease and these ingredients.

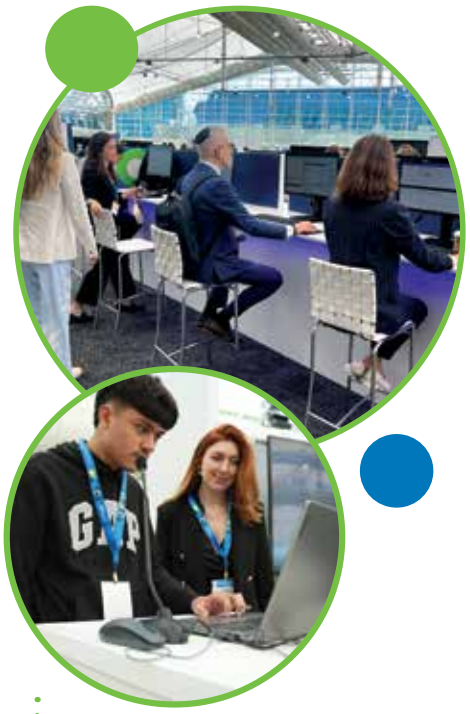
"My preferred sunscreens are mineral-based products, such as zinc oxide and titanium dioxide," he said.

Crystal Aguh, MD, FAAD, associate professor of dermatology at the Johns Hopkins School of Medicine in Baltimore, added to the session with a discussion of medical therapies for central centrifugal cicatricial alopecia, including oral and topical metformin.

"Topical metformin is truly a wonder drug, but patients need to be aware of the big side effects, such as stomach upset, increased fertility, lactic acidosis, and weight loss," she said.

Sergio Vano-Galvan, MD, PhD, IFAAD, concluded the session with a presentation on "Procedural treatments for hair loss: Mesotherapy with antiandrogens, injected triamcinolone, PRP, botulinum toxin, microneedling, and hair transplantation." ●

**Daylight Saving Time (DST) begins tonight!**
Turn your clocks forward an hour and don't miss a session!



## Don't miss ePosters and Presentations

*Sails Pavilion*

**ePoster Exhibits hours:**

**7 a.m.-5 p.m.**
Friday, March 8-
Sunday, March 10, 2024

**Oral Presentation hours:**

**8:30 a.m.-5 p.m.**
Friday, March 8-
Saturday, March 9, 2024

**1-3:30 p.m**
Sunday, March 10, 2024

# Inside

# I am modernizing dermatology

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# Who will be the future leaders of the Academy?

The Nominating Committee voted to present the following slate of candidates (listed in random order) for the 2024 Academy election of Officers, Directors, and Nominating Committee Member Representatives (West Region).

Visit the AAD Election Connection at **aad.org/election** to learn about this year's candidates and to interact with them on top issues via the online Ask the Candidates forum.

## President-Elect

*Murad Alam, MD, FAAD*

*Robert T. Brodell, MD, FAAD*

## Vice President-Elect

*Marc D. Brown, MD, FAAD*

*Larry Green, MD, FAAD*

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*Joseph Merola, MD, MSc, FAAD*

## Nominating Committee Member Representatives

*Cory Rubin, MD, FAAD*

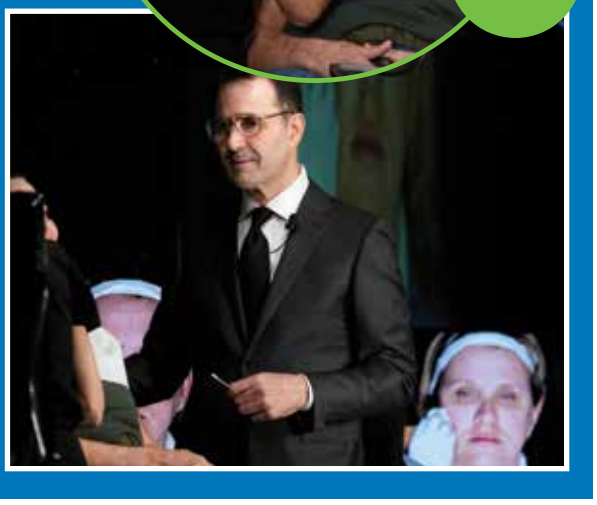
*Lindsay Ackerman, MD, FAAD*

## Easily vote using personalized voting link beginning March 9.

Eligible voting members can easily vote using their personalized voting link starting March 9. Watch your email inbox for voting reminders that include this link. Members can access the AAD Election Connection at **aad.org/election** to view/print the election ballot book and learn more about the candidates.

# Raising eyebrows

Experts from around the country demonstrated their techniques and treatment tips for such cosmetic procedures as FDA-approved fillers, neuromodulators, deoxycholic acid, chemical peels, and microneedling during Friday's live interactive session C002 – Live Demonstration: The State of the Art of Aesthetic Dermatology. Attendees watched as faculty assessed the aging face and treated areas of the face from brow to neck and a few select non-facial areas. Each area was treated by one of the faculty while another physician discussed the procedure.



## TODAY'S HIGHLIGHTS

**S024 – Contact Dermatitis**
**9 a.m.-noon**
*Location: Room 29D*

**S025 – JAK Inhibitors: A New Frontier in Dermatology**
**9 a.m.-noon**
*Location: Room 6B*

**S026 – Late-Breaking Research: Session 1**
**9 a.m.-noon**
*Location: Room 20B*

**S027 – Residents and Fellows Symposium**
**9 a.m.-noon**
*Location: Room 31B*

**S030 – Vitiligo**
**9 a.m.-noon**
*Location: Room 6C*

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**aadmeetingnews.org**


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# Root reactions

## Treating plant dermatoses with the right extract.

In the world of plant lovers, a green thumb may not always be a good thing. Some people experience significant cutaneous reactions when exposed to certain plants. And that requires a bit of detective work by the dermatologist.

Solving the mystery and bringing relief to patients was the focus of Friday's session, U003 – Welcome to the Jungle: Plant Dermatoses and Plant Extracts in Dermatology. Callie Burgin, MD, FAAD, from the Indiana University School of Medicine, served as the session's director.

Dr. Burgin discussed the mechanism of reactions and gave examples of plant species that cause each reaction with a focus on the most often encountered wild plant species and popular garden/house plants.


"Know common plants in your geographic area and the means of potential exposures," Dr. Burgin said. Cutaneous reactions are often caused by exposure to plants that can cause allergic contact dermatitis, phytophotodermatitis, mechanical and chemical irritant dermatitis, immunologic contact urticaria, and non-immunologic contact urticaria, she said.

Thorns and spines from cacti, thistles, prickly lettuce, berries, and grasses can penetrate the skin and become an abrasive injury, leading to a secondary infection.

Allergic contact dermatitis is often caused by toxicodendron genus (poison ivy, oak, sumac), but can be caused by several other common floral species and foods, including onion, garlic, and chive.

Ironically, plants — or plant extracts — can provide therapeutic applications to treat cutaneous reactions.

### Garden variety

According to Dr. Burgin, allergic contact dermatitis is the most common of all reactions. It is most often caused by toxicodendron genus (poison ivy, oak, sumac), but can be caused by several other common floral species and foods, including onion, garlic, and chive.

The most common immunologic-based rashes represent allergic contact dermatitis and urticaria. Non-immunologic-based rashes often result from physical injuries caused by thorns, leaves, or chemicals in the plant's sap or coating of the leaves, she said.

"Dermatitis occurs at the site of exposure, so taking a history of potential exposures can help identify a cause," Dr. Burgin said. "Even workplace exposures can contribute to [cutaneous reactions], such as food preparation workers, florists, etc."

### Leave it at work

For example, 95% of the time, immunologic contact urticaria is caused by workplace exposure. Immunologic contact urticaria, a hypersensitivity to IgE antibodies such as histamine, prostaglandins, kinins, and leukotrienes, may often be tied to long-term food handling, gardening, and landscaping, Dr. Burgin said. It's also associated with patients who have a history of an underlying dermatitis (atopic, irritant contact). Specific foods related to the condition include fresh fruits and vegetables, such as tomatoes, bananas, lemons, celery, onions, potatoes, and lettuce.

Similarly, exposure to certain other plants can cause mechanical irritant dermatitis, Dr. Burgin said. Thorns and spines from cacti, thistles, prickly lettuce, berries, and grasses, for example, can penetrate the skin and become an abrasive injury. This can lead to a secondary infection, she said, such as *Clostridium tetani, S. aureus, Sporothrix schenckii, Mycobacterium kansasii* (blackberries), *M. marinum* (cactus spines), and *M. ulcerans* (thorned tropical vegetation).

### Turning over a new leaf

Ironically, plants — or plant extracts — can provide therapeutic applications to treat cutaneous reactions. Dr. Burgin reviewed emerging use of plant extracts in dermatology including arnica, bromelain, and polypodium leucotomos extract.

Bromelain is an enzyme extract derived from the stem and fruit of the pineapple plant, Dr. Burgin said. One must use caution with bromelain as it can cause irritant contact dermatitis and stomatitis, but with appropriate use it may provide anti-inflammatory and analgesic benefits as well as relief from sinus congestion and sore muscles. Because it is beneficial in wound care, 35% bromelain included in a lipid base is used for debridement of necrotic, chemical wounds.

"Among the extracts, consider arnica and bromelain for bruising, swelling, and post-procedure wound healing; ginkgo biloba for vitiligo; and polypodium leucotomos fern extract for sun protection," Dr. Burgin said. ●

HAPPENING TODAY

# Attend today's Residents and Fellows Symposium

## Top researchers present.

Don't miss this morning's S027 – Residents and Fellows Symposium. This annual symposium is an opportunity to hear about groundbreaking research performed by dermatology residents and fellows. The top 18 projects are selected from a pool of over 100 applicants to give detailed summaries of their research.

The Everett C. Fox Award (formerly the Stelwagon Award) also is given at this time to the presenters of the most outstanding clinical and laboratory research. This $3,500.00 cash award is granted by the American Academy of Dermatology through an endowment created by Dr. Fox and is divided evenly between the top award recipients in both the clinical and basic science abstract categories.

Cory A. Dunnick, MD, FAAD, will lead this morning's symposium, giving attendees the opportunity to analyze advances in clinical and basic science research conducted by their dermatology residents and fellow peers and recognize emerging concepts in research of dermatologic disorders.

Presenters include, Savannah Alvarado, MD; Amber R. Atwater, MD, FAAD; Conor Broderick; Craig N. Burkhart, MD, FAAD; Robert Paul Dellavalle, MD, PhD, FAAD; Thomas Casey Gallagher, MD, FAAD; George K. Hightower, MD, FAAD; Nikolaj Holgersen, MD; Tyng-Shiuan Hsieh; Soodeh Kabir, MD, IFAAD; Seong Rae Kim; Anusha Kumar, MD, MS; Kyle Lauck, MD; Alessandra Michelucci; Fatima Mirza, MD, MPH; Lawrence C. Nwabudike, MD, MBBS, PhD, IFAAD; Lily Park, DO; Amy Petty, MD; Katherine Whang Rice, MD; Kevin Severson, MD; James Edwin Sligh, MD, PhD, FAAD; João Nuno Soares; Lin Xie; and Isara Yenyuwadee, MD. ●

**S027 – Residents and Fellows Symposium**
9 a.m.-noon
Saturday, March 9
*Location: Room 31B*

OPENS March 9
2024 AAD ELECTION
CLOSES March 23

## Your vote matters!

You will be able to watch presentations by the candidates for Academy president-elect during the Business Meeting.

**AAD/A Annual Business Meeting**
8-8:45 a.m.
Sunday, March 10
*Preceding the Plenary session*
*Room 20B*

Keep informed about the next AAD election through the **AAD Election Connection** at **www.aad.org/election**.

### Important dates:

**March 9, 2024**
AAD Election opens

**March 23, 2024**
AAD Election closes

**March 25, 2024**
AAD Election results announced

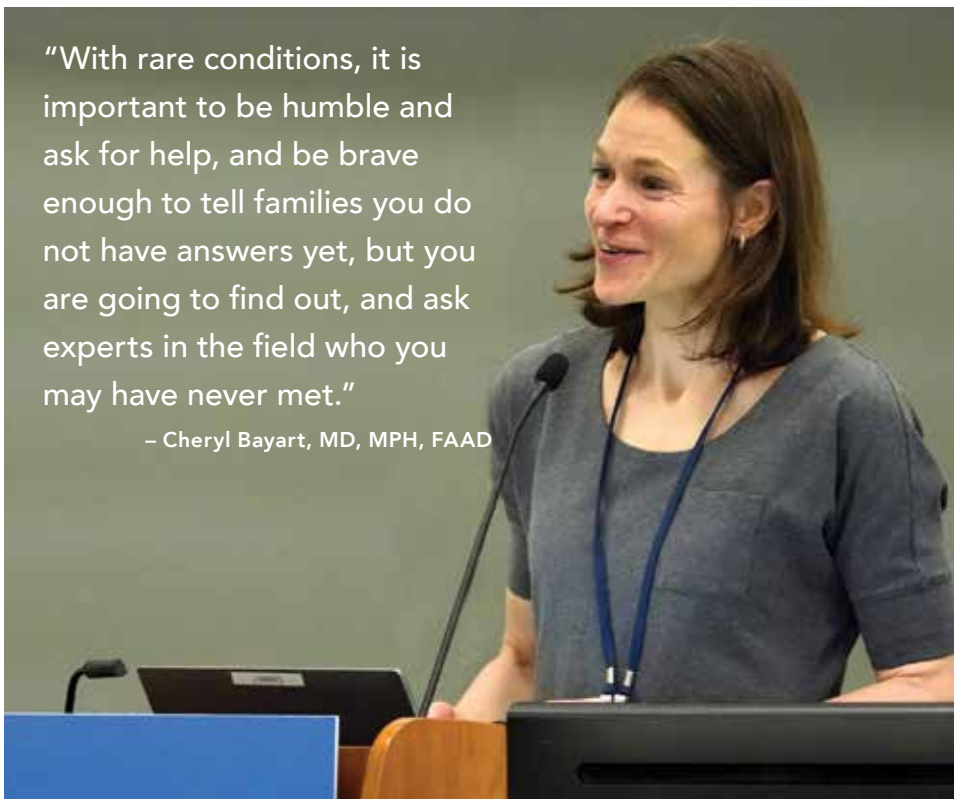
# Scratching the surface, and then some

## Experts explored the complexities of treating ichthyosis.

What makes an itch complex? During Friday's session, U010 – Think Like an Expert About Ichthyosis, a panel of dermatologists shared their expertise in managing patients with unfamiliar, uncommon, and complex skin disease.

Cheryl Bayart, MD, MPH, FAAD, assistant professor of dermatology and pediatrics at the University of Cincinnati, led the interactive discussion, which explored cases that often perplex dermatologists and lack established management guidelines or FDA-approved treatments. Dr. Bayart also credited Sarah Asch, MD, FAAD, who was not able to attend, with serving as her co-director and contributing to the session. Dr. Asch is a North Oak, Minnesota, pediatric dermatologist and chair of the Foundation for Ichthyosis and Related Skin Types (FIRST) Medical and Scientific Advisory Board, a patient advocacy organization dedicated to improving lives and seeking cures for those affected by ichthyosis and related skin types.

"The best approach for a rare disease is to marshal a broad scope of your available resources and partner with your patient and their family. With rare conditions, it is important to be humble and ask for help, and be brave enough to tell families you do not have answers yet, but you are going to find out, and ask experts in the field who you may have never met," Dr. Bayart said. "As dermatologists, we are accustomed to scouring the medical literature and reaching out to our colleagues for assistance with challenging cases."




### Scratching your head about ichthyosis?

According to Dr. Bayart, patients with rare conditions like ichthyosis often have practical questions about daily skin care or managing other aspects of life such as activities, travel, and school that are often beyond the expertise of their physicians.

Unfortunately, many dermatologists are inexperienced in the management of ichthyosis, she said. Treating a patient with the condition requires "true engagement with your patient and renewed curiosity about a disease process you may not have thought about since residency," Dr. Bayart said. Accessing a patient support group, such as FIRST, asking experts, and seeking information about clinical trials can help.

### A human condition

Any condition that causes an apparent physical difference can have a profound impact on a patient and their family, so it's important to tap the right emotional resources, she said. Sadly, some individuals with ichthyosis have been denied boarding on airline flights because someone thought their skin was infectious and have been turned away from common activities, such as blood donation. In another example, Dr. Bayart said babies affected by ichthyosis were depicted as mutants in a recent movie trailer. It has since been edited after FIRST and families advocated against the portrayal.

"These can be profoundly painful experiences, compounded by the grind of hours of daily skin care, which can be challenging and labor intensive. Because ichthyosis is so rare, affected individuals and their families often don't know anyone else who is affected, and feel very alone," she said. "It can be life-changing to connect with a community of individuals and families who are living similar experiences as well as to have a source of advocacy when needed."

According to Dr. Bayart, FIRST has a family conference every other year which can be the basis of life-long friendships, support, and identifying areas of advocacy for change. Dermatologists and resident physicians are welcome, and often attend after being invited by a patient to attend and learn.

"Seeing your doctor at a local conference dedicated to your rare condition is deeply meaningful, and an afternoon of the physician's time is a small commitment," she said. "Additionally, dermatologists need to complete referral forms for affected children and teens to attend Camp Discovery, a free camp for kids with skin conditions which is sponsored by the AAD."

### More than skin deep: genetic testing

In the management of ichthyosis, more attention is being given to the role of genetic testing. This move can be controversial because it changes the thinking of what dermatologists learned in residency, Dr. Bayart said. For example, most residents considered barrier creams and oral retinoids to be the only treatments for ichthyosis. This is no longer true, she said. With increasing knowledge of the underpinnings of disease, including the role of inflammation, treatments are rapidly emerging, including repurposing some biologics for treatment, and genetic diagnosis can help guide the future development of treatments.

"We are learning more about the effects of long-term inflammation on joints and metabolic processes, and that ichthyosis is more than skin deep," she said. "Genetic testing can to some degree help physicians provide patients with anticipatory guidance regarding clinical course and prognosis. Identifying the mode of transmission can help provide reproductive counseling."

Dr. Bayart pointed to the tremendous advances in genetic testing in recent years, including in the field of ichthyosis. For example, The Ichthyosis Project, led by Keith Choate, MD, FAAD, has played an integral role in identifying causative genes and characterizing genotype-phenotype correlations. As genetic research advances, dermatologists will be better equipped to identify targeted therapies to address the pathogenesis of each condition.

These therapies are often more effective and have fewer adverse effects than less targeted, more traditional therapies, Dr. Bayart said. One of the earliest and most striking examples of this is the use of compounded cholesterol-lovastatin cream to treat skin findings associated with CHILD syndrome (congenital hemidysplasia with ichthyosiform erythroderma and limb defects), which is caused by an abnormality in cholesterol metabolism.

"It takes a village to help patients with ichthyosis to live their best lives, and it is essential for dermatologists to be educated about, and not intimidated by, these conditions and play an active role in these patients' care," Dr. Bayart said. ●

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## Booth 3327

# Session for sensitive people

## Sun sensitivity triggers include the usual and not-so-usual culprits.

Photoallergic and phototoxic reactions can be triggered by any number of substances, including sunscreen, medications that are applied to the skin, certain fragrances, and even limes. Getting to the root of the reaction and finding the proper treatment requires a systematic approach.

Brandon Adler, MD, FAAD

**U059 – Fun in the Sun: Photocontact Dermatitis and Related Conditions**
7-8 a.m. | Sunday, March 10
*Location: Room 25B*

That's the challenge Brandon Adler, MD, FAAD, will tackle as the director of tomorrow's session, U059 – Fun in the Sun: Photocontact Dermatitis and Related Conditions.

Dr. Adler is a clinical assistant professor of dermatology at the Keck School of Medicine of the University of Southern California in Los Angeles.

"Limes can cause a phototoxic skin reaction with blisters or hyperpigmentation that can last for years," Dr. Adler said. "Something as simple as lime juice on a hot sunny day can do it."

### Know the condition to find the treatment

According to Dr. Adler, the detective work includes comprehensive steps, including patient history, diagnostic test results, understanding diagnostic and therapeutic reactions, and knowing who needs to be photo patch tested versus who doesn't.

"This systematic approach is really important because these are really impactful conditions," he said. "They decrease the patient's quality of life and a lot of times they can go on for years. You can really make a difference in a patient's life by sitting down and listening to them and taking a methodical approach to the situation."

One new development in recent years is the recognition that chronic actinic dermatitis, traditionally thought to mostly affect older, fair-skinned men, may develop in younger patients of color. Although the exact cause of chronic actinic dermatitis is unknown, Dr. Adler said this new understanding illustrates the need for dermatologists to expand their thinking when it comes to treating their patients.

"In reality, a lot of these sun reactions have been shown to be not uncommon in people with darker skin types," he explained. "So, it's important to not limit your thinking based on what the patient looks like. It's important to consider the whole patient and not put them in boxes based on skin type."

### To patch or not?

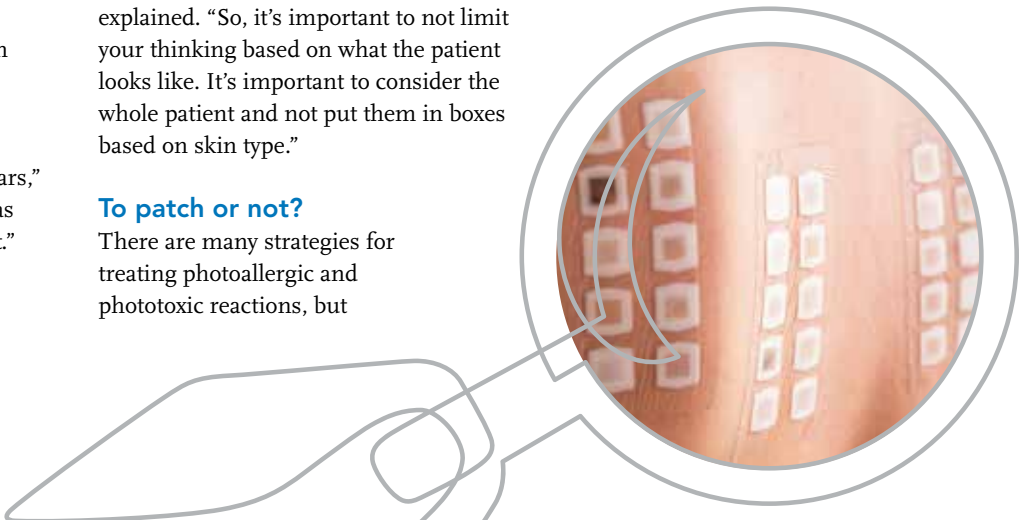
There are many strategies for treating photoallergic and phototoxic reactions, but Dr. Adler said there is one test that should be used more than it is.

"The key test in cases of photoallergy — the gold standard test — is the photo patch test. It's not nearly as widely performed as it should be," he said. "I think the reason for that is that a lot of dermatologists don't get adequate exposure to it during their residency."

In some cases, however, testing may not be indicated. In those instances, Dr. Adler explained that dermatologists will have to go another route.

"For phototoxic reactions, we highlight that this is a clinical diagnosis," he said. "There's not a test available because testing the patient for these substances can trigger a severe, nonspecific skin reaction."

Attend tomorrow morning's session to learn more from Dr. Adler, and from Vincent Anthony DeLeo, MD, FAAD, who is also presenting on this topic. ●



**Sun reactions are not uncommon in people with darker skin types. So, it's important to not limit your thinking based on what the patient looks like.**

### The detective work includes comprehensive steps:

- Patient history
- Diagnostic test results
- Understanding diagnostic and therapeutic reactions
- Knowing who needs to be photo patch tested versus who doesn't


# When your patients are **EVERYTHING**, your commitment stops at **NOTHING**

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# Exhibit Hall Map

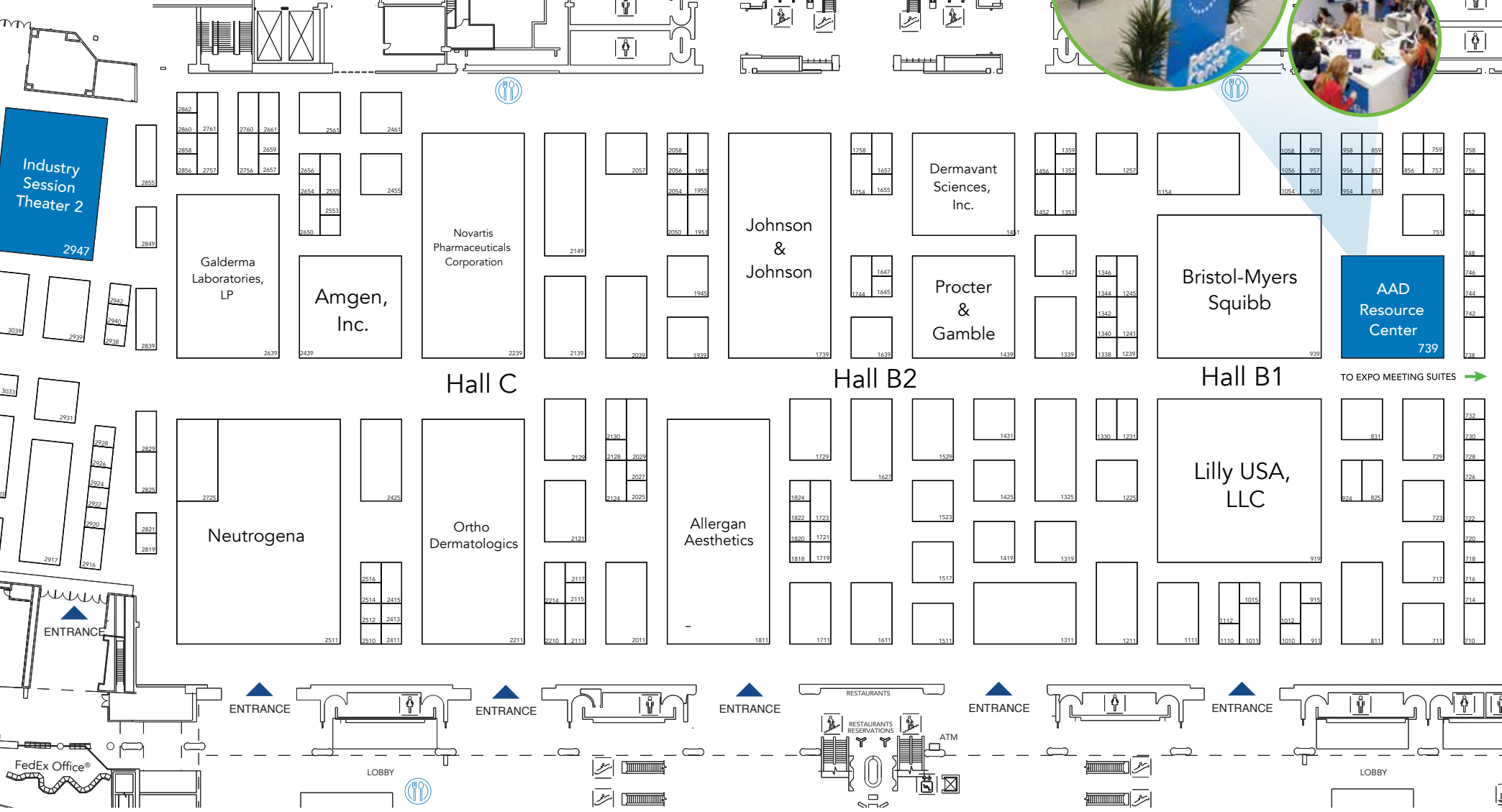
**Exhibit Hall hours**
Saturday | 10 a.m.-5 p.m.
Sunday | 10 a.m.-3 p.m.


# Exhibitor Listing

Data current as of Feb. 23, 2024. Please use the AAD Meeting App **aad.org/mobile** for the most up-to-date exhibitor list.

## 123 – D

## Sails Pavilion
## ePOSTERS & PRESENTATIONS

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# EXHIBITOR LISTING

*continued from page 13*



## J – N







## N – R



## S – V



## W – Z

# Follow @AADmember to win big at Annual Meeting!


#AAD2024

What could be better than being in San Diego with all your favorite colleagues? Winning daily giveaways, of course! The @AADmember accounts are hosting new **social media challenges each day of the 2024 AAD Annual Meeting, from Friday, March 8, until Monday, March 11**.

Each day, a post will be shared on Instagram and X (formerly Twitter) that will ask attendees to participate in a new type of challenge. One randomly selected winner will be chosen on each platform to receive a daily giveaway. Prizes will include everything from $100 gift cards to registration discounts for future AAD meetings. Attendees are encouraged to participate on both platforms to double down on the fun and increase their chances of winning. In addition to offering sizzling prizes, the @AADmember accounts will also be sharing tons of photos and updates about the meeting that you won't want to miss. Be sure to include the official meeting hashtag **#AAD2024** in all your posts to see if your content gets reshared by the AAD! ●


*For more information, see the official rules and regulations online at* aadmeetingnews.org/22886745 *or direct message @AADmember on X (formerly Twitter) or Instagram.*

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- Session schedules
- Exhibitor information
- CME
- Session evaluations

# Plenary to deliver insights, inspiration

Your sneak peek at what to expect.

**P151 – Plenary**
8:45-11:30 a.m. | Sunday, March 10
*Location: Room 20B*

**Henry W. Lim, MD, FAAD**
*Clarence S. Livingood, MD Award and Lectureship*

**"From Photodermatology to Global Skin Health"**
"Photodermatology is an integral part of dermatology. Phototherapy is widely used globally for treatment of dermatoses, different manifestations of photodermatoses in individuals with different skin types, and personalized photoprotection. Finding innovative ways to provide photoprotection and sunscreens for persons with albinism in low-income countries demonstrates that the understanding of photobiology, with the appropriate infrastructure and commitment, can help advance skin health throughout the world."

**Brian J. Druker, MD**
*Lila and Murray Gruber Memorial Cancer Research Award and Lectureship*

**"Imatinib as a Paradigm of Targeted Cancer Treatments"**
"I will highlight how fundamental discoveries directly translated into therapeutic benefits for patients with cancer and how this paradigm can be applied more broadly."

**Brian S. Kim, MD, FAAD**
*Marion B. Sulzberger, MD Memorial Award and Lectureship*

**"Starting From Scratch: The Itch Revolution"**
"Despite being historically overlooked, and its importance in medicine underappreciated, I will highlight how fundamental discoveries, coupled with rapid successes of new therapeutics, have placed itch biology at the forefront of a basic and translational revolution."

**Patricia A. Treadwell, MD, FAAD**
*John Kenney Jr., MD Lifetime Achievement Award and Lectureship*

**"Health Equity in Dermatology: What Can I Do?"**
"I think everyone would agree that health inequities exist in dermatology and our current approaches have not been successful in addressing these issues. A pertinent quote I plan to refer to from an unknown source is, 'Insanity is doing the same thing, over and over again, but expecting different results.'"

**Terrence A. Cronin Jr., MD, FAAD**
*2023 President, American Academy of Dermatology/ Association*

**Seemal R. Desai, MD, FAAD**
*2023 President-Elect, American Academy of Dermatology/ Association*

Following these presentations, the Plenary will finish with a presentation by guest speaker **William Shatner!**

# RESIDENT JEOPARDY RETURNS

## "Dermatology" for the win!

Have fun and learn with Resident Jeopardy.

**S044 – Resident Jeopardy**
1-4 p.m. | Saturday, March 9
*Location: Room 23C*

If you think S044 – Resident Jeopardy is just a game — well, in one sense it is. The camaraderie and competition bring out the fun in contestants. But the real objective is to give attendees the opportunity to self-assess core competencies across numerous domains in dermatology, identify gaps in medical knowledge, and interact and network with colleagues at similar career levels from various institutions across the country.

So, join your colleagues for this dynamic, fast-paced take on the classic television show, *Jeopardy!* Contestants representing various residency training programs will face *Jeopardy*-style queries and image-based inquiries encompassing the breadth of dermatology in the friendly competition. The session is open to all Annual Meeting attendees. Lida Zheng, MD, FAAD, and Kassandra E. Holzem, MD, FAAD, serve as hosts.

The final clue will be, "This institution emerged as the 2024 AAD Resident Jeopardy champion." Come to the session today and find out who it is! ●

# You must attend this year's AAD/A Annual Business Meeting!

**Terrence A. Cronin Jr., MD, FAAD**
*2023 President, American Academy of Dermatology/ Association*

**Daniel Bennett, MD, FAAD**
*Secretary-Treasurer, American Academy of Dermatology/ Association*

**AAD/A Annual Business Meeting**
8-8:45 a.m.
Sunday, March 10
*Preceding the Plenary session*
*Location: Room 20B*

To learn everything about what the Academy is doing and its plans for the future, you must attend the AAD/A Annual Business Meeting on Sunday, March 10, from 8-8:45 a.m. in Room 20B (preceding the Plenary session).

During the Annual Business Meeting, you will hear from AAD/A President Terrence A. Cronin Jr., MD, FAAD, and Secretary-Treasurer Daniel Bennett, MD, FAAD, about the AAD/A's state of affairs. The Annual Business Meeting is the cornerstone event of the meeting and puts all the Academy's efforts into context. And it's exciting. The Academy is doing a lot for its members and for all of dermatology.

**To make sure you don't miss this important event, please remember that Daylight Saving Time (DST) begins Sunday!** Turn your clocks forward an hour on Saturday night and don't sleep in on Sunday! ●

# Late-breaking research sessions start today!

## Investigators represent top-scoring works.

**S026 – Late-Breaking Research: Session 1**
9 a.m.-noon | Saturday, March 9

**S050 – Late-Breaking Research: Session 2**
1-4 p.m. | Sunday, March 10

*Both sessions are in Room 20B*

Harvard Medical School dermatology professor Hensin Tsao, MD, PhD, FAAD, will lead Saturday and Sunday's two Late-Breaking Research sessions, each serving as the backdrop to new and yet-unpublished results from an expansive panel of investigators.

Today's research represents all aspects of dermatologic research. Panelists presenting at the two sessions were selected after a competitive review and earning top-scoring studies. Session presentations will focus on practice-changing clinical trials, large population-based studies, innovative new transformative technologies, translationally relevant biomarker studies, and basic science research that sheds light on mechanisms of disease, therapy, or adverse events. All topics related to disorders of the skin, hair, and nails will be considered.

Upon reviewing the groundbreaking scientific developments uncovered in today's research, dermatologists will have the opportunity to evaluate and apply the new information to clinical practice. ●

# The AAD Resource Center is where it's at!

**Location:** Exhibit Hall, Booth 739

**Hours:** 10 a.m.-5 p.m. | Saturday, March 9
10 a.m.-3 p.m. | Sunday, March 10

**Complimentary professional headshots**
*Brought to you by CareCredit*

**NOW AVAILABLE!**


*Actor portrayal*

# ZORYVE®
## (roflumilast) topical foam, 0.3%

**DOWN TO AGE 9**

**Effectively control seborrheic dermatitis and simplify treatment with a steroid-free foam.**[1]

**One foam. Once a day. Anywhere.**[1]

# SebDone.

**DRAMATIC 77% IGA SUCCESS AT WEEK 8**[1,2]

Trial 203 and STRATUM studies evaluated ZORYVE (n=458) vs vehicle (n=225) once daily for 8 weeks in patients with seborrheic dermatitis. The primary endpoint was IGA Success at Week 8, defined as a score of *Clear* (0) or *Almost Clear* (1) and a ≥2-grade improvement from baseline.

ZORYVE is for topical use only and not for ophthalmic, oral, or intravaginal use.[1]

IGA = Investigator Global Assessment

A 2023 Arcutis survey of 93 adults diagnosed with seborrheic dermatitis found that an average of 15 products (including over-the-counter, alternative, and prescription treatments) were reportedly used on a yearly basis.[2]

## INDICATION

ZORYVE foam, 0.3%, is indicated for the treatment of seborrheic dermatitis in adult and pediatric patients 9 years of age and older.

## IMPORTANT SAFETY INFORMATION

ZORYVE is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C).

**Flammability:** The propellants in ZORYVE are flammable. Avoid fire, flame, and smoking during and immediately following application.

The most common adverse reactions (≥1%) include nasopharyngitis (1.5%), nausea (1.3%), and headache (1.1%).

**Please see brief summary of full Prescribing Information for ZORYVE foam on the following page.**

**See the results at zoryvehcp.com/foam**

**References: 1.** ZORYVE® foam. Prescribing information. Arcutis Biotherapeutics, Inc; 2023.
**2.** Data on File. Arcutis Biotherapeutics, Inc.

ARCUTIS® BIOTHERAPEUTICS


US-COM-154-00125 01/24

**Brief Summary of Prescribing Information for ZORYVE® (roflumilast) foam, 0.3%, for topical use. See package insert for full Prescribing Information.**

## INDICATIONS AND USAGE

ZORYVE foam, 0.3%, is indicated for the treatment of seborrheic dermatitis in adult and pediatric patients 9 years of age and older.

## DOSAGE AND ADMINISTRATION

Shake can prior to each use. Apply a thin layer of ZORYVE foam, 0.3%, once daily to affected areas on skin and/or scalp when they are not wet. Rub in completely.

Wash hands after application.

Avoid fire, flame, and smoking during and immediately following application.

ZORYVE foam, 0.3%, is for topical use only and not for ophthalmic, oral, or intravaginal use.

## CONTRAINDICATIONS

ZORYVE foam, 0.3%, is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C).

## WARNINGS AND PRECAUTIONS

### Flammability

The propellants in ZORYVE foam, 0.3%, are flammable. Avoid fire, flame, and smoking during and immediately following application.

## ADVERSE REACTIONS

### Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

In two multicenter, randomized, double-blind, vehicle-controlled trials (Trial 203 and STRATUM), 683 adult and pediatric subjects 9 years of age or older with seborrheic dermatitis were treated with ZORYVE foam, 0.3%, or vehicle foam once daily for 8 weeks.

The combined trial population was 79% White, 11% Black, and 5% Asian; for ethnicity, 79% identified as non-Hispanic/Latino and 21% identified as Hispanic/Latino. Fifty percent (50%) were male and 50% were female. The median age was 41 years (range 9 to 87 years). The median body surface area (BSA) affected was 2.5%.

Table 1 presents adverse reactions that occurred in at least 1% of subjects treated with ZORYVE foam, 0.3%.

**Table 1. Adverse Reactions Reported in ≥1% of Subjects with Seborrheic Dermatitis Treated with ZORYVE Foam, 0.3%, for 8 Weeks in Trial 203 and Trial STRATUM**

| Adverse Reaction | ZORYVE foam, 0.3% (N=458) n (%) | Vehicle foam (N=225) n (%) |
|---|---|---|
| Nasopharyngitis | 7 (1.5) | 1 (0.4) |
| Nausea | 6 (1.3) | 0 (0) |
| Headache | 5 (1.1) | 0 (0) |

The following additional adverse reactions were reported in fewer than 1% of subjects treated with ZORYVE foam, 0.3%: diarrhea and insomnia.

In 408 subjects who continued treatment with ZORYVE foam, 0.3%, for up to 24 to 52 weeks in an open-label, long-term trial, the adverse reaction profile was consistent with that observed in vehicle-controlled trials.

## USE IN SPECIFIC POPULATIONS

### Pregnancy

Risk Summary

There are insufficient data available on the use of ZORYVE foam, 0.3%, in pregnant women to inform a drug-associated risk of major birth defects, miscarriage, or other adverse maternal or fetal outcomes. In animal reproduction studies, roflumilast administered orally to pregnant rats and rabbits during the period of organogenesis produced no fetal structural abnormalities at doses up to 30 and 26 times the maximum recommended human dose (MRHD), respectively. Roflumilast induced post-implantation loss in rats at oral doses greater than or equal to 10 times the MRHD. Roflumilast induced stillbirth and decreased pup viability in mice at oral doses 16 and 49 times the MRHD, respectively. Roflumilast has been shown to adversely affect pup post-natal development when dams were treated with an oral dose 49 times the MRHD during pregnancy and lactation periods in mice.

The background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Clinical Considerations

*Labor and delivery*

Avoid using ZORYVE foam, 0.3%, during labor and delivery. There are no human studies that have investigated effects of ZORYVE foam, 0.3%, on preterm labor or labor at term; however, animal studies showed that oral roflumilast disrupted the labor and delivery process in mice.

Data

*Animal data*

In an embryo-fetal development study, pregnant rats were dosed orally during the period of organogenesis with up to 1.8 mg/kg/day roflumilast (30 times the MRHD on a mg/m$^2$ basis). No evidence of structural abnormalities or effects on survival rates were observed. Roflumilast did not affect embryo-fetal development at a maternal oral dose of 0.2 mg/kg/day (3 times the MRHD on a mg/m$^2$ basis).

In a fertility and embryo-fetal development study, male rats were dosed orally with up to 1.8 mg/kg/day roflumilast for 10 weeks and females for 2 weeks prior to pairing and throughout the organogenesis period. Roflumilast induced pre- and post-implantation loss at maternal oral doses greater than or equal to 0.6 mg/kg/day (10 times the MRHD on a mg/m$^2$ basis). Roflumilast did not cause fetal structural abnormalities at maternal oral doses up to 1.8 mg/kg/day (29 times the MRHD on a mg/m$^2$ basis).

In an embryo-fetal development study in rabbits, pregnant does were dosed orally with 0.8 mg/kg/day roflumilast during the period of organogenesis. Roflumilast did not cause fetal structural abnormalities at the maternal oral doses of 0.8 mg/kg/day (26 times the MRHD on a mg/m$^2$ basis).

In pre- and post-natal developmental studies in mice, dams were dosed orally with up to 12 mg/kg/day roflumilast during the period of organogenesis and lactation. Roflumilast induced stillbirth and decreased pup viability at maternal oral doses greater than 2 mg/kg/day and 6 mg/kg/day, respectively (16 and 49 times the MRHD on a mg/m$^2$ basis, respectively). Roflumilast induced delivery retardation in pregnant mice at maternal oral doses greater than 2 mg/kg/day (16 times the MRHD on a mg/m$^2$ basis). Roflumilast decreased pup rearing frequencies at a maternal oral dose of 6 mg/kg/day during pregnancy and lactation (49 times the MRHD on a mg/m$^2$ basis). Roflumilast also decreased survival and forelimb grip reflex and delayed pinna detachment in mouse pups at a maternal oral dose of 12 mg/kg/day (97 times the MRHD on a mg/m$^2$ basis).

### Lactation

Risk Summary

There are no data on the presence of roflumilast or its metabolite in human milk, the effects on the breastfed infant, or the effects on milk production.

Roflumilast and/or its metabolites are excreted into the milk of lactating rats. When a drug is present in animal milk, it is likely that the drug will be present in human milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for ZORYVE foam, 0.3%, and any potential adverse effects on the breastfed infant from ZORYVE foam, 0.3%, or from the underlying maternal condition.

Clinical Considerations

To minimize potential exposure to the breastfed infant via breast milk, use ZORYVE foam, 0.3%, on the smallest area of skin and for the shortest duration possible while breastfeeding. To avoid direct infant exposure, advise breastfeeding women not to apply ZORYVE foam, 0.3%, directly to the nipple or areola. If applied to the patient's chest, avoid exposure via direct contact with the infant's skin.

Data

*Animal data*

Roflumilast and/or its metabolite concentrations measured 8 hours after an oral dose of 1 mg/kg given to lactating rats were 0.32 and 0.02 mcg/g in the milk and pup liver, respectively.

### Pediatric Use

The safety and effectiveness of ZORYVE foam, 0.3%, for the treatment of seborrheic dermatitis have been established in pediatric patients 9 years of age and older. Use of ZORYVE foam, 0.3%, in this age group is supported by data from two 8-week, vehicle-controlled trials which included 32 pediatric subjects 9 to 17 years of age, of whom 17 received ZORYVE foam, 0.3%, and from open-label trials of up to 52 weeks which included 23 pediatric subjects treated with ZORYVE foam, 0.3%. The adverse reaction profile was consistent with that observed in adults.

The safety and effectiveness of ZORYVE foam, 0.3%, in pediatric patients below the age of 9 years have not been established.

### Geriatric Use

Of the 683 subjects with seborrheic dermatitis exposed to ZORYVE foam, 0.3%, or vehicle for up to 8 weeks in the controlled clinical trials, 98 (14%) were 65 years of age or older, and 33 (5%) were 75 years of age or older. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out.

### Hepatic Impairment

Oral roflumilast 250 mcg once daily for 14 days was studied in subjects with hepatic impairment. The systemic exposure of roflumilast and roflumilast N-oxide were increased in subjects with moderate (Child-Pugh B) hepatic impairment. ZORYVE foam, 0.3%, is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C). No dosage adjustment is needed in patients with mild (Child-Pugh A) hepatic impairment.

## PATIENT COUNSELING INFORMATION

Advise the patient or caregiver to read the FDA-approved patient labeling (Patient Information).

Flammability

Because the propellants in ZORYVE foam, 0.3%, are flammable, instruct the patient to avoid fire, flame, and smoking during and immediately following application.

Lactation

Advise patients to use ZORYVE foam, 0.3%, on the smallest area of skin and for the shortest duration possible while breastfeeding. Instruct patients who are breastfeeding not to apply ZORYVE foam, 0.3%, directly to the nipple or areola to avoid direct infant exposure. Instruct patients to avoid inadvertent contact of treated areas with infant skin.

FOR PLAQUE PSORIASIS
AGE 6+

# ZORYVE®
## (roflumilast) cream 0.3%

# Effective. Everywhere. Easy.[1]

A once-daily, steroid-free cream with the **power to clear elbows and knees**, and the **gentleness for face and folds**.[1,2]


*Actor portrayal*

**In DERMIS-1 and DERMIS-2, ~40% of patients achieved IGA Success and ~70% of patients achieved I-IGA Success at Week 8.[1]**

DERMIS-1 and DERMIS-2 were identical Phase 3 randomized, parallel, double-blind, vehicle-controlled, multicenter studies that evaluated ZORYVE over 8 weeks as a once-daily, topical treatment for plaque psoriasis. Subjects (N=881) were randomized 2:1 to receive ZORYVE cream 0.3% (n=576) or vehicle (n=305) applied once daily for 8 weeks. Eligibility criteria included a diagnosis of mild, moderate, or severe plaque psoriasis and an affected BSA of 2% to 20%. The primary endpoint was IGA Success at Week 8 and a key secondary endpoint was I-IGA Success at Week 8.[1]

IGA Success and I-IGA Success were defined as a score of *Clear* (0) or *Almost Clear* (1) and a ≥2-grade improvement from baseline.[1,2]

ZORYVE is for topical use only and not for ophthalmic, oral, or intravaginal use.[1]

BSA = Body Surface Area, IGA = Investigator Global Assessment, I-IGA = Intertriginous-IGA

## INDICATION

ZORYVE cream is indicated for topical treatment of plaque psoriasis, including intertriginous areas, in patients 6 years of age and older.

## IMPORTANT SAFETY INFORMATION

ZORYVE is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C).

The most common adverse reactions (≥1%) include diarrhea (3.1%), headache (2.4%), insomnia (1.4%), nausea (1.2%), application site pain (1.0%), upper respiratory tract infection (1.0%), and urinary tract infection (1.0%).

**Please see brief summary of full Prescribing Information for ZORYVE cream on the following page.**

**See the results at zoryvehcp.com/cream**

**References: 1.** ZORVYE® cream. Prescribing information. Arcutis Biotherapeutics, Inc; 2023.
**2.** Data on File. Arcutis Biotherapeutics, Inc.

ARCUTIS® BIOTHERAPEUTICS


US-COM-151-00311 01/24

**Brief Summary of Prescribing Information for ZORYVE® (roflumilast) cream, for topical use. See package insert for full Prescribing Information.**

## INDICATIONS AND USAGE

ZORYVE cream is indicated for topical treatment of plaque psoriasis, including intertriginous areas, in patients 6 years of age and older.

## DOSAGE AND ADMINISTRATION

Apply ZORYVE cream to affected areas once daily and rub in completely. Wash hands after application, unless ZORYVE cream is for treatment of the hands.

ZORYVE cream is for topical use only and not for ophthalmic, oral, or intravaginal use.

## CONTRAINDICATIONS

ZORYVE cream is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C).

## ADVERSE REACTIONS

### Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

In two multicenter, randomized, double-blind, vehicle-controlled trials (DERMIS-1 and DERMIS-2), 881 adult and pediatric subjects 6 years of age or older with plaque psoriasis were treated with ZORYVE cream or vehicle topically once daily for 8 weeks.

The median age was 47 years (range 6 to 88). The majority of the subjects were male (64%) and White (82%). The median body surface area (BSA) affected was 5.5% (range 2% to 20%). The proportion of subjects who discontinued treatment due to an adverse reaction was 1.0% for subjects treated with ZORYVE cream and 1.3% for subjects treated with vehicle cream. The most common adverse reaction that led to discontinuation of ZORYVE cream was application site urticaria (0.3%).

Table 1 presents adverse reactions that occurred in at least 1% of subjects treated with ZORYVE cream, and for which the rate exceeded the rate for vehicle cream.

**Table 1. Adverse Reactions Reported in ≥1% of Subjects with Plaque Psoriasis Treated with ZORYVE Cream (and More Frequently than Vehicle Cream) for 8 Weeks in Trials DERMIS-1 and DERMIS-2**

| Adverse Reaction | ZORYVE Cream (N=576) n (%) | Vehicle Cream (N=305) n (%) |
|---|---|---|
| Diarrhea | 18 (3.1) | 0 (0.0) |
| Headache | 14 (2.4) | 3 (1.0) |
| Insomnia | 8 (1.4) | 2 (0.7) |
| Nausea | 7 (1.2) | 1 (0.3) |
| Application site pain | 6 (1.0) | 1 (0.3) |
| Upper respiratory tract infection | 6 (1.0) | 1 (0.3) |
| Urinary tract infection | 6 (1.0) | 2 (0.7) |

In 594 subjects who continued treatment with ZORYVE cream for up to 64 weeks in open-label extension trials, the adverse reaction profile was consistent with that observed in vehicle-controlled trials.

## USE IN SPECIFIC POPULATIONS

### Pregnancy

Risk Summary

There are insufficient data available on the use of ZORYVE cream in pregnant women to inform a drug-associated risk of major birth defects, miscarriage, or other adverse maternal or fetal outcomes. In animal reproduction studies, roflumilast administered orally to pregnant rats and rabbits during the period of organogenesis produced no fetal structural abnormalities at doses up to 36 and 31 times the maximum recommended human dose (MRHD), respectively. Roflumilast induced post-implantation loss in rats at oral doses greater than or equal to 12 times the MRHD. Roflumilast induced stillbirth and decreased pup viability in mice at oral doses 19 and 59 times the MRHD, respectively. Roflumilast has been shown to adversely affect pup post-natal development when dams were treated with an oral dose 59 times the MRHD during pregnancy and lactation periods in mice.

The background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Clinical Considerations

*Labor and delivery*

Avoid using ZORYVE cream during labor and delivery. There are no human studies that have investigated effects of ZORYVE cream on preterm labor or labor at term; however, animal studies showed that oral roflumilast disrupted the labor and delivery process in mice.

Data

*Animal data*

In an embryo-fetal development study, pregnant rats were dosed orally during the period of organogenesis with up to 1.8 mg/kg/day roflumilast (36 times the MRHD on a mg/m$^2$ basis). No evidence of structural abnormalities or effects on survival rates were observed. Roflumilast did not affect embryo-fetal development at a maternal oral dose of 0.2 mg/kg/day (4 times the MRHD on a mg/m$^2$ basis).

In a fertility and embryo-fetal development study, male rats were dosed orally with up to 1.8 mg/kg/day roflumilast for 10 weeks and females for 2 weeks prior to pairing and throughout the organogenesis period. Roflumilast induced pre- and post-implantation loss at maternal oral doses greater than or equal to 0.6 mg/kg/day (12 times the MRHD on a mg/m$^2$ basis). Roflumilast did not cause fetal structural abnormalities at maternal oral doses up to 1.8 mg/kg/day (35 times the MRHD on a mg/m$^2$ basis).

In an embryo-fetal development study in rabbits, pregnant does were dosed orally with 0.8 mg/kg/day roflumilast during the period of organogenesis. Roflumilast did not cause fetal structural abnormalities at the maternal oral doses of 0.8 mg/kg/day (31 times the MRHD on a mg/m$^2$ basis).

In pre- and post-natal developmental studies in mice, dams were dosed orally with up to 12 mg/kg/day roflumilast during the period of organogenesis and lactation. Roflumilast induced stillbirth and decreased pup viability at maternal oral doses greater than 2 mg/kg/day and 6 mg/kg/day, respectively (19 and 59 times the MRHD on a mg/m$^2$ basis, respectively). Roflumilast induced delivery retardation in pregnant mice at maternal oral doses greater than 2 mg/kg/day (19 times the MRHD on a mg/m$^2$ basis). Roflumilast decreased pup rearing frequencies at a maternal oral dose of 6 mg/kg/day during pregnancy and lactation (59 times the MRHD on a mg/m$^2$ basis). Roflumilast also decreased survival and forelimb grip reflex and delayed pinna detachment in mouse pups at a maternal oral dose of 12 mg/kg/day (116 times the MRHD on a mg/m$^2$ basis).

### Lactation

Risk Summary

There are no data on the presence of roflumilast or its metabolite in human milk, the effects on the breastfed infant, or the effects on milk production.

Roflumilast and/or its metabolites are excreted into the milk of lactating rats. When a drug is present in animal milk, it is likely that the drug will present in human milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for ZORYVE cream and any potential adverse effects on the breastfed infant from ZORYVE cream or from the underlying maternal condition.

Clinical Considerations

To minimize potential exposure to the breastfed infant via breast milk, use ZORYVE cream on the smallest area of skin and for the shortest duration possible while breastfeeding. To avoid direct infant exposure, advise breastfeeding women not to apply ZORYVE cream directly to the nipple or areola. If applied to the patient's chest, avoid exposure via direct contact with the infant's skin.

Data

*Animal data*

Roflumilast and/or its metabolite concentrations measured 8 hours after an oral dose of 1 mg/kg given to lactating rats were 0.32 and 0.02 mcg/g in the milk and pup liver, respectively.

### Pediatric Use

The safety and effectiveness of ZORYVE cream for the treatment of plaque psoriasis have been established in pediatric patients 6 years of age and older. Use of ZORYVE cream in pediatric patients 6 to less than 18 years of age is supported by data from two 8-week, vehicle-controlled safety and efficacy trials which included 18 pediatric subjects 6 to 17 years of age, of whom 11 received ZORYVE cream. Use of ZORYVE cream in pediatric patients 12 to 17 years of age is also supported by data from open-label trials of 2 and 24 weeks duration which included 18 pediatric subjects 12 to 17 years of age treated with ZORYVE cream. Use of ZORYVE cream in pediatric patients 6 to less than 12 years of age is also supported by data from one 4-week, open-label, safety and pharmacokinetic (PK) study which included 20 pediatric subjects 6 to less than 12 years of age. The adverse reaction profile in subjects 6 to less than 18 years of age was consistent with that observed in adults.

The safety and effectiveness of ZORYVE cream in pediatric patients below the age of 6 years have not been established.

### Geriatric Use

Of the 881 subjects with psoriasis exposed to ZORYVE cream or vehicle for up to 8 weeks in 2 controlled clinical trials, 106 were 65 years of age or older. No overall differences in safety or effectiveness were observed between these subjects and younger subjects. Other reported clinical experience has not identified differences in responses between the geriatric and younger patients, but greater sensitivity of some older individuals cannot be ruled out. Based on available data for roflumilast, no adjustment of dosage in geriatric patients is warranted.

### Hepatic Impairment

Oral roflumilast 250 mcg once daily for 14 days was studied in subjects with hepatic impairment. The systemic exposure of roflumilast and roflumilast N-oxide were increased in subjects with moderate (Child-Pugh B) hepatic impairment. ZORYVE cream is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C). No dosage adjustment is needed in patients with mild (Child-Pugh A) hepatic impairment.

## PATIENT COUNSELING INFORMATION

Advise the patient or caregiver to read the FDA-approved patient labeling (Patient Information).

Lactation

Advise patients to use ZORYVE cream on the smallest area of skin and for the shortest duration possible while breastfeeding. Instruct patients who are breastfeeding not to apply ZORYVE cream directly to the nipple and areola to avoid direct infant exposure. Instruct patients to avoid inadvertent contact of treated areas with infant skin.

# Spreading the news about everyday patient cases

## Panel brings scientific updates to common skin conditions.

From left: Sarah Lonowski, MD, MBA, FAAD; Erin Wei, MD, FAAD; Megan Arthur, MD, FAAD; Jennifer Adams, MD, FAAD; Corey Georgesen, MD, FAAD

Common dermatologic conditions — the bread and butter of most dermatology practices — keep the waiting room full, but often leave dermatologists with little time to investigate "what's new" in the management and treatment of those same conditions.

Friday's session, U012 – Bread N' Butter With a Side of Nutella: Short N' Sweet, High-Yield Updates on Management of Bread N' Butter Dermatologic Diseases, gave dermatologists the opportunity to explore just that and more. Session co-directors, Erin Wei, MD, FAAD, and Megan Arthur, MD, FAAD, both associate professors of dermatology at the University of Nebraska College of Medicine in Omaha, led the discussion on updates on management of common dermatologic conditions, including warts, itch, blistering diseases, and psoriasis as well as updates of common inpatient dermatology diagnosis. Later in the session, the full panel included a look at updates in dermatopathology in diagnosis of diseases such as melanoma. According to Dr. Wei, there's plenty of new information to digest when treating patients with these common diseases.

"For example, it continues to be an exciting time for treatment of bullous diseases," Dr. Wei said. "The field is moving forward at a rapid speed with a handful of new targeted treatments in the pipeline, whereas just a decade ago, there were limited options." Specifically, Dr. Wei said more targeted treatments are on the horizon for bullous pemphigoid, including anti-IL-5, anti-eotaxin, and neonatal Fc receptor antagonists, which are all in trials. Additionally, neonatal Fc receptor antagonists and targeted cell therapies such as CAAR-T cell therapy are being investigated for treatment of pemphigus, with some early results.

### Rethinking inpatient treatment

Additionally, there are many changes in how we treat common inpatient dermatologic diagnoses including Stevens-Johnson syndrome/toxic epidermal necrolysis, acute graft-versus-host disease, incorporating anti-TNFα to the treatment scheme, and drug rash with eosinophilia and systemic symptoms (DRESS) which includes how DRESS is classified.

In some instances, such as the first-line treatment of warts, updates have not been significant, but robust efforts are underway to gather and research newer agents. According to Jennifer Adams, MD, FAAD, associate professor of dermatology, also at the University of Nebraska College of Medicine, the treatment of verruca has long focused on destructive, antimitotic, antiviral, or immunotherapeutic mechanisms.

"Recent expansion of agents in these categories has led to hope and further questions. However, there remains a deficit of larger randomized clinical trials to support newer treatments over long-practiced treatment algorithms," Dr. Adams said. "Researchers are currently exploring data for newer application of topical agents, such as cidofovir, berdazimer sodium, or the combination of 5-flurouracil and salicylic acid, as well as intralesional options like vitamin D3, cidofovir, and the HPV vaccine for warts."

### Scratching itch

According to Dr. Arthur, significant advancements have been made in expanding dermatology's knowledge of itch. Promising new therapeutics are in development targeting multiple layers of itch pathogenesis, including biologics that target central itch signaling pathways and small molecules that modulate pro-inflammatory cytokines. Some of the exciting treatments currently being studied include:

- Nemolizumab, a monoclonal anti-IL-31 receptor blocker, is the only systemic therapy in phase 3 studies for treatment of chronic prurigo. After 16 weeks, pruritus reduction greater than 4 points (PP-NRS) was achieved in 56.3% of nemolizumab treated patients.
- Vixarelimab, a human monoclonal antibody that blocks oncostatin M receptor β, and therefore inhibits oncostatin M and IL-31 signaling, is currently in phase 2 studies for treatment of chronic prurigo. After 8 weeks, pruritus reduction greater than 4 points (PP-NRS) was achieved by 52.2% of vixarelimab-treated patients.
- Oral JAK 1 inhibitors, abrocitinib and povorcitinib, and topical JAK inhibitor, ruxolitinib, are currently in phase 2 studies for the management of chronic prurigo.
- Barzolvolimab, a tyrosine kinase KIT receptor, which leads to mast cell depletion, has shown efficacy in the management of chronic inducible urticaria and is currently in phase 1 studies for the management of chronic prurigo.

### Dermatopathology embraces new technology

Panelists also discussed the newest dermatopathology technology in diagnosing and determining treatment of common skin diseases. Whole slide imaging and artificial intelligence (AI) can be effective diagnostic tools, said Corey Georgesen, MD, FAAD, assistant professor of dermatology at the University of Nebraska College of Medicine, while new immunohistochemistry aids gene fusions and point mutations.

"Whole slide imaging can aid in diagnostic methods, team communication, and medical education," he said.

Dr. Georgesen also discussed genetic sequencing for melanocytic and soft tissue neoplasms, and DRESS for its specific histologic characteristics, including neutrophilic inflammation and interface dermatitis.

### Psoriasis gets a boost

Meanwhile, it continues to be an exciting time in the field of psoriasis treatment with novel topical, oral, and injectable agents that continue to push our standards for skin clearance and expand the options available to patients, according to Sarah Lonowski, MD, MBA, FAAD, assistant professor of dermatology at the University of Nebraska College of Medicine. Dr. Lonowski discussed new advances, including the IL-17 A and F inhibitor, bimekizumab, which has been approved for plaque psoriasis, with notable features including rapidity of action and superior efficacy compared to multiple existing biologic agents. However, it increases the risk of candidiasis. Dr. Lonowski said additional efficacy, safety, and adverse event data are available for the novel, selective TYK2 inhibitor deucravacitinib, which is approved for plaque psoriasis. And two recent phase 3 randomized controlled trials demonstrated its efficacy versus apremilast and placebo.

Still another exciting new drug in psoriasis includes tapinarof, she said. It is a first-in-class topical aryl hydrocarbon receptor agonist and represents the first novel, non-steroidal topical approved for plaque psoriasis for over 25 years, though folliculitis is a notable side effect. Additionally, another exciting new treatment includes roflumilast, a selective phosphodiesterase-4 inhibitor, which was initially approved for plaque psoriasis in 2022 and has recently been approved for this indication in children ages 6 to 11. It was also recently approved as a topical foam for seborrheic dermatitis. Finally, according to Dr. Lonowski, the FDA recently approved the biosimilar ustekinumab-auub for plaque psoriasis and psoriatic arthritis in patients ages 6 and older. ●

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