

# HIGHLIGHTS

24<sup>th</sup> World Congress of Dermatology (WCD)

# 10-15 JUNIO 2019











# Dermatología pediátrica

Dra. Ana Rodríguez Bandera







# **Atopic dermatitis**

Lawrence Eichenfield





# Identification of atopic dermatitis subgroups in <sup>J</sup> children from 2 longitudinal birth cohorts

Lavinia Paternoster, PhD,<sup>a</sup> Olga E. M. Savenije, MD, PhD,<sup>b,c</sup> Jon Heron, PhD,<sup>d</sup> David M. Evans, PhD,<sup>a,e</sup> Judith M. Vonk, PhD,<sup>c,f</sup> Bert Brunekreef, PhD,<sup>g,h</sup> Alet H. Wijga, PhD,<sup>i</sup> A. John Henderson, MD,<sup>d</sup> Gerard H. Koppelman, MD, PhD,<sup>b,c</sup>\* and Sara J. Brown, MD, FRCPE<sup>i,k</sup>\* *Bristol and Dundee, United Kingdom; Groningen, Utrecht, and Bilthoven, The Netherlands; and Brisbane, Australia* 

## Distinct phenotypes with different disease trajectories

6 latent classes were identified

- Early-onset-early-resolving AD; associated with male sex
- **Persistent disease** (early-onset-persistent and early-onset-late-resolving) AD; associated with genetic risk factors and parental history of AD
- Mid-onset-resolving AD; not associated with FLG, but associated with asthma

### $\rightarrow$ Demonstrates the potential importance of a stratified medicine approach



## Accepted Manuscript

The Effect of Water Hardness on Surfactant Deposition Following Washing and Subsequent Skin Irritation in Atopic Dermatitis Patients and Healthy Controls

Simon G. Danby, Kirsty Brown, Andrew M. Wigley, John Chittock, Phyoe K. Pyae, Carsten Flohr, Michael J. Cork

PII: S0022-202X(17)32938-X

DOI: 10.1016/j.jid.2017.08.037

Reference: JID 1065

To appear in: The Journal of Investigative Dermatology

- Hard water is rich in dissolved salts (calcium/magnesium)
- Direct interaction with FLG deficiency

**Does a water softener decrease eczema prevalence**? = SOFTER trial (*ClinicalTrial identifier: NCT03270566*)





# **JCI** insight

### First-in-human topical microbiome transplantation with *Roseomonas mucosa* for atopic dermatitis

Ian A. Myles, ..., Gulbu Uzel, Sandip K. Datta

JCI Insight. 2018;3(9):e120608. https://doi.org/10.1172/jci.insight.126

## Microbiome

- Coagulase negative staph (CoNS) species with activity against Staphylococcus aureus are common on normal skin and rare in patients with AD
- Introduction of CoNS species onto the skin of patients with AD decreased colonization with *Staphylococcus aureus*
- Antimicrobial peptides produced by CoNS were strain specific, highly potent, and selective against *Staphylococcus aureus*

- Roseomonas mucosa predominant gram –ve bacterium on skin (70% healthy skin colonized, only 20% in patients with eczema)
- 10 adults + 5 children aerosolized culture applied to skin twice weekly for 6-16 weeks
- 65% skin improvement
  - No complications or infections

### SCIENCE TRANSLATIONAL MEDICINE | RESEARCH ARTICLE

#### MICROBIOME

Antimicrobials from human skin commensal bacteria protect against *Staphylococcus aureus* and are deficient in atopic dermatitis

Teruaki Nakatsuji,<sup>1</sup> Tiffany H. Chen,<sup>1</sup> Saisindhu Narala,<sup>1</sup> Kimberly A. Chun,<sup>1</sup> Aimee M. Two,<sup>1</sup> Tong Yun,<sup>1</sup> Faiza Shafiq,<sup>1</sup> Paul F. Kotol,<sup>1</sup> Amina Bouslimani,<sup>2</sup> Alexey V. Melnik,<sup>2</sup> Haythem Latif,<sup>3</sup> Ji-Nu Kim,<sup>3</sup> Alexandre Lockhart,<sup>4</sup> Keli Artis,<sup>4</sup> Gloria David,<sup>4</sup> Patricia Taylor,<sup>5</sup> Joanne Streib,<sup>5</sup> Pieter C. Dorrestein,<sup>2,6</sup> Alex Grier,<sup>7</sup> Steven R. Gill,<sup>7</sup> Karsten Zengler,<sup>3</sup> Tissa R. Hata,<sup>1</sup> Donald Y. M. Leung,<sup>5</sup> Richard L. Gallo<sup>1</sup>\* 2017 © The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science.



# In vitro study of permeation and penetration of Crisaborole 2% when applied with emollients

- Human skin was placed between donor and receptor compartments of a flow-through diffusion cell
- Crisaborole was applied alone, 15 minutes before, immediately after, or 15 minutes after application of an over-the-counter ointment or over-thecounter moisturizing cream.
- Diffusion of crisaborole was measured 2 hourly for 24 hours
- Results: Crisaborole alone or 15 minutes before cream ointment had equal and significantly higher absorption over crisaborole 15 minutes after cream/ointment or cfrisaborole 15 minutes after cream/ointment

→ Apply active topical preparation alone or before emollient





## **Psoriasis**

**Dr. Amy Paller** 





## JAMA Dermatology | Original Investigation

# Safety of Systemic Agents for the Treatment of Pediatric Psoriasis

Inge M. G. J. Bronckers, MD; Marieke M. B. Seyger, MD, PhD; Dennis P. West, PhD; Irene Lara-Corrales, MD, MSc; Megha Tollefson, MD; Wynnis L. Tom, MD; Marcia Hogeling, MD; Leah Belazarian, MD; Claus Zachariae, MD, PhD; Emmanuel Mahé, MD, PhD; Elaine Siegfried, MD; Sandra Philipp, MD, PhD; Zsuzsanna Szalai, MD, PhD; Ruth Ann Vleugels, MD, MPH; Kristen Holland, MD; Ruth Murphy, MD, PhD; Eulalia Baselga, MD, PhD; Kelly Cordoro, MD; Jo Lambert, MD, PhD; Alex Alexopoulos, MD, PhD; Ulrich Mrowietz, MD, PhD; Wietske Kievit, PhD; Amy S. Paller, MD, MSc; for the Psoriasis Investigator Group (PsIG) of the Pediatric Dermatology Research Alliance and the European Working Group on Pediatric Psoriasis (EWGPP)

JAMA Dermatology November 2017 Volume 153, Number 11

- Retrospective study
- 270 children on methotrexate
- Folid acid administration 6-7 times per week was more protective protected more against methotrexate-induced gastrointestinal AEs than weekly administration



Papp K *et al*. Efficacy and safety of adalimumab every other week versus metotrexate once weekly in children and adolescents with severe chronic plaque psoriasis: a randomised, double blind, phase 3 trial. **Lancet. 2017**.

- 114 children ≥4- <18 years with severe plaque psoriasis
- 16 weeks
- Randomised to ADA (0.8mg/Kg/15 days)/ ADA (0.4mg/Kg/15 days)/ MTX (0.1-0.4mg/Kg/7 days)
- > ADA (0.8mg/Kg/15 days) showed significant improvements in PASI 75 compared with MTX
- > No new safety risks.

Thaçi D *et al*. Sustained long-term efficacy and safety of Adalimumab in pediatric patients with severe chronic plaque psoriasis from a randomised, double-blind, phase 3 study. Br J Dermatol. 2019

- 108 children ≥4- <18 years with severe plaque psoriasis
- 52 week long-term extension (16 weeks initial treatment/36 weeks withdrawal period/16 weeks re-treatment)
- Randomised to ADA (0.8mg/Kg/15 days)/ ADA (0.4mg/Kg/15 days)/ MTX (0.1-0.4mg/Kg/7 days)
- > Maintained or improved efficacy.
- Improvement in MTX non-responders with ADA (0.8mg/Kg/día)
- > No new safety risks.



CARD 14-Associated papulosquamous eruption (CAPE): a spectrum including features of psoriasis and pityriasis rubra pilaris. J Am Acad Dermatol. 2018

## CAPE

- Early onset
- Prominent involvment of cheeks, chin and ears
- Family history of psoriasis or PRP
- Minimal response to conventional topical and systemic therapies
- Good response to ustekinumab

# CARD 14 sequencingTreatment with ustekinumab





## Genodermatoses

Dr. Christine Bodemer Dr. Michele de Lucas





#### The NEW ENGLAND JOURNAL of MEDICINE

### BRIEF REPORT

## Prenatal Correction of X-Linked Hypohidrotic Ectodermal Dysplasia

Holm Schneider, M.D., Florian Faschingbauer, M.D., Sonia Schuepbach-Mallepell, Ph.D., Iris Körber, Sigrun Wohlfart, Ph.D., Angela Dick, Ph.D., Mandy Wahlbuhl, Ph.D., Christine Kowalczyk-Quintas, Ph.D., Michele Vigolo, M.S., Neil Kirby, Ph.D., Corinna Tannert, R.A., Oliver Rompel, M.D., Wolfgang Rascher, M.D., Matthias W. Beckmann, M.D., and Pascal Schneider, Ph.D. N Engl J Med 2018;378:1604-10. DOI: 10.1056/NEJMoa1714322 Copyright © 2018 Massachusetts Medical Society.

- Genetic deficiency of ectodysplasin A (EDA) causes X-linked hypohidrotic ectodermal dysplasia (XLHED) with impaired sweating and a risk of life-threatening hyperthermia
- A recombinant protein that includes the receptor-binding domain of EDA was administered intraamniotically to twins at gestational age 26 and 31 weeks and to a single fetus at 26 weeks
- Result: XLHED-related illness did not develop by 22 months follow-up and the subjects were observed to sweat normally.



#### Dermatology

## Topical Diacerein Ointment for Epidermolysis Bullosa Simplex: A Review

By STL Volume 24 Number 3 - May 12, 2019

Allison L. Limmer, BA, BS<sup>1</sup>; Crystal E. Nwannunu, BS<sup>1</sup>; Radhika Shah, BS, MS<sup>2</sup>; Kendall Coleman, BSA<sup>1</sup>; Ravi R. Patel, MD<sup>3</sup>; Uyen Ngoc Mui, MD<sup>3</sup>; Stephen K. Tyring, MD, PhD<sup>1,3</sup> Skin Therapy Letter

- EBS is due to a mutated Keratin 14 gene and constitutive activation of IL-1
- Topical 1% diacerein, a drug used to stabilize cartilage in osteoarthritis, has been shown to be an effective and safe in treatment in this condition
- It has been granted USA FDA Rare Pediatric Disease designation in may 2018
- $\rightarrow$  A new use for an old drug



# Stem Cell Reports



OPEN ACCESS

## Long-Term Stability and Safety of Transgenic Cultured Epidermal Stem Cells in Gene Therapy of Junctional Epidermolysis Bullosa

Laura De Rosa,<sup>1,5</sup> Sonia Carulli,<sup>1,5</sup> Fabienne Cocchiarella,<sup>1</sup> Daniela Quaglino,<sup>2</sup> Elena Enzo,<sup>1</sup> Eleonora Franchini,<sup>1</sup> Alberto Giannetti,<sup>3</sup> Giorgio De Santis,<sup>4</sup> Alessandra Recchia,<sup>1</sup> Graziella Pellegrini,<sup>1</sup> and Michele De Luca<sup>1,\*</sup> <sup>1</sup>Center for Regenerative Medicine "Stefano Ferrari," Department of Life Sciences, University of Modena and Reggio Emilia, 41125 Modena, Italy <sup>2</sup>Department of Life Sciences, University of Modena and Reggio Emilia, 41125 Modena, Italy <sup>3</sup>Emeritus of Dermatology, University of Modena and Reggio Emilia, 41125 Modena, Italy <sup>4</sup>Department of Medical and Surgical Sciences, University of Modena and Reggio Emilia, 41125 Modena, Italy <sup>5</sup>These authors contributed equally to this work

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http://dx.doi.org/10.1016/j.stemcr.2013.11.001

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## Correction of Recessive Dystrophic Epidermolysis Bullosa by Transposon-Mediated Integration of *COL7A1* in Transplantable Patient-Derived Primary Keratinocytes

Maria Carmela Latella<sup>1</sup>, Fabienne Cocchiarella<sup>1</sup>, Laura De Rosa<sup>1</sup>, Giandomenico Turchiano<sup>1,†</sup>, Manuel A.F.V. Gonçalves<sup>2</sup>, Fernando Larcher<sup>3,4,5</sup>, Michele De Luca<sup>1</sup> and Alessandra Recchia<sup>1</sup>







# **Infectious dermatosis**

Dra. Iria Neri





Pediatric Dermatology 1-3, 2017

### Congenital Herpes Simplex Virus Type 1 Infection Mimicking Congenital Erosive and Vesicular Dermatosis: Possible Pathogenic Insights

Andrew W. Swarbrick , M.B.B.S.,\* Christopher C. Blyth, M.B.B.S. (Hons.),†,‡ and Anne R. Halbert, M.B.B.S. (Hons.)\*

- HSV1 infection isolated with PCR in a patient
- Authors note 20% recurrent HSV infection in first year of life in previously reported cases

??Are at least some previous cases of CEVD undiagnosed congenital HSV infection??







Multiple neonatal staphylococcal cold abscesses in large skin folds: a benign neonatal skin <sup>T</sup><sub>M</sub> infection

- Retrospective observational study from 28 dermatology departments (13 cases)
- Localization in large skin folds, absence of inflammation or fever
- Regardless of treatment, all had a favorable outcome

JEADV 2018, 33, e92-e143

T. Hubiche,<sup>1,\*</sup> C. Chiaverini,<sup>2</sup> E. Goujon,<sup>3</sup> E. Bourrat,<sup>4</sup> M. Bes,<sup>5</sup> P. del Giudice,<sup>1</sup> F. Boralevi,<sup>6</sup> on behalf of the 'Groupe de Recherche de la Société Française de Dermatologie Pédiatrique'



