



# Le nuove frontiere della terapia della vitiligine in età pediatrica

**TORELLO LOTTI**

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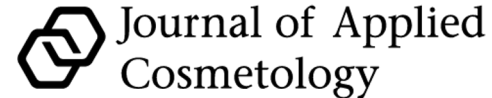
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# Aesthetic Approach Vitiligo

## Vitiligo



### Domande e risposte

#### Parte 1 dal Prof. Torello Lotti, MD

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**Vitiligine. Domande e risposte.**  
**Parte 1 del Prof. Torello Lotti, MD**

# Camouflage of Vitiligo



## Camouflage for patients with vitiligo

Feroze Kaliyadan et al. Indian J Dermatol Venereol Leprol. 2012 Jan-Feb.

[Free article](#)

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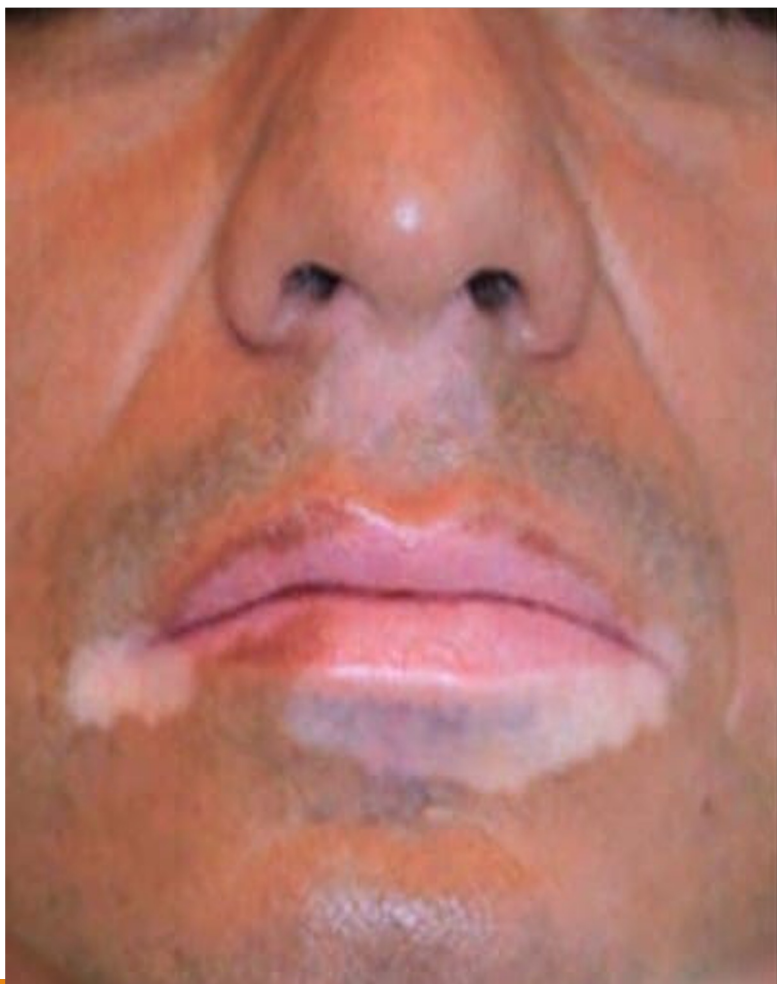
> [Indian J Dermatol Venereol Leprol](#)

. 2012 Jan-Feb;78(1):8-15.

doi: 10.4103/0378-

6323.90940.

# Vitiligo Camouflage



## Vitiligine: nuovi concetti e terapie

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Una malattia cronica che sebbene non influisca sull'aspettativa di vita condiziona la qualità della stessa e può rappresentare un evento traumatico anche serio.

**Torello Lotti<sup>1</sup>, Veronica Di Nardo<sup>1</sup>,  
Jacopo Scala<sup>2</sup>, Farah Daaboul<sup>3</sup>**

<sup>1</sup> Centro Studi per la Ricerca Multidisciplinare e Rigenerativa,  
Università degli Studi Guglielmo Marconi,  
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camouflages the white patches  
of skin so they blend right in  
with your regular skin tone.

---

# Vitiligo Semipermanent Camouflage

# FDA APPROVES OPZELURA™ AS VITILIGO TREATMENT FOR REPIGMENTATION



## OPZELURA Ruxolitinib

### Topical Administration



#### What Should I Do?

- Wash hands before and after applying.
- If you don't feel well or think you have an infection, contact your healthcare provider immediately.



#### What Shouldn't I Do?

- Do not allow Opzelura to come into contact with your eyes or mouth.
- Do not apply large amounts.
- Do not apply more than twice a day.



#### When Should I Do it?

- Apply twice daily at the same times each day.
- For atopic dermatitis, follow up with a provider after 8 weeks of treatment.
- For vitiligo, follow up with a provider after 24 weeks.



Areas  
Affected

# *Fda approves topical treatment addressing repigmentation in vitiligo in patients aged 12 and older*

---

FDA has approved **Opzelura (ruxolitinib)** cream for the treatment of nonsegmental vitiligo in adult and pediatric patients 12 years of age and older. Opzelura is a topical Janus kinase (JAK) inhibitor currently approved for the topical short term and non continuous chronic treatment of mild to moderate atopic dermatitis in non immunocompromised patients 12 years of age and older...



**RUXOLITINIB 1,5% CREAM**

# *Biologic and targeted therapeutics in Vitiligo*

*J Cosmet Dermatol.* **2023** Jan 22. doi: 10.1111/jocd.14770.

Priyanka Karagaiah , Robert A Schwartz, **Torello Lotti**, Uwe Wollina, Stephan Grabbe, Mohamad Goldust

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Numerous cytokines and signalling pathways have been associated with disease pathogenesis in recent past. However, **most conventional treatment modalities are restricted to generalised nonspecific immunosuppressants like topical and oral corticosteroids, calcineurin inhibitors, phototherapy and surgical modalities.** There have been reports and studies on the usage of biologicals in treating vitiligo. **JAK inhibitors** have shown good efficacy in vitiligo, however, it lacks substantial evidence in the form of randomised control trials. Similarly, the use of targeted therapeutics in treating vitiligo is substantiated by limited evidence and requires more randomised trials for further evidence. This article aims at a comprehensive review of all the biologicals and newer targeted therapeutics tried in vitiligo and their efficacy with an insight into the potential complications arising as a result of the therapy.

# Some News – Free PMC article

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## *Vitiligo: What's old, what's new*

*Dermatol Reports.* **2021** Sep 15;13(2):9142. doi:10.4081/dr.2021.9142. eCollection 2021 Aug 1.

Mariabeatrice Bertolani, Eleonora Rodighiero, Maria Beatrice de Felici Del Giudice , **Torello Lotti** , Claudio Feliciani , Francesca Satolli

## *Updates and new medical treatments for vitiligo (Review)*

*Exp Ther Med.* **2021** Aug;22(2):797. doi: 10.3892/etm.2021.10229. Epub 2021 May 25.

David Emmanuel Kubelis-López, Natalia Aranza Zapata-Salazar, Salvador Luis Said-Fernández, Celia Nohemí Sánchez-Domínguez, Mauricio Andrés Salinas-Santander, Herminia Guadalupe Martínez-Rodríguez, Osvaldo Tomás Vazquez-Martínez, Uwe Wollina, **Torello Lotti**, Jorge Ocampo-Candiani

# Some News – Free PMC article

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## *Novel immunological and genetic factors associated with vitiligo: A review*

*Exp Ther Med.* **2021** Apr;21(4):312. doi: 10.3892/etm.2021.9743. Epub 2021 Feb 1.

Salvador Luis Said-Fernandez, Celia Nohemi Sanchez-Domínguez, Mauricio Andres Salinas-Santander, Herminia Guadalupe Martinez-Rodriguez, David Emmanuel Kubelis-Lopez, Natalia Aranza Zapata-Salazar, Osvaldo Tomas Vazquez-Martinez, Uwe Wollina, **Torello Lotti**, Jorge Ocampo-Candiani

## *Simvastatin in vitiligo: an update with recent review of the literature*

*Int J Dermatol.* **2021** Oct;60(10):e390-e396. doi: 10.1111/ijd.15330. Epub 2021 Feb 7.

Rashidul Hasan, Komal Agarwal, Indrashis Podder, Angelica Misitzis, Robert A Schwartz, Uwe Wollina, **Torello Lotti**, Stephan Grabbe, Mohamad Goldust

# How to choose phototherapy treatment for vitiligo: my personal list

---

1. Age
2. Comorbidities
3. Expectations
4. Compliance – consider always systemic therapy
5. Unlicensed treatments – Tofacitinib F.D.A approved

# How to choose phototherapy treatment for vitiligo: my personal list

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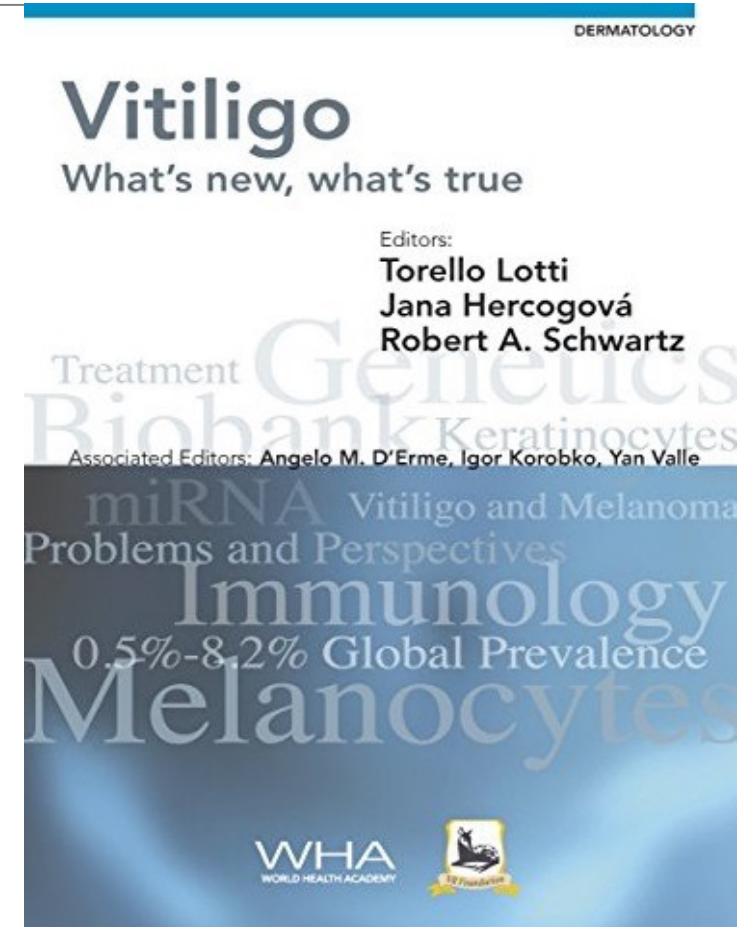
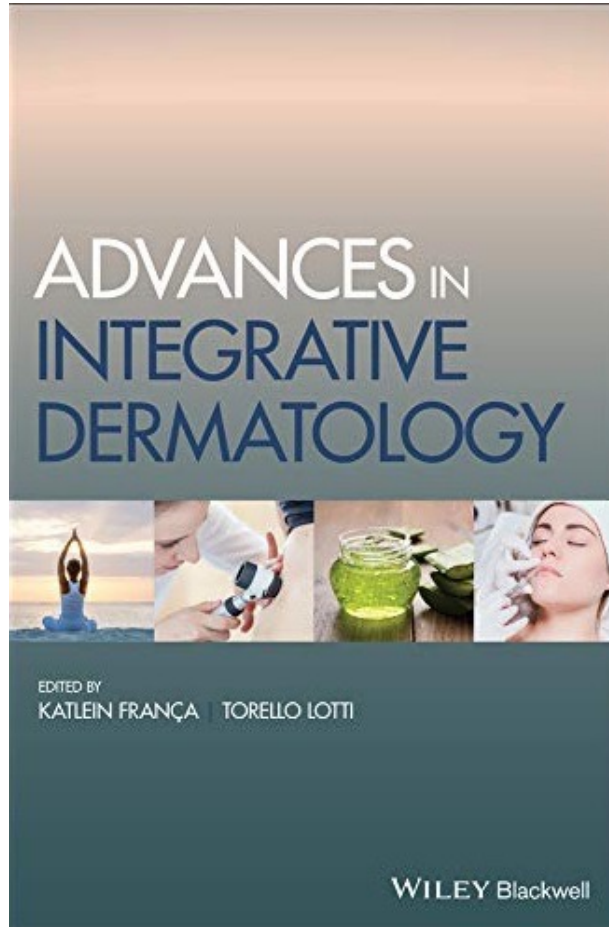
- 6. Sunlight
  - a) Dead Sea Model
  - b) Khellin – herbs and fruit extracts
  - c) Pseudocatalase
  - d) Psoralens Family
  - e) Photocil
  - f) Afamelanotide

# How to choose phototherapy treatment for vitiligo: my personal list

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- 7. Artificial lights
  - a) P.U.V.A
  - b) U.V.B 311 nm
  - c) U.V.B 308 nm
  - d) U.V.A 1 355 nm
  - e) Photocil
  - f) U.V.B 311 nm + afamelanotide

# Combined Treatments



# Focused microtherapy



## *Emerging drugs for the treatment of vitiligo*

*Expert Opin Emerg Drugs. 2020 Mar;25(1):7-24.*

Priyanka Karagaiah, Yan Valle, Julia Sigova, Nicola Zerbinati, Petar Vojvodic, Davinder Parsad, Robert A Schwartz, Stephan Grabbe, Mohamad Goldust,

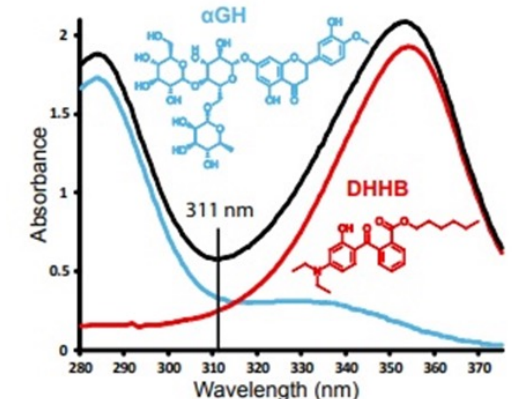
**Torello Lotti**



Photos of surface area repigmentation at zero (A) and 9 (B) weeks of treatment



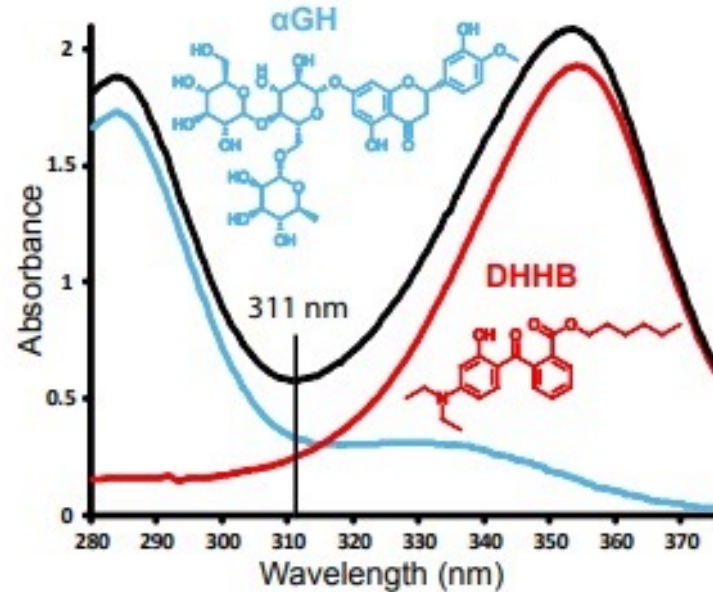
Photos of surface area repigmentation at zero (A), 4 (B), and 9 (C) weeks of treatment



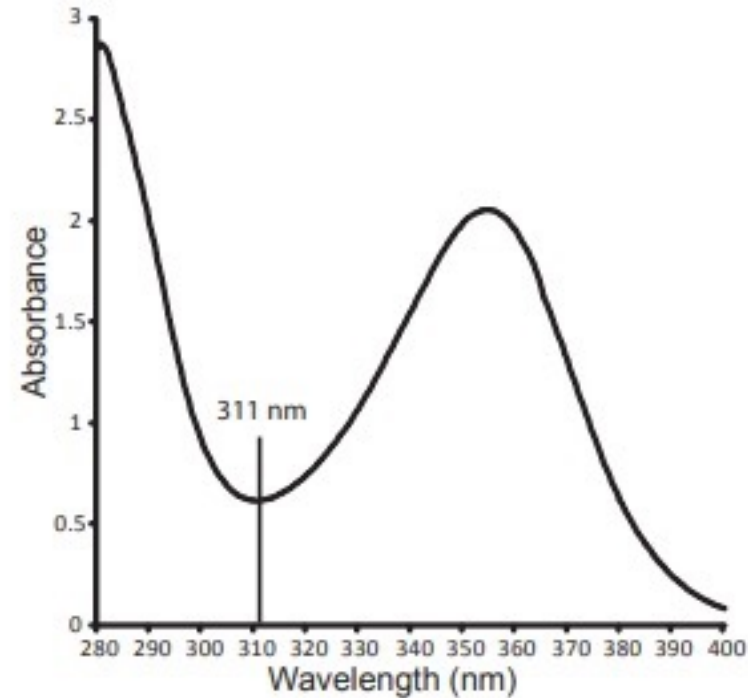
# *Novel topical cream delivers safe and effective sunlight therapy for vitiligo by selectively filtering damaging ultraviolet radiation*

*Dermatologic Therapy, Vol. ••, 2014, ••—••*

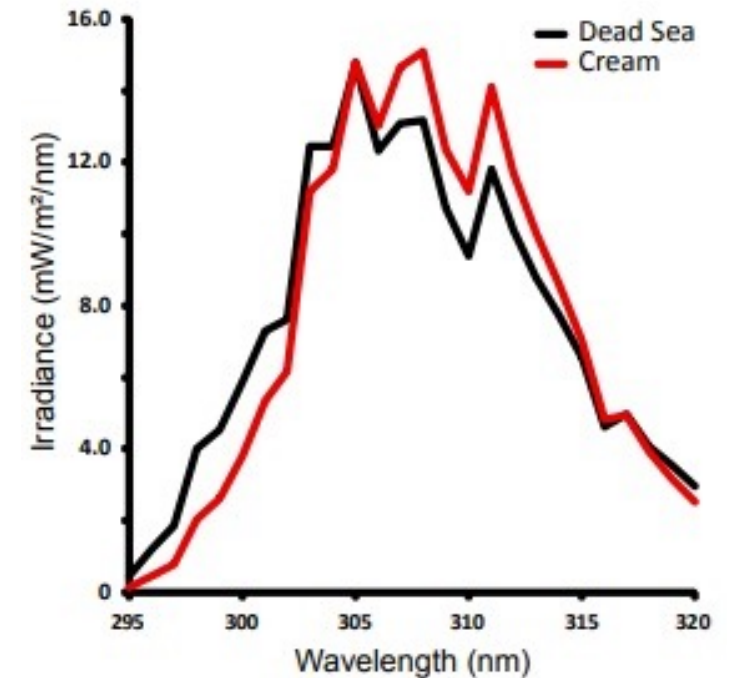
Andy Goren, Antonio Salafia, John McCoy, Sharon Keene & **Torello Lotti**



UV absorbance of αGH (blue), DHHB (red) and resultant spectrum (black). The calculated minimum is 311 nm



UV absorbance of the topical cream in methanol.



Erythral weighted irradiance of sunlight passed through the topical cream (red) and at the Dead Sea (black). Spectra are normalized to equivalent erythral doses

Excimer  
Light



Excimer Lasers

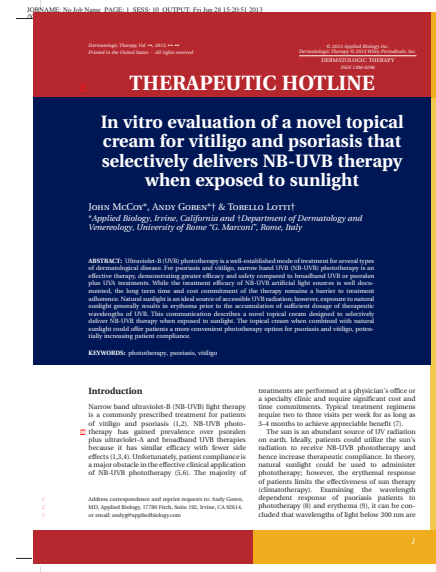


Bioskin Evolution



UVA-1 355 nm Alba Laser

PUVA



# Small molecules Emerging therapeutics

## *JAK inhibitors*

JAK located inside keratinocytes is activated by IFN-gamma, then STAT activates the transcription of genes such as CXCL9 and 10 that are potent chemokines.

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WVD 2021, Indonesia

**SPEAKERS**

**Prof. Yan Valle, MSc**  
CEO Vitiligo Research  
Foundation, USA

**Prof. Dr. Torello Lotti, MD, FRCP**  
President Executive Scientific  
Committee VRF, Italy

**Yulianto Listiawan, MD, PhD, FINSDV, FAADV**  
President of Indonesian Society of  
Dermatology and Venereology

**Reiva Farah Dwiyana, MD, PhD, FINSDV, FAADV**  
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**Sali Rahadi Asih, M.Psi, MGPPC, PhD, psikolog**  
Indonesia

**Stanley Setiawan, MD**  
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**HIGHLIGHTS**

- Vitiligo Patients Sharing Session
- Vitiligo Awareness Month Activity
- TikTok and Video Competitions Winner Announcement

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# Small molecules Emerging therapeutics

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*Tofacitinib* FDA approved for the treatment of rheumatoid arthritis, psoriatic arthritis and ulcerative colitis. Topical modulation is preferred with respect to the oral form because of the serious side effects.

*Ruxolitinib* the first JAK inhibitor approved for the management of polycythemia vera and high risk myelofibrosis, has also shown beneficial therapeutic results in a phase 2 trial in vitiligo patients. Topical application of ruxolitinib 0,1% cream BD for 24 weeks, gave the highest responses obtaining facial VASI50 of 58%, F-VASI75 52% and F-VASI90 of 33%. patients demonstrated repigmentation of vitiligo patches and good tollerability throughout an observation period of 52 weeks.



# Small molecules Emerging therapeutics

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*Baricitinib* has been investigated only of patients treated for rheumatoid arthritis, which accidentally showed repigmentation in their vitiligo patches.

*Ifidancitinib*, a dual JAK1/3 inhibitor used for the treatment of alopecia areata, ritlecitinib an irreversible inhibitor of TYK2/JAK1 operated for rheumatoid arthritis and cerdulatinib, are currently under assessment as far as it concerns their efficacy and safety in the management of vitiligo



# Small molecules Emerging therapeutics

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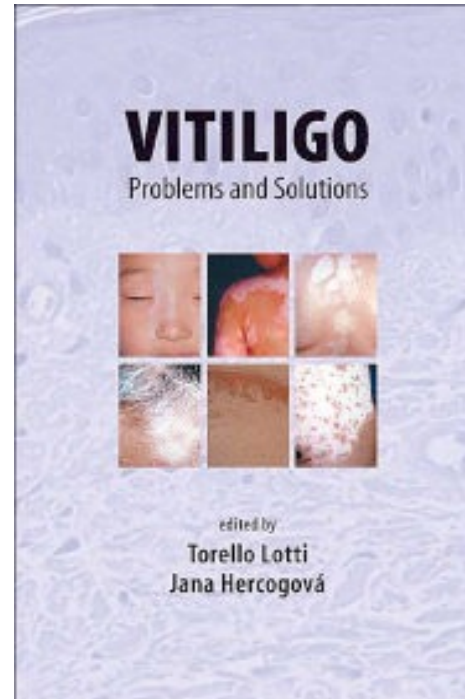
*Wnt signaling pathway* Janus kinase-signal transducer and activator of transcription (JAK/STAT) is an intracellular pathway. The result is a further **recruitment of cytotoxic T-cells producing more IFN-gamma that directly inhibits melanogenesis**, induces senescence of melanocytes and promotes the release of heat shock protein –70 which marks the melanocytes for damage by innate immune response.



# Small molecules Emerging therapeutics

## *MicroRNAs (miRNAs)*

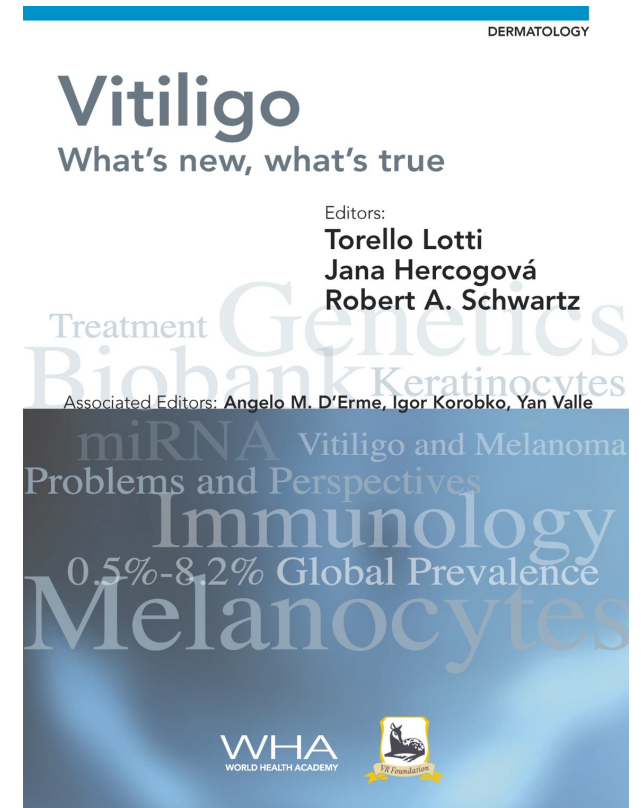
MiRNAs constitute a small class of non-coding RNA molecules, participating in the regulation of **mRNA** expression by degrading or repressing RNA translation with altered migratory capacity of melanocytes after the application of miR-211 mimic through the p53-TRPM1/miR-211-MMP9 axis.



# Small molecules Emerging therapeutics

## *Regulatory T-Cells*

Regulatory T cells are **CD4+** capable of suppressing self-reactive T cell activation. Treg cells have been proven to be decreased within lesional, non-lesional, and perilesional vitiligo sections, **giving way to a novel therapeutic intervention for vitiligo**, by increasing their population. One phase 2 clinical trial is ongoing , testing the efficacy of **0.1% topical rapamycin**. Additionally, the administration of a combination of nanoparticles along with rapamycin and autoantigen HEL46-61 arrested the progression of vitiligo.



# *Vitiligo in Children: A Review of Conventional Treatments*

*Open Access Maced J Med Sci. 2018 Jan 21;6(1):213-217.*

Serena Gianfaldoni , Uwe Wollina, Georgi Tchernev, Katlein França & **Torello Lotti**

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## **Abstract**

Vitiligo is an important skin disease of childhood, which may lead to deep psychological trauma, resulting in a poor quality of life and low self-esteem. The Authors discuss a short review of the more conventional therapies available for the treatment of vitiligo in children.

**Keywords:** Childhood vitiligo; Combined treatments; Conventional treatments; Phototherapy; Surgical therapies; Systemic treatments; Topical treatments.

# *Vitiligo in Children: A Better Understanding of the Disease*

*Open Access Maced J Med Sci. 2018 Jan 20;6(1):181-184.*

Serena Gianfaldoni , Uwe Wollina, Georgi Tchernev, Katlein França & **Torello Lotti**

---

## **Abstract**

Vitiligo is an important skin disease of childhood. The authors briefly discuss the etiopathobiology, clinics and comorbidities of the disease.

**Keywords:** children; clinic; comorbidities; environmental stress; genetic background; trigger factor; vitiligo.

# *Vitiligo in Children: What's New in Treatment?*

*Open Access Maced J Med Sci. 2018 Jan 21;6(1):221-225.*

Serena Gianfaldoni , Uwe Wollina, Georgi Tchernev, Francesca Satolli, Katlein França & **Torello Lotti**

---

## **Abstract**

Vitiligo is an acquired chronic hypopigmentary disorder, which usually starts in childhood. The Authors discuss a short review of the more innovative therapies for childhood vitiligo.

**Keywords:** Antioxidants; Childhood vitiligo; Dead Sea Climatotherapy; Excimer laser; Immunomodulatory agent; Innovative treatments; Low dose medicine; Micro-focused phototherapy; UVA-1 laser; selective sunlight therapy.



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2024-03-05

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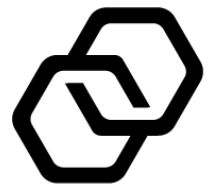
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the WHAD&P to organize the First  
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that we presented here. The WHAD&P  
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