AAD **ANNUAL** MEETING **2025**

AEDV 7 - 11 MARZO ORLANDO

highlights

Fotodermatosis y Fotobiología

"Hacia una fotoprotección personalizada"

Luis Alfonso Pérez González.

Hospital Universitario Ramón y Cajal.

Una iniciativa de:

ACADEMIA ESPAÑOLA DE DERMATOLOGÍA Y VENEREOLOGÍA

FUNDACIÓN AEDV PIEL SANA – ACADEMIA ESPAÑOLA DE DERMATOLOGÍA Y VENEREOLOGÍA

dralfonsoperez_promir

Con el patrocinio de:

ucb

AAD **ANNUAL** MEETING **2025**

AEDV 7 - 11 MARZO ORLANDO

highlights

NO TENGO CONFLICTOS DE INTERÉS

Fotodermatosis: novedades

- ✓ **Novedades de tratamiento**
  - ✓ Dupilumab en prurigo actínico.
  - ✓ Dupilumab en dermatosis crónica actínica
  - ✓ Tofacitinib en EPL refractaria
  - ✓ Anifrolumab en dermatomiositis
  - ✓ Ensayos fase III con inhibidores de transportador de glicina y porfirina en protoporfiria eritropoyética.

› Dermatitis. 2024 May-Jun;35(3):246-249. doi: 10.1089/derm.2023.0360. Epub 2024 Jan 23.

Tofacitinib: A Treatment Option for Recalcitrant Polymorphic Light Eruption and Its Mechanistic Rationale

Kabir Sardana [1], Sinu Rose Mathachan [2], Ananta Khurana [1]

› J Am Acad Dermatol. 2024 Dec;91(6):1217-1219. doi: 10.1016/j.jaad.2024.07.1491. Epub 2024 Aug 12.

Anifrolumab in recalcitrant cutaneous dermatomyositis: A multicenter retrospective cohort study

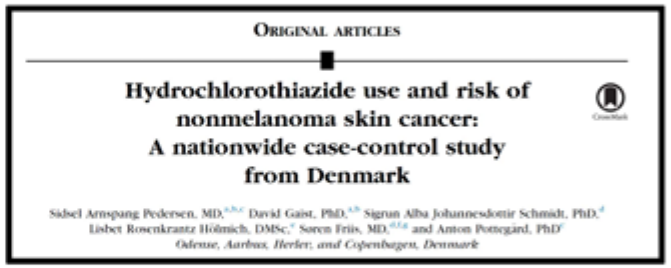
Katharina S Shaw [1], Kimberly B Hashemi [2], Rochelle L Castillo [2], Elizabeth Rainone [3], Allen W Ho [3], Philip J Kahn [4], Vikash S Oza [5], Alisa Femia [6], Ruth Ann Vleugels [2]

Vellaichamy G, Chadha AA, Hamzavi IH, Lim HW. Polymorphic light eruption sine eruptione: A variant of polymorphous light eruption. Photodermatol Photoimmunol Photomed. 2020.
Dover JS, Hawk JL. Polymorphic light eruption sine eruption. Br J Dermatol. 1988 Jan;118(1):73-6. doi: 10.1111/j.1365-2133.1988.tb01752.x. PMID: 3342178.
Shah A, Mittal S, Tollefson MM, Davis DM, Mohandesi NA. Treatment of actinic prurigo with dupilumab in an adolescent. Int J Dermatol. 2025
O'Reilly M, Paolino A, Pathmarajah P, Ferguson J, Smith CH, Sarkany R, Dawe RS, Salam A, Pink AE, Fassihi H, Ibbotson S. Dupilumab in chronic actinic dermatitis: a retrospective case series. Br J Dermatol. 2024
Shaw KS, Hashemi KB, Castillo RL, Rainone E, Ho AW, Kahn PJ, Oza VS, Femia A, Vleugels RA. Anifrolumab in recalcitrant cutaneous dermatomyositis: A multicenter retrospective cohort study. J Am Acad Dermatol. 2024

Fotodermatosis: fotosensibilidad por fármacos

Photocarcinogenesis

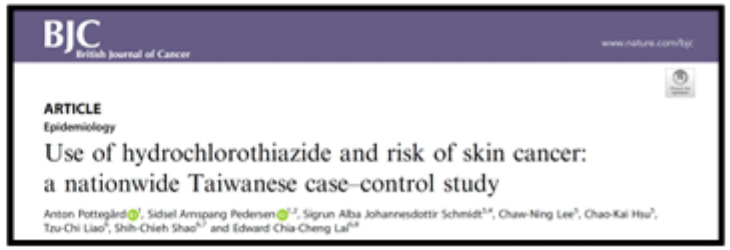
- Psoralens
- Voriconazole
- Azathioprine
- Vemurafenib
- Equivocal data e.g. : - Thiazides
  - Antihypertensives
  - Statins
  - Anti-epileptics



ORIGINAL ARTICLES

Hydrochlorothiazide use and risk of nonmelanoma skin cancer: A nationwide case-control study from Denmark

Sidsel Arnspang Pedersen, MD,[a,b,c] David Gaist, PhD,[a,b] Sigrun Alba Johannesdottir Schmidt, PhD,[d] Lisbet Rosenkrantz Hölmich, DMSc,[e] Soren Friis, MD,[d,f,g] and Anton Pottegård, PhD[c]
Odense, Aarhus, Herlev, and Copenhagen, Denmark



BJC British Journal of Cancer

ARTICLE
Epidemiology

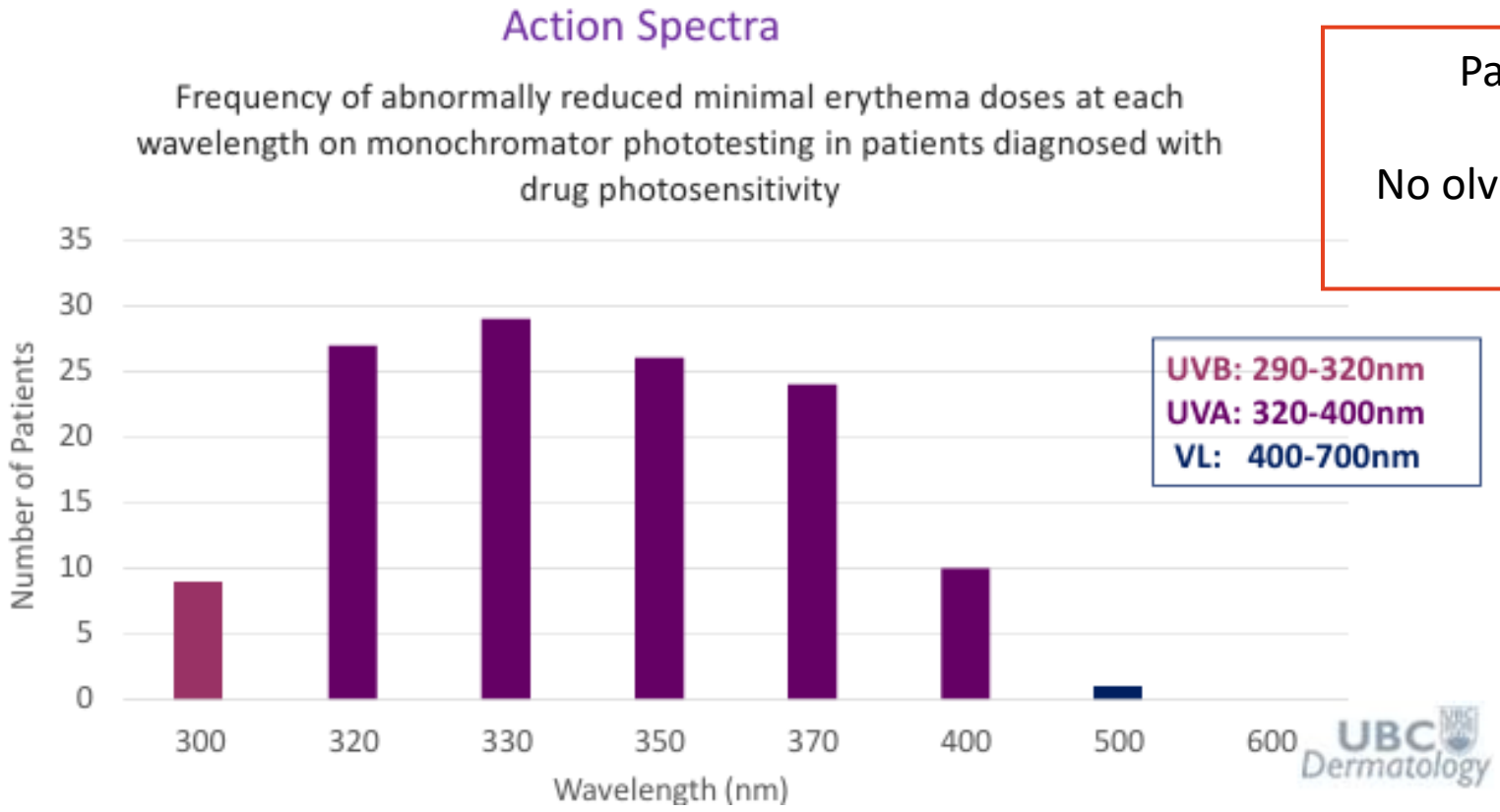
Use of hydrochlorothiazide and risk of skin cancer: a nationwide Taiwanese case–control study

Anton Pottegård, Sidsel Arnspang Pedersen, Sigrun Alba Johannesdottir Schmidt, Chaw-Ning Lee, Chao-Kai Hsu, Tzu-Chi Liao, Shih-Chieh Shao and Edward Chia-Cheng Lai

Aumento de **riesgo de CCNM con HCTZ**

- ✓ Dosis dependiente
- ✓ Fenotipo dependiente

Fotodermatosis: fotosensibilidad por fármacos



Papel clave de la radiación UVA en la fotosensibilidad por fármacos.
No olvidar la UVB y la LV, pueden ser clave en algunos pacientes

Alrashidi A, Rhodes LE, Sharif JCH, Kreeshan FC, Farrar MD, Ahad T. Systemic drug photosensitivity-Culprits, impact and investigation in 122 patients. Photodermatol Photoimmunol Photomed. 2020

Fotodermatosis: fotosensibilidad por fármacos

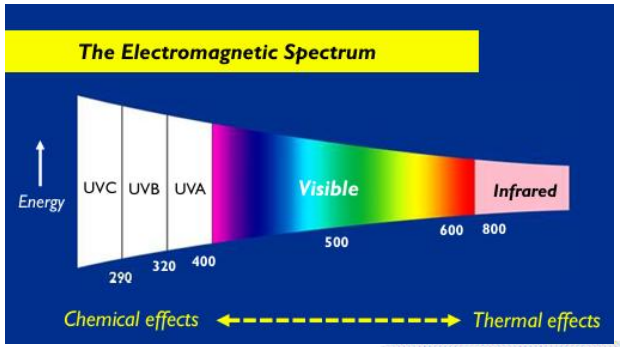
Drug class	% of cases	Drug	BB-UVA	SSR	UVB	UVA	VL
Antimalarials	12.3%	Quinine					
Thiazide Diuretics	10.6%	Bendroflumethiazide					
		Indapamide Hydrochlorothiazide					
Antifungals	9.8%	Voriconazole					
		Terbinafine					
PPIs	9.8%	Omeprazole					
		Lansoprazole Rabeprazole					
ACE-inhibitors	8.2%	Lisinopril Enalapril Ramipril					
Statins	5.7%	Simvastatin Atorvastatin					
Ca^{2+} channel antagonists	4.9%	Amlodipine					
		Diltiazem					
SSRIs	4.9%	Fluoxetine Sertraline					

SSR: solar simulated

Common reported culprits

- Thiazide diuretics
- Antibiotics- e.g. tetracyclines, flouroquinolones
- Quinine
- NSAIDs
- Amiodarone
- Antifungals: e.g. voriconazole
- Ca^{2+} channel antagonists
- Antipsychotics: e.g. chlorpromazine
- Vemurafenib

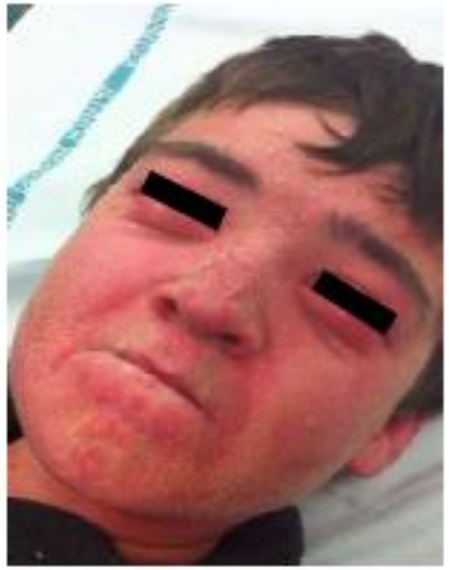
Importancia del tipo de radiación: Papel de la luz visible en muchos fármacos



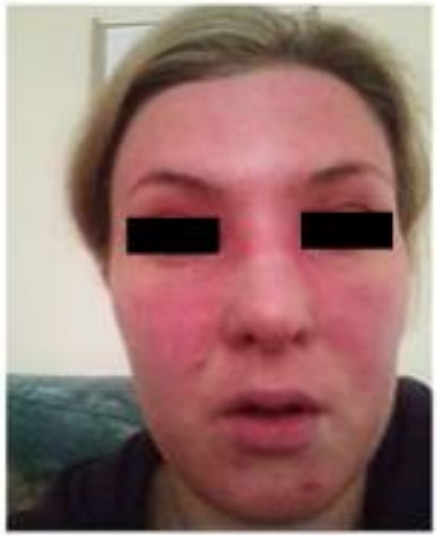
Alrashidi A, Rhodes LE, Sharif JCH, Kreeshan FC, Farrar MD, Ahad T. Systemic drug photosensitivity-Culprits, impact and investigation in 122 patients. Photodermatol Photoimmunol Photomed. 2020

Fotodermatosis: fotosensibilidad por fármacos

Drug class	% of cases	Drug	BBUVA	SSR	UVB	UVA	VL
Monoclonal antibodies	2.5%	Etanercept					
		Infliximab					
		Denosumab					
		Dapsone					
Immunosuppressants	2.5%	Azathioprine					



Azathioprine + Infliximab



Etanercept

Alrashidi A, Rhodes LE, Sharif JCH, Kreeshan FC, Farrar MD, Ahad T. Systemic drug photosensitivity-Culprits, impact and investigation in 122 patients. Photodermatol Photoimmunol Photomed. 2020

Fotodermatosis: optimización de la fotoprotección

- ✓ **Filtros con color como mejor opción para protección frente a UVA y LV**.
- ✓ Nuevos filtros químicos frente a LV (Mexoryl 400, TriasorB y BDBP).
- ✓ Fotoprotección oral (*P. leucotomos*) como complemento en pacientes con fotodermatosis

Table II. Chemical formulas of pigments used in tinted sunscreens

Variable	Color: Iron oxide red	Iron oxide yellow	Iron oxide black	Pigmentary titanium dioxide
Chemical formula	Fe_2O_3	$FeO(OH)\cdot H_2O$	$FeO\cdot Fe_2O_3$	TiO_2
INCI name	CI 77491*	CI 77492	CI 77499	CI 77891

INCI, International Nomenclature of Cosmetic Ingredients.
*Color index (*CI*), a universally accepted nomenclature for pigments and dyes.

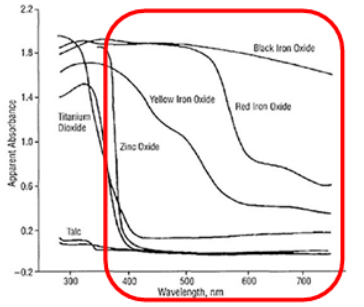
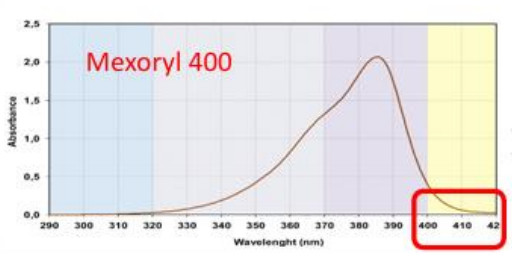
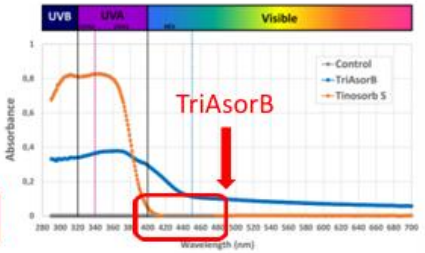
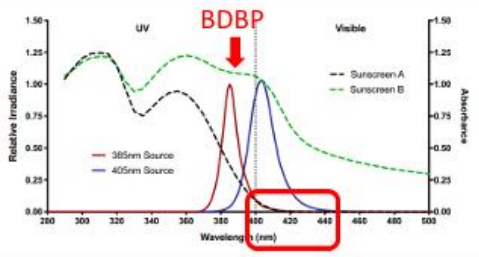


Fig 2. Absorbance profile of iron oxides and inorganic (mineral) filters. Reprinted from Sayre et al,[12] with permission.

Lyons, AB, et al. JAAD 2021; 84:1393



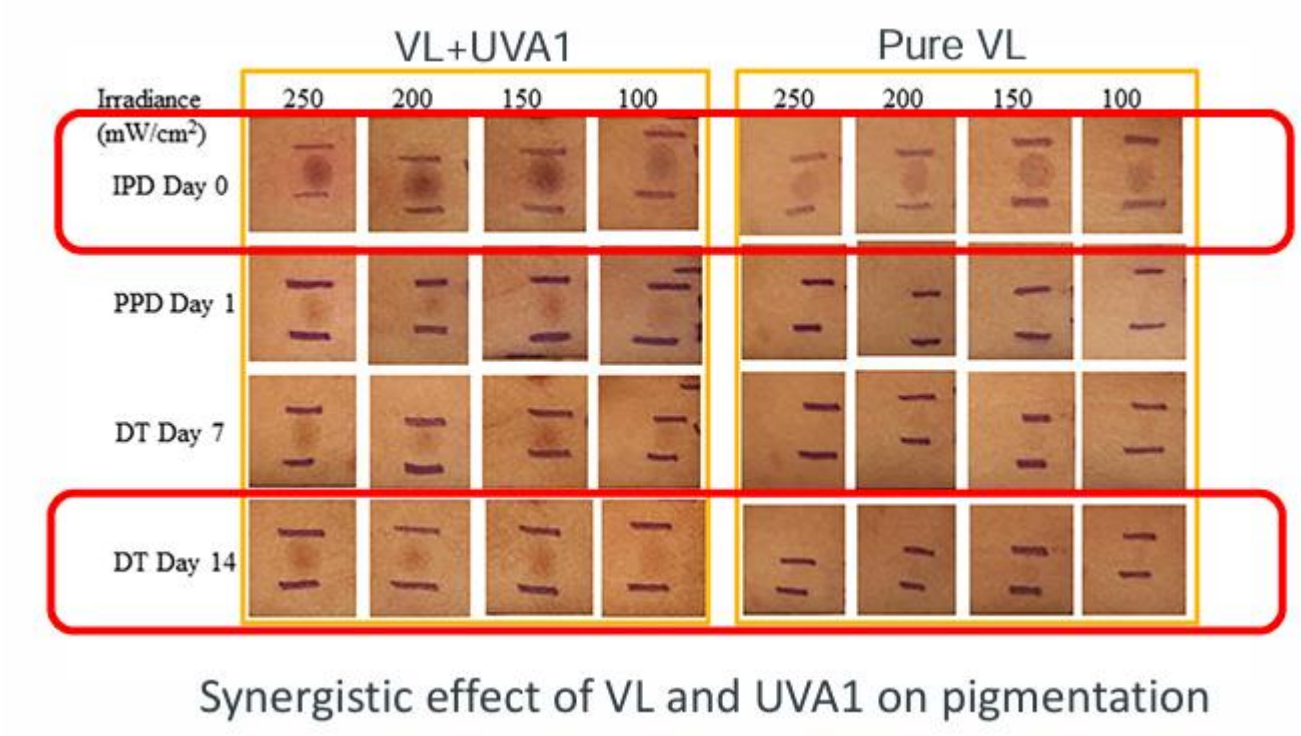




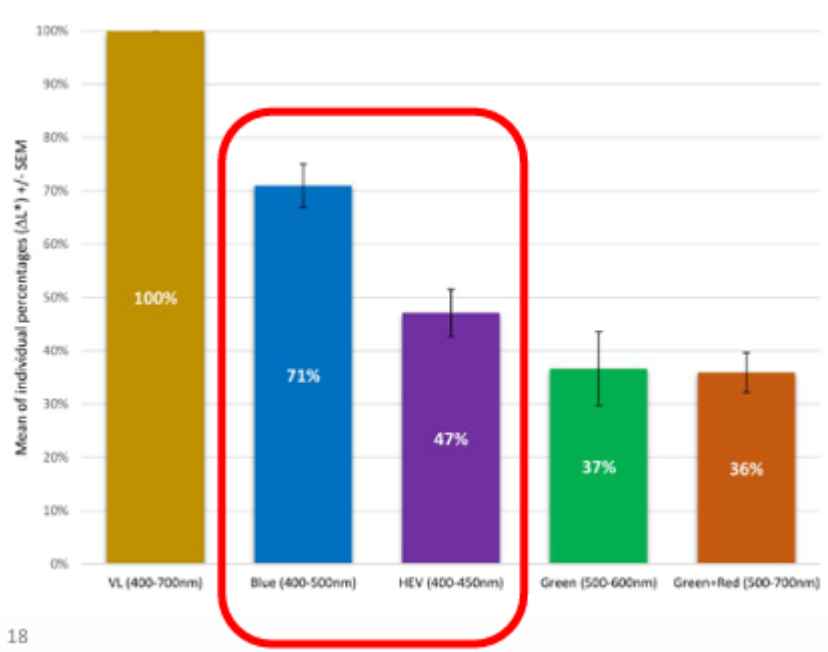
HENRY FORD HEALTH + MICHIGAN STATE UNIVERSITY Health Sciences

Lawrence KP, Sarkany RPE, Acker S, Herzog B, Young AR. A new visible light absorbing organic filter offers superior protection against pigmentation by wavelengths at the UVR-visible boundary region. J Photochem Photobiol B. 2022
Bacqueville D, Jacques-Jamin C, Lapalud P, Douki T, Roullet N, Sereno J, Redoulès D, Bessou-Touya S, Duplan H. Formulation of a new broad-spectrum UVB + UVA and blue light SPF50⁺ sunscreen containing Phenylene Bis-Diphenyltriazine (TriAsorB), an innovative sun filter with unique optical properties. J Eur Acad Dermatol Venereol. 2022.

Luz visible y pigmentación



Synergistic effect of VL and UVA1 on pigmentation



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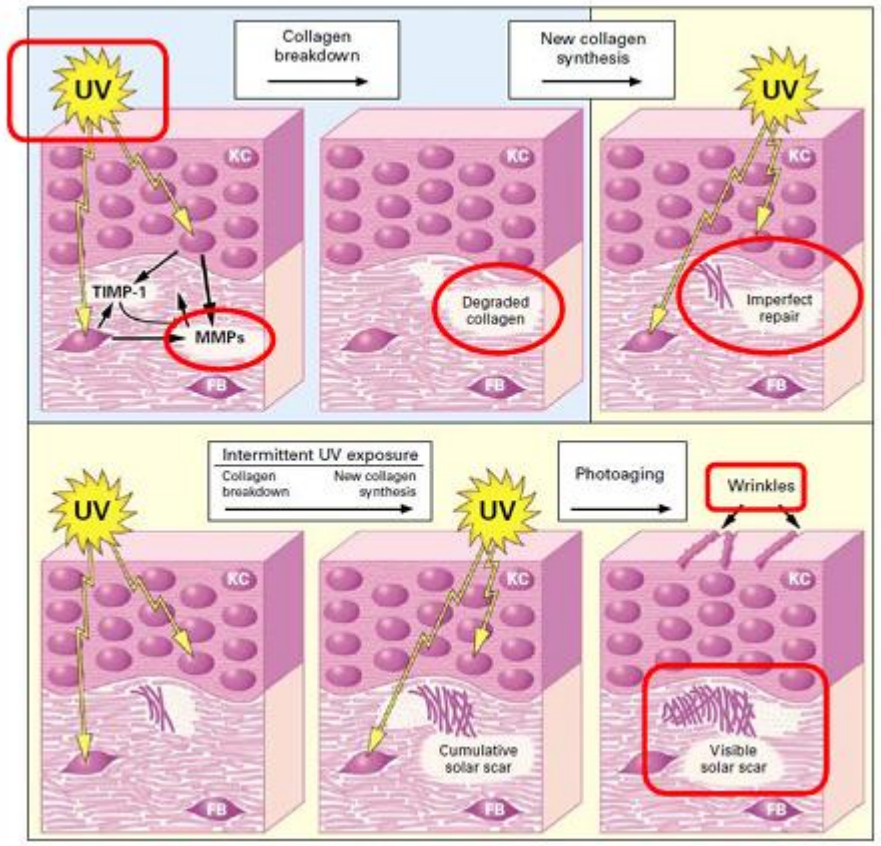
Luz azul → **Opsina 3**

- ✓ Aumento de actividad de la tirosinasa.
- ✓ Hiperpigmentación inducida por una vía diferente a UVA.

Kohli I, Chaowattanapanit S, Mohammad TF, Nicholson CL, Fatima S, Jacobsen G, Kollias N, Lim HW, Hamzavi IH. Synergistic effects of long-wavelength ultraviolet A1 and visible light on pigmentation and erythema. Br J Dermatol. 2018.

Marionnet C, Piffaut V, Sasai J, Jouni H, Nouveau S, Roudot A, Planel E, Gillant F, Tricaud C, Duteil L, Bernerd F. A precise analysis of the relative contribution of UVA1 and visible light colour domains in solar light-induced skin pigmentation. J Eur Acad Dermatol Venereol. 2023

Luz visible y fotoenvejecimiento



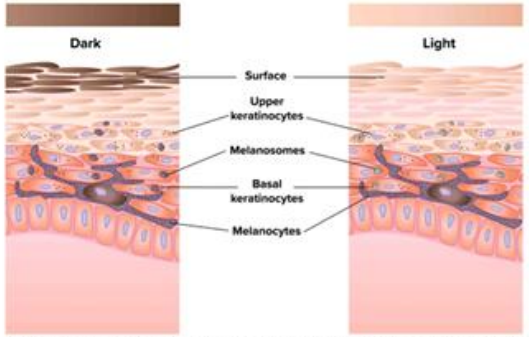


Fig 2. Differences in skin pigmentation due to melanosome distribution within epidermal keratinocytes.

Diferencias entre fototipos:

- ✓ Fototipos altos 3-5 veces más melanina
- ✓ FPS intrínseco 13,4 (FT V y VI) vs 3.3 (FT I y II)

Visible Light and MMPs in Skin

Kohli, I, Chaowattanapanit S,..., Lim, HW, Hamzavi, I. Br J Dermatol 2018 May; 178:1173. Detroit

- Irradiation with visible light of SPT IV-VI subjects, at 24 hrs:
  - Increased cyclin D1 and COX2 (markers of proliferatiohn);
  - Increased MMP1 (collagenase) and MMP9 (gelatinase): collagen degradation

Fisher GJ, Wang ZQ, Datta SC, Varani J, Kang S, Voorhees JJ. Pathophysiology of premature skin aging induced by ultraviolet light. N Engl J Med. 1997.
Taylor SC, Alexis AF, Armstrong AW, Chiesa Fuxench ZC, Lim HW. Misconceptions of photoprotection in skin of color. J Am Acad Dermatol. 2022
Krutmann J, Schalka S, Watson REB, Wei L, Morita A. Daily photoprotection to prevent photoaging. Photodermatol Photoimmunol Photomed. 2021
Kohli I, Chaowattanapanit S, Mohammad TF, Nicholson CL, Fatima S, Jacobsen G, Kollias N, Lim HW, Hamzavi IH. Synergistic effects of long-wavelength ultraviolet A1 and visible light on pigmentation and erythema. Br J Dermatol. 2018

Fotoprotección personalizada

Sunscreens for Different Phototypes

(T Passeron, H W Lim, ...J Ocampo Candiani, ... S Schalka, et al. JEADV 2021 Jul;35:1460)

Fitzpatrick phototype	Description	Individual Typology Angle (ITA)	Skin color (ITA classification)	UVB protection (SPF)	UVA protection (UVA-PF)	High energy visible light protection (VL-PF)
I	Always burns, never tans	ITA° >55°	Very light	SPF50+	UVA-PF +++ (>1/3 labelled SPF)	
II	Burns easily, sometimes tans	41° <ITA° <55°	Light			
III	Sometimes burns, always tans	28° <ITA° <41°	Intermediate			
IV	Rarely burns, tans easily	10° <ITA° <28°	Tan			
V	Rarely burns tans easily; moderately pigmented	-30° <ITA° <10°	Brown			
VI	Rarely burns, tans promptly and intensely; highly pigmented	ITA° <-30°	Dark	SPF30+	UVA-PF +++ (> 2/3 labelled SPF)	VL-PF+++

Review › Photodermatol Photoimmunol Photomed. 2024 May;40(3):e12967. doi: 10.1111/phpp.12967.

New trends on personalized sunscreens

Tamara Gracia-Cazaña [1 2], José Aguilera [3], Alba Navarro-Bielsa [1 2], Salvador González [4], Henry W Lim [5], Yolanda Gilaberte [1 2]

› Photodermatol Photoimmunol Photomed. 2025 Jan;41(1):e70001. doi: 10.1111/phpp.70001.

Personalized Photoprotection: Expert Consensus and Recommendations From a Delphi Study Among Dermatologists

Magdalena de Troya-Martín [1], Alba Rodríguez-Martínez [2], Francisco Rivas-Ruiz [2], Andras Subert [2], Maria-Ivonne Arellano-Mendoza [3], Piergiacomo Calzavara-Pinton [4], Maria Victoria de Gálvez [5], Yolanda Gilaberte [6], Chee-Leok Goh [7], Henry W Lim [8], Sergio Schalka [9], Peter Wolf [10], Salvador González [11]

Efectos beneficiosos de la exposición solar

Reducción de mortalidad asociada a luz solar

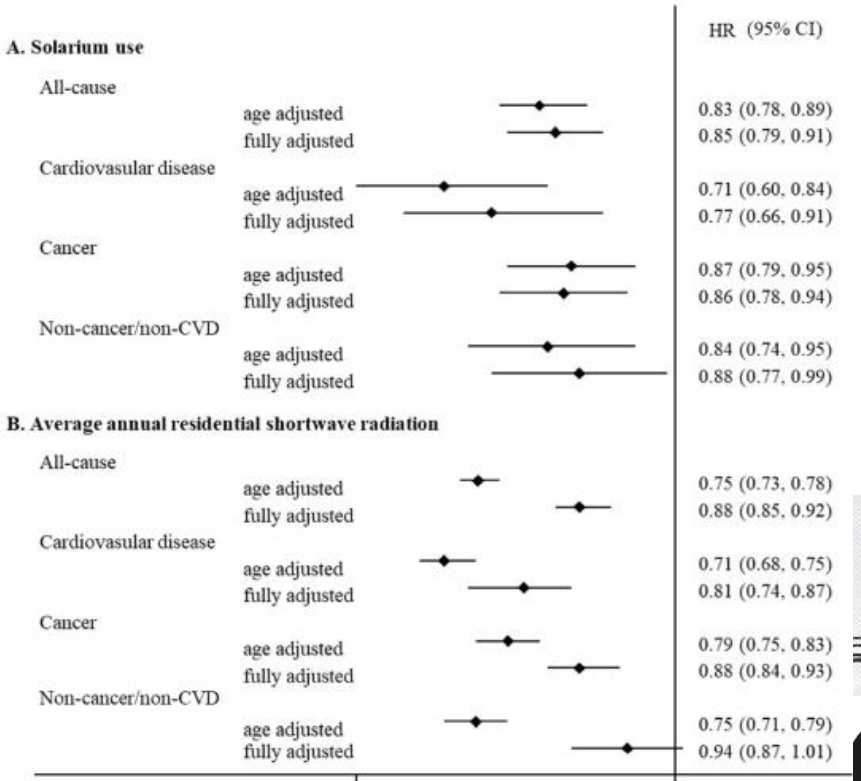
Reduce incidencia, hospitalización y mortalidad por COVID-19.
Aumenta producción de endorfinas
Reduce riesgo de depresión y suicidio.
Reduce riesgo de esclerosis múltiples

Exposición a luz solar como factor cardioprotector
- ✓ Reduce riesgo de HTA
- ✓ Mejora perfil lipídico
- ✓ Reduce riesgo de DM tipo 2
- ✓ Reduce riesgo de obesidad

Health Place. 2024 Sep:89:103328. doi: 10.1016/j.healthplace.2024.103328. Epub 2024 Aug 1.

Higher ultraviolet light exposure is associated with lower mortality: An analysis of data from the UK biobank cohort study

Andrew C Stevenson [1], Tom Clemens [1], Erola Pairo-Castineira [2], David J Webb [3], Richard B Weller [4], Chris Dibben [5]



Efectos beneficiosos de la exposición solar y vitamina D

Review › J Invest Dermatol. 2024 Aug;144(8):1724-1732. doi: 10.1016/j.jid.2023.12.027. Epub 2024 Apr 24.

Sunlight: Time for a Rethink?

› Environ Res. 2017 Nov:159:239-248. doi: 10.1016/j.envres.2017.07.045. Epub 2017 Sep 18.

The acute effects of ultraviolet radiation on the blood transcriptome are independent of plasma 25OHD$_3$

Mariona Bustamante [1], Carles Hernandez-Ferrer [2], Yaris Sarria [2], Graham I Harrison [3], Lara Nonell [4], Wenjing Kang [5], Marc R Friedländer [5], Xavier Estivill [6], Juan R González [2], Mark Nieuwenhuijsen [2], Antony R Young [7]

Efectos sistémicos independientes de la vitamina D

Table 1. Sunlight Quartet of Conditions in which There Is an Epidemiological Suggestion of Vitamin D–Independent Health Benefits from Sunlight Exposure

Condition	Latitude Relationship	Seasonal Relationship	Vitamin D Correlation	Vitamin D Supplementation Effect
Multiple sclerosis	Population prevalence increases by 5.27 per 100,000 per degree higher latitude (Simpson et al, 2019)	MS relapses peak in late winter/early spring and trough in late summer/early autumn. At higher latitudes, the peak and trough times move earlier (closer to minimum/maximum UV times) (Spelman et al, 2014)	Seasonally adjusted risk of relapse of MS HR = 0.90 (95% CI = 0.83–0.98) per 10 nmol/l increase in measure vitamin D (P = .016) (Simpson et al, 2010)	Cochrane systematic review of placebo controlled clinical trials of vitamin D supplementation shows no reduction in clinical or MRI measures of relapse (Jagannath et al, 2018)
BP/hypertension	Population BP correlates with latitude (R^2 = 0.26) in pre-antihypertensive medication era (Weller, 2016)	Daytime winter to summer home BP difference is −6.05 (−7.04 to −5.06) mmHg systolic/−3.05 (−3.53 to −2.56) mmHg diastolic (Kollias et al, 2019)	Circulating vitamin D levels correlate inversely with relative risk of hypertension diagnosis (Zhang et al, 2020)	Oral vitamin D has no effect on BP (Autier et al, 2017; Bouillon et al, 2022; Rostand et al, 2016)
Ischaemic heart disease	IHD deaths correlate with latitude in Europe (R^2 = 0.25) (Zittermann et al, 2005). Carotid atherosclerosis correlates with latitude (Baldassarre et al, 2010)	Cardiovascular events are 10–30% higher in winter than in summer in temperate latitudes (Gemmell et al, 2000; Mackay et al, 2019; Scragg, 1981; Stewart et al, 2017)	Low vitamin D levels associated with incident cardiovascular disease (Wang et al, 2008)	Vitamin D supplementation has no effect on incident cardiovascular disease (Barbarawi et al, 2019; Manson et al, 2019)
T2DM		Fasting glucose and HbA1c nadirs in summer (Gikas et al, 2009; Higgins et al, 2009; Tseng et al, 2005)	Baseline serum vitamin D correlates inversely with probability of developing T2DM (Gagnon et al, 2012; Lips et al, 2017)	Vitamin D supplementation does not lower the risk of T2DM in subjects unselected for vitamin D insufficiency (Pittas et al, 2019)
COVID-19	COVID-19–specific mortality correlates inversely with local UV environment (Cherrie et al, 2021)	COVID-19 infection rate increases Autumn → Winter and decreases Spring → Summer (Carleton et al, 2021)	Severe COVID-19 (hospitalization or death) more prevalent with vitamin D insufficiency (Pereira et al, 2022)	Oral vitamin D (Jolliffe et al, 2022) or cod liver oil (Brunvoll et al, 2022) have no effect on COVID-19 infection/mortality
All-cause mortality	Latitude effects of sunlight confounded by skin color	Overall mortality peaks in winter and nadirs in summer in temperate countries but not in low-latitude countries (Marti-Soler et al, 2014). Seasonal mortality variation relates to latitude and thus day length variation (Douglas and Rawles, 1999)	Low-serum vitamin D levels nonlinearly associated with increased mortality (Fan et al, 2020)	No effect of vitamin D supplementation on mortality (Zhang et al, 2019). Mendelian randomization study results inconsistent (Afzal et al, 2014; Sutherland et al, 2022; Trummer et al, 2013)

Abbreviations: BP, blood pressure; CI, confidence interval; HBA1c, hemoglobin A1c; HR, hazard ratio; IHD, ischemic heart disease; MRI, magnetic resonance imaging; MS, multiple sclerosis; T2DM, type 2 diabetes mellitus.

63688 - PHOTOPROTECTIVE EFFICACY AND PHOTOSTABILITY OF AN ULTRAFLUID SUNSCREEN CONTAINING Phenylene Bis-Diphenyltriazine, A NEW BROAD-SPECTRUM FILTER AGAINST UVB, UVA AND BLUE LIGHT RADIATIONS

Dr. Ana Coutinho, Fernanda Chaves « Pierre Fabre Dermo-Cosmétique et Personal Care, Rio de Janeiro, Brazil »
Raphael Pinheiro «R&D, Pierre Fabre Dermo-Cosmétique et Personal Care, Rio de Janeiro, Brazil »
Gautier Doat « Laboratoires Dermatologiques Avène, Lavaur, France »

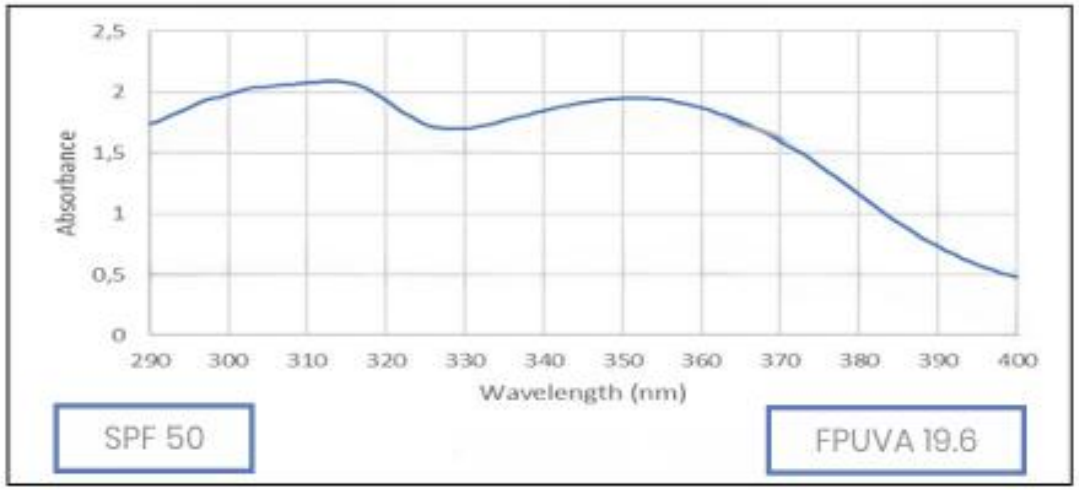
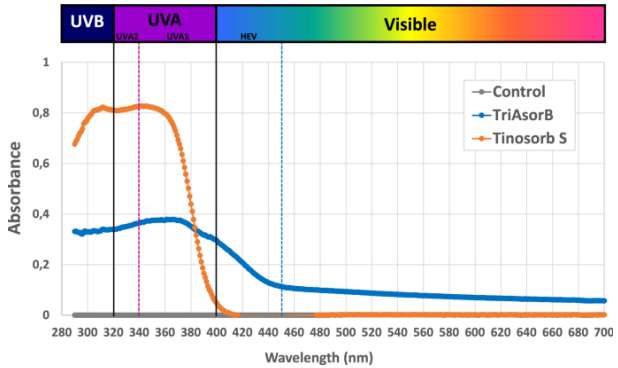


Fig 2: Mean absorbance spectra in the UV for the PMMA plates with the product applied, after ultraviolet irradiation.

	Percentual decrease	Photostability
4 hours	5,90%	94,10%
8 hours	8,50%	91,50%
12 hours	10,50%	89,50%



› Photochem Photobiol Sci. 2021 Nov;20(11):1475-1486. doi: 10.1007/s43630-021-00114-x. Epub 2021 Oct 13.

Phenylene Bis-Diphenyltriazine (TriAsorB), a new sunfilter protecting the skin against both UVB + UVA and blue light radiations

D Bacqueville [1 2], C Jacques-Jamin [3], H Dromigny [3], F Boyer [3], Y Brunel [3], P J Ferret [3], D Redoulès [4], T Douki [5], S Bessou-Touya [3], H Duplan [3]

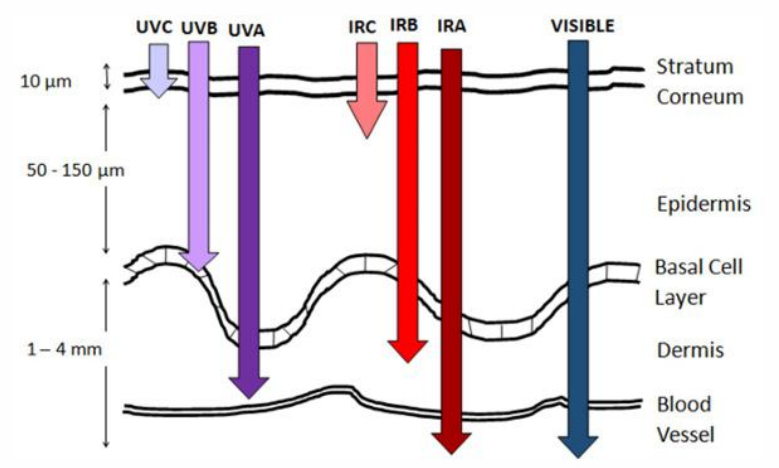
TriAsorB muestra buenos resultados en Fotoestabilidad

Investigation of two sun protection products in terms of their potency in protecting against blue light induced decrease in human skin cell viability.

Poster: 62835

Authors: Jessica Moor[1,3], Amy Bowman[1], Hina Choudhary[2], Jonathan Brookes[1], Patricia Brieva[2] and Mark A Birch-Machin[1,3]

[1]Skin Life Analytics, Catalyst, Newcastle NE45TG, UK; [2]SkinCeuticals, 10 Hudson Yards, New York, NY 10001, USA [3]Newcastle University, Dermatology, UK



Más datos sobre el efecto de la luz azul sobre la dermis.
Las fórmulas con filtros minerales consiguen mejor protección frente a luz azul que los filtros químicos.

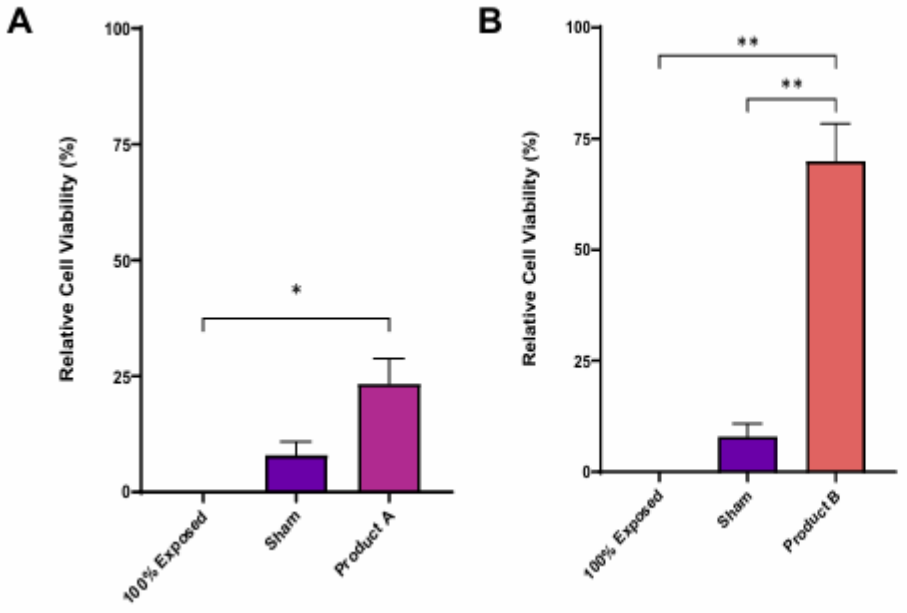


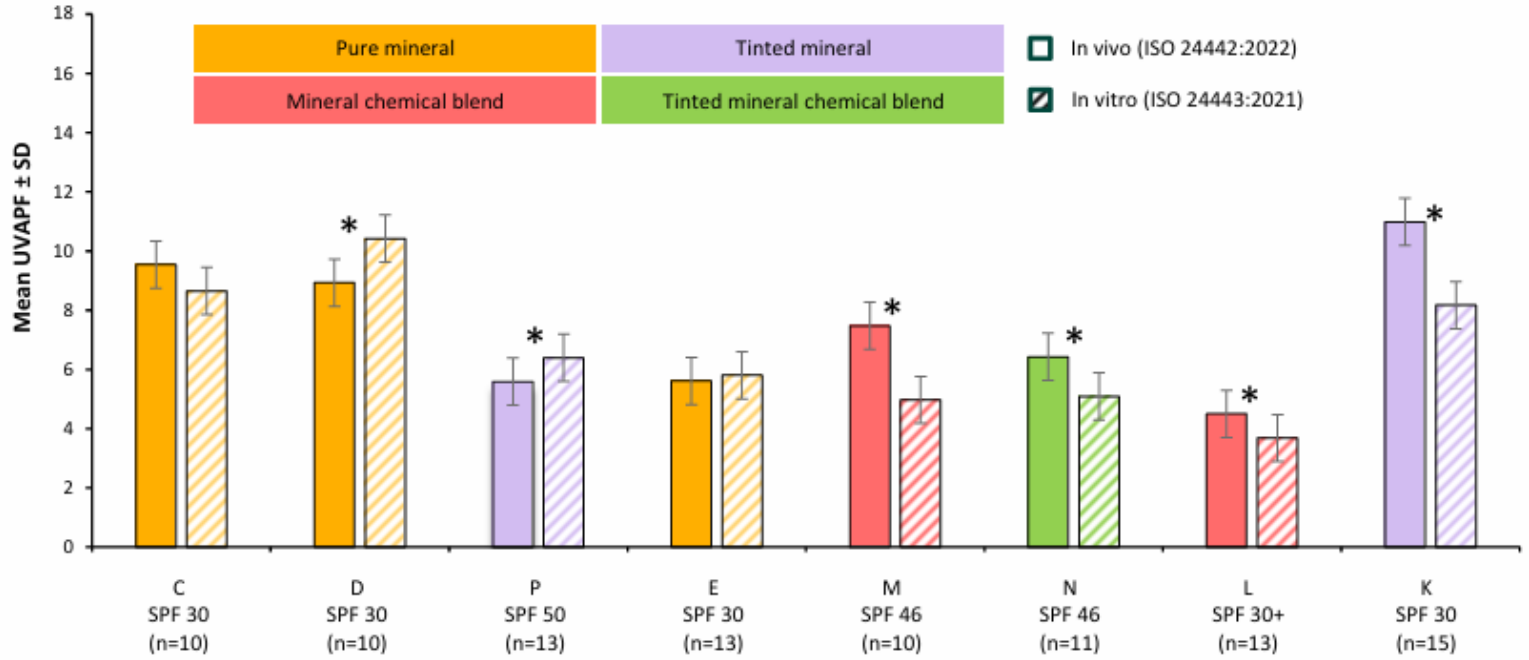
Figure 2. Cell viability of blue light irradiated human skin cell fibroblasts (HDFn cells) in the presence of Products A and B (parts A and B).
HDFn cells were irradiated with filtered blue light equivalent to 50 J/cm^2, with formulations applied at 2 mg/cm^2 on transpore tape and placed over the relevant cells during irradiation. MTS assays determined cell viability 24 hours after irradiation. The data is presented as cell viability relative to 100% Exposed (Tape) condition (0% cell viability). Sham is SPF=0 vehicle. As expected, the degree of cell viability in the presence of the Sham product was not statistically different from the 100% exposed condition. Statistical analysis was performed using t-test where (*): $p<0.05$, (**): $p<0.01$. Data shows mean ± SEM, n=3 namely three biological repeats were performed for each condition, with 8 technical repeats per condition per run (therefore each column = 24 data points).

Evaluating the variability in effective protection against ultraviolet A (UVA) radiation-induced pigmentation provided by mineral sunscreens

Joshua D. Williams PhD, Tatiana Luts PhD, Mark Benn, Thomas Shyr

Filtros minerales con color como mejor opción para conseguir buena protección frente a UVA

In vivo and in vitro UVA protection factor comparison of mineral sunscreens



*Denotes statically significant difference (p<0.05).

Sunscreen critical wavelength

Product	Labeled SPF	Mean critical wavelength	
		Pre-UV exposure	Post-UV exposure
C	30	376.05	376.15
D	30	371.70	371.95
P	50	371.35	371.10
E	30	373.00	373.00
M	46	365.10	368.00
N	46	366.10	368.90
L	31	366.40	368.45
K	30	378.05	377.00

DEVELOPMENT OF GRAPHENE AND CARBON NANOTUBES AS ULTRAVIOLET ABSORBERS FOR SUNSCREEN FORMULATIONS

Tram Phan[1,6], Hope Zehr[1,2,6], Yang Yang[1,3,6], Edward Maytin[1,4,5], Vijay Krishna[1,2,3,6]

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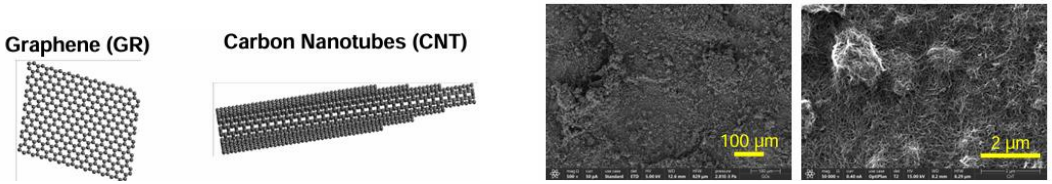
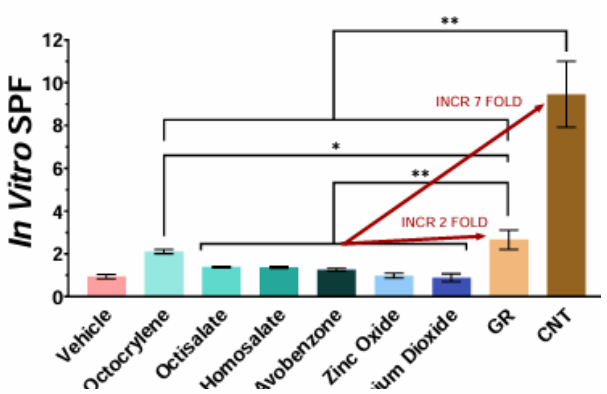
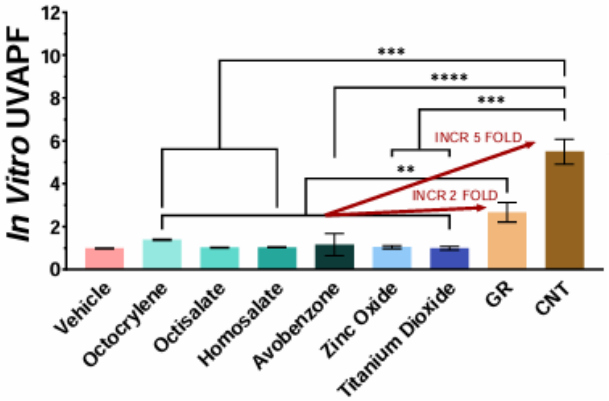
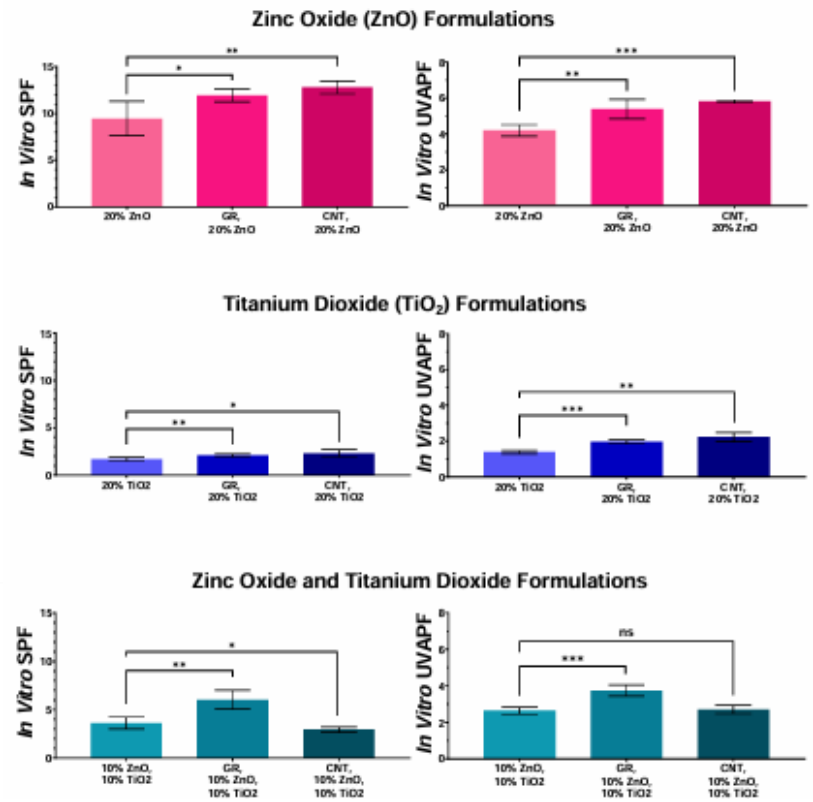
[3] Biomedical Engineering, Case Western Reserve University, [4] Dermatology and Plastic Surgery Institute, Cleveland Clinic
[5] Disclosure Information: DUSA Pharmaceuticals, Inc. Advisory Board , [6] Authors have no relationships to disclose

Cleveland Clinic





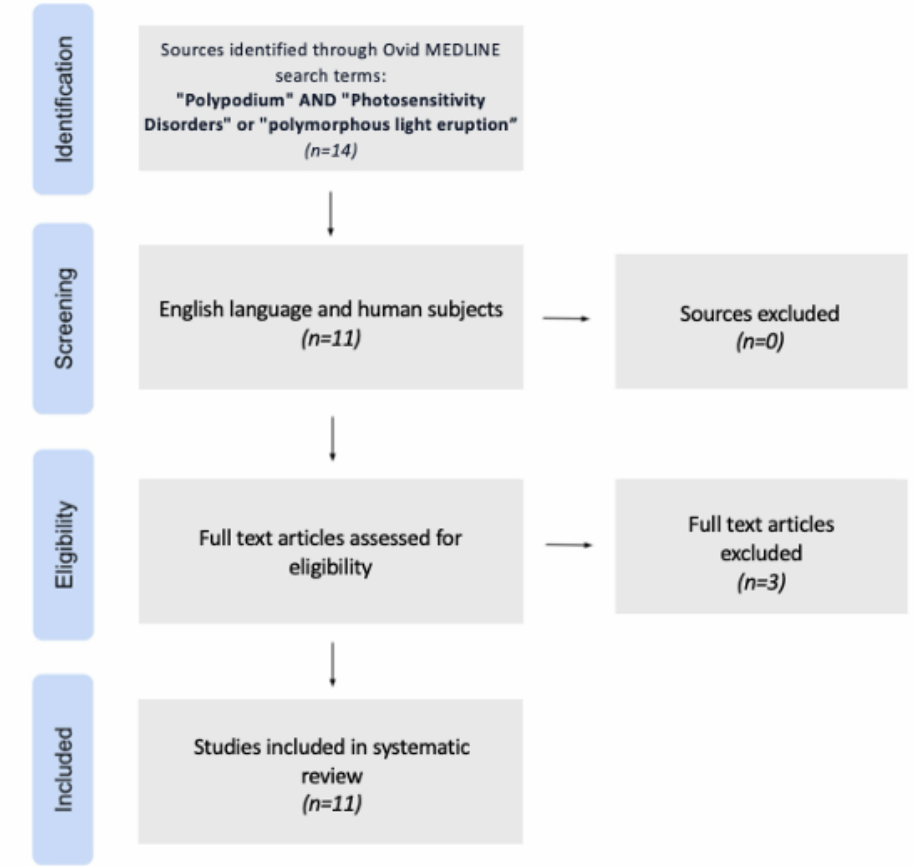




Los preparados con partículas de grafeno y los nanotúbulos de carbono consiguen mejores FPS y FPS-UVA *in vitro* que los filtros físicos y químicos tradicionales.
No penetración cutánea
Limitaciones: homogeneidad en la aplicación

Systematic Review of the Therapeutic Role of Polypodium Leucotomos in Photosensitivity Disorders

Rayva Khanna MD[1,2], Maria Etcheverry BS[3], Danielle Abi-Najm MS[3], Seemal R. Desai MD[4]
[1]MedStar Georgetown University Hospital; [2]MedStar Washington Hospital Center, Department of Dermatology; [3]Georgetown University School of Medicine; [4]Innovative Dermatology



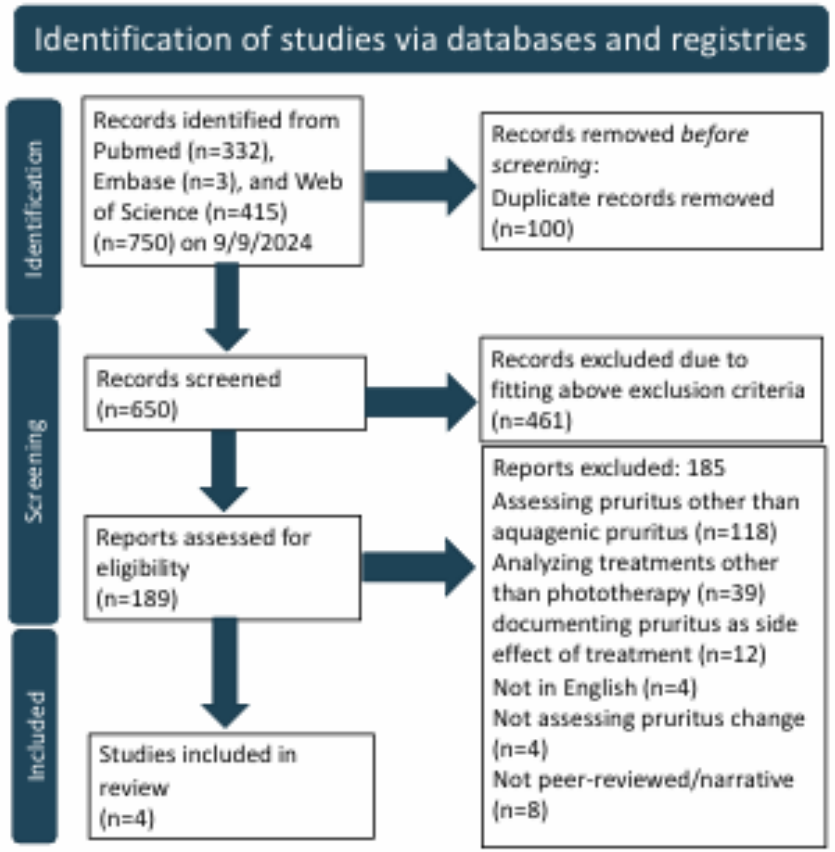
Tratamiento complementario prometedor en fotodermatosis como EPL, urticaria solar y prurigo actínico.
Excelente tolerancia del tratamiento sin aumento de efectos adversos.
Necesidad de RCT

The Utility of Phototherapy in Aquagenic Pruritus: A Systematic Review

Jamie Warner, BS[1], Chhaya Patel, BS[1], Kate Beekman, BS[2], Ashley Bissenas, BS[1], Kenan Kherallah, BS[3], Tahseen Alkaelani, BS[4], Navid Farahbakhsh, MD[5]

[1]University of Florida College of Medicine, Gainesville, FL. [2]University of South Florida Morsani College of Medicine, Tampa, FL. [3]Keck School of Medicine of University of Southern California, Los Angeles, CA. [4]Florida State University College of Medicine, Tallahassee, FL. [5]University of Florida College of Medicine Department of Dermatology, Gainesville, FL.

All authors have no disclosures, financial or otherwise.



No hay evidencia suficiente sobre la eficacia de la fototerapia en monoterapia para el tratamiento del prurito acuágenico.
Limitación en número de estudios y pacientes.
Probablemente útil en combinación con anti-H.

Study	Total number of patients	Number of patients with Aquagenic Pruritus	Phototherapy Type	Available Treatment Details	Outcomes Measured	Patient Outcomes
Steinman et al. (1985)	34	14	Suberythemal UVB	Suberythemal/UVB therapy administered two to three times weekly	• The effectiveness of the phototherapy treatment was measured based on the patient's therapeutic response: significant relief, partial relief, and no relief	• 8 patients self-reported "significant relief"[2] and improved pruritus from UVB therapy
Xifra et al. (2005)	2	2	NB-UVB	NB-UVB therapy administered three times weekly (with a maximum dose 1 J/cm2)	• The effectiveness of the phototherapy treatment was measured based on the patient's therapeutic response: significant relief, partial relief, and no relief	• All patients had self-reported "significant relief"[3] from NB-UVB therapy
Morgado-Carrasco et al. (2017)	1	1	Combined UVA and NB-UVB	UVA (3-9 J/cm2) with NB-UVB (200-1200 mJ/cm2) three times weekly	• The effectiveness of the phototherapy treatment was measured based on the patient's therapeutic response and decrease in severity and frequency of symptom occurrence	• The patient experienced "rapid improvement of the pruritus in only a few sessions with complete resolution of the symptoms"[4] from UVA and NB-UVB therapy
Morgado-Carrasco et al. (2020)	2	2	Combined UVA and NB-UVB	UVA (4-9 J/cm2) with NB-UVB (200-1200 mJ/cm2) three times weekly	• The effectiveness of the phototherapy treatment was measured based on the patient's symptom-free length	• One patient remained "asymptomatic for 1 year"[5] but the pruritus reappeared in the following months after UVA and NB-UVB therapy • One patient experienced "prolonged symptom-free periods, with a booster cycle once a year to maintain remission"[5] from UVA and NB-UVB therapy

THYROID FUNCTION AND BENZOPHENONE-3 IN SUNSCREEN: A NATIONWIDE STUDY

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Department of Medicine, Eastern Virginia Medical School at Old Dominion University, Norfolk, VA

Macon & Joan Brock Virginia Health Sciences
Eastern Virginia Medical School
at Old Dominion University

In animal studies, BP-3 affects thyroid function by enhancing gene expressions related to thyroid hormone production, iodine uptake, and peripheral conversion of T4 to T3. However, small epidemiological studies in humans have provided inconsistent results.

Leve disminución de niveles de T3 y T4 total.
No cambios en TSH ni en T3 y T4 libres.
No claro efecto negativo sobre la función tiroidea.

Variables	CNBP3					
	Q1 (N=992)	Q2 (N=991)	Q3 (N=992)	Q4 (N=991)	Total (N=3,966)	P-value
Age, years	49 (36)	40 (39)	40 (36)	41.5 (33)	42.9 (36.9)	<0.001
6-15 years, n (%)	45(4.5)	107 (10.8)	99 (10.0)	57 (5.7)	308 (7.8)	<0.001
16-25 years, n (%)	165 (16.6)	207 (20.9)	187 (18.8)	183 (18.5)	742 (18.7)	
26-45 years, n (%)	236 (23.8)	246 (24.8)	270 (27.2)	308 (31.1)	1060 (26.7)	
46-65 years, n (%)	306 (30.8)	255 (25.7)	286 (28.8)	290 (29.3)	1137 (28.7)	
>65 years, n (%)	240 (24.2)	176 (17.8)	150 (20.9)	153 (15.4)	719 (18.1)	
Female, n (%)	327(33.0)	446 (45.0)	525 (52.9)	685 (69.1)	1985 (50)	<0.001
Race, n (%)						<0.001
White	356 (35.9)	366 (36.9)	394 (39.7)	481 (48.5)	1597 (40.3)	
Black	336 (33.9)	239 (24.1)	190 (19.1)	140 (14.1)	905 (22.8)	
Hispanic	208 (21.0)	268 (27.0)	306 (30.8)	253 (25.5)	1035 (26.1)	
Other	92 (9.3)	118 (11.9)	102 (10.3)	117 (11.8)	429 (10.8)	
Diabetes Mellitus, n (%)	160 (16.1)	104 (10.5)	101 (10.2)	77 (7.8)	442 (11.1)	<0.001
Hypertension, n (%)	403 (40.6)	286 (28.9)	294 (29.6)	254 (25.6)	1237 (31.2)	<0.001
Obesity, n (%)	343 (35.0)	353 (36.0)	325 (33.3)	264 (26.9)	1285 (32.8)	<0.001
Urinary Benzophenone-3, ng/mL	2 (2.6)	7.6 (7.6)	23.7 (26.7)	218 (549)	12.5 (47.5)	
Estimated GFR, ml/min	97.8 (37.3)	104 (37)	104 (36.8)	103.0 (32.4)	102.1 (35.8)	<0.001
CKD Stage ≥ 3, n (%)	113 (11.4)	60 (6.1)	46 (4.6)	40 (4.0)	259 (6.5)	<0.001
TSH, µIU/mL	1.5 (1.17)	1.56 (1.29)	1.5 (1.2)	1.52 (1.26)	1.5 (1.2)	0.90
T4, µg/dL	7.87 (2.04)	7.7 (2.03)	7.7 (1.84)	7.61 (1.81)	7.7 (1.9)	0.22
FT4, ng/dL	0.8 (0.2)	0.8 (0.2)	0.8 (0.2)	0.8 (0.2)	0.8 (0.2)	0.02
T3, ng/dL	112 (30)	117 (32)	113.5 (29)	112 (27)	114 (30)	<0.001
FT3, pg/mL	3.2 (0.58)	3.22 (0.52)	3.2 (0.54)	3.1 (0.5)	3.2 (0.55)	<0.001
Serum Albumin, g/dL	4.3 (0.4)	4.3 (0.4)	4.3 (0.4)	4.3 (0.4)	4.3 (0.4)	0.47

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