Benzoyl Peroxide and Tea Tree Oil in Acne Compositions

Prepared for Dr. Jane Doe

Imaginary Pharmaceuticals

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accuracy, completeness or adequacy of such information; and shall have no liability for errors, omissions or
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Original Search Request

Conduct a search of the literature and patents for references to acne compositions containing benzoyl peroxide and tea tree oil. Remove the duplicates.

Science IP’s Understanding of the Request

Search the literature and patents for references containing benzoyl peroxide and tea tree oil in acne compositions. Remove the duplicates.
Science IP Search Results

Research Summary
A search was conducted in the Chemical Abstracts database for benzoyl peroxide by CAS Registry Number and by names collected from the Chemical Abstracts Registry and combined with references to tea tree oil or melaleuca. These references were then combined with terms for acne or anti-acne, and 28 references were retrieved.

A search was conducted in the Derwent World Patents Index for benzoyl peroxide by Derwent Registry Number and by names and combined with the results for tea tree oil by Derwent Registry Number and by names. These references were then combined with terms for acne or anti-acne, and 33 references were retrieved.

A search was conducted in the fulltext patent databases (US, EP, FR, GB, DE, WO, AU, CA, CN and JP), and three different approaches were used to help target the results. Benzoyl peroxide was searched within 250 words of tea tree oil within 250 words of the acne terms. Benzoyl peroxide was searched within 250 words of tree oil and then combined with terms for acne or anti-acne. The third approach was for all of the concepts to be limited to the title, abstract or claims. The three approaches retrieved 311 references.

Other bibliographic patent databases were searched for benzoyl peroxide and tea tree oil and acne terms, and 49 references were retrieved.

STNIndex which is an index to more than 120 databases on STN was searched to identify which databases might contain references on our search topic. Nine additional databases were identified and searched, and 41 references were retrieved.

The duplicates were removed, and 199 patent references and 42 non-patent literature references were retrieved. These references can be found below in the Detailed Results section with the bibliographic citation, abstracts and either hit indexing or keywords in context displayed.

Please let me know if you have any questions.

Discussion of Search Strategy

The scope of each database searched is shown in the Sources Used section at the end of the report. If additional information about the databases is desired, please contact the searcher.

Answers resulting from text search strategies are general and it is likely that some answers will not be of interest.
Detailed Results

Hypertext links have been added to selected patent numbers. Links for US documents open the corresponding Google Patents web page. Links for AU, CA, DE, EP, FR, GB, and WO documents open the corresponding page at the Espacenet web site. A patent family link has been added to USPATFULL and USPAT2 citations. Patents for other patent authorities (and non-patent records) are available, via CAS Fulltext Options, by clicking the ‘Full-text’ link above the patent titles.

Patent References

For this sample report, only the 26 references from HCAPPLUS, the first 7 references from USPATFULL, the first 4 references from PCTFull, and the reference from IFIPAT are displayed below.

L56  ANSWER 1 OF 199  HCAPPLUS  COPYRIGHT 2013 ACS on STN
ACCESSION NUMBER: 2012:1402229  HCAPPLUS  Full-text
DOCUMENT NUMBER: 157:530072
TITLE: Treatment of inflammatory and infectious skin disorders
INVENTOR(S): Taylor, Emma
PATENT ASSIGNEE(S): University of California, USA
LANGUAGE: English
PATENT INFORMATION:

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<td>20120927</td>
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PRIORITY APPLN. INFO.: US 2011-466510P  P 20110323

AB Disclosed herein is a compn. comprising of resveratrol and/or derivs. thereof and/or functionally related compds. and benzoyl peroxide and/or derivs. thereof and/or functionally related compds. for the treatment of acne and other inflammatory or infectious skin disorders. Also disclosed are methods of treating acne and other inflammatory and infectious skin disorders using the compns. described herein. Efficacy of a combination benzoyl peroxide and resveratrol against of Pityrosporum acnes was shown.

IPCI A61K0009-06 [I,A]; A61K0009-20 [I,A]; A61K0031-03 [I,A]; A61K0031-075 [I,A]; A61K0031-085 [I,A]; A61P0031-00 [I,A]; A61P0017-10 [I,A]
IPCR A61K0009-06 [I,A]; A61K0009-20 [I,A]; A61K0031-03 [I,A]; A61K0031-075 [I,A]; A61K0031-085 [I,A]; A61P0017-10 [I,A]; A61P0031-00 [I,A]
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
ST inflammatory infectious skin disorder treatment benzoyl peroxide resveratrol
IT Essential oils
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca; treatment of inflammatory and infectious skin disorders)
IT Acne
(vulgaris; treatment of inflammatory and infectious skin disorders)
IT 52-01-7, Spironolactone 68-26-8, Retinol 69-72-7, Salicylic acid, biological studies 79-14-1, Glycolic acid, biological studies 94-36-0, Benzoyl peroxide, biological studies 112-38-9, Undecylenic acid 114-07-8, Erythromycin 123-99-9, Azelaic acid, biological studies 127-56-0, Sulfacetamide sodium 130-26-7, Clioquinol 302-79-4, Tretinoin 501-36-0, Resveratrol 501-36-0D, Resveratrol, derivs. 537-42-8, Pterostilbene 777-11-7,
Haloprogin 1397-89-3, Amphotericin B 1400-61-9, Nystatin 1404-04-2, Neomycin 1404-26-8, Polymyxin B 1405-87-4, Bacitracin 1406-18-4, Vitamin E 2398-96-1, Tolnaftate 4759-48-2, Isotretinoin 7704-34-9, Sulfur, biological studies 12650-69-0, Mupirocin 18323-44-9, Clindamycin 22199-08-2, Silver sulfadiazine 22255-22-7 22916-47-8, Miconazole 23593-75-1, Clotrimazole 27208-80-6, trans-Piceid 29342-05-0, Ciclopirox 38963-95-0, Resveratroloside 42438-89-1 53515-95-0 62218-08-0, α-Viniferin 62218-13-7, α-Viniferin 65277-42-1, Ketoconazole 65472-88-0, Naftifine 86386-73-4, Fluconazole 91161-71-6, Terbinafine 99592-32-2, Sertaconazole 101828-21-1, Butenafine 106685-40-9, Adapalene 118292-40-3, Tazarotene) 145356-39-4 148766-36-3, cis-Piceid 150258-83-6 204076-78-8 224452-66-8, Retapamulin 1093198-85-6 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (treatment of inflammatory and infectious skin disorders)
Oil compositions for treatment of dermatological disorders

The present invention provides oil compns. and assocd. methods and reagents, useful for the treatment and/or prevention of dermatol. conditions. The compns. comprise an oil agent including oils contg. a medium-chain triglyceride, a surfactant, a paraben, and a least one inactive agent. The oil agents inhibit activity of sweat and/or sebaceous glands, show antiperspirant and/or deodorant activity and can be used to treat or prevent certain clin. conditions assocd. with sweat, such as, for example, hyperhidrosis, chromhidrosis and bromhidrosis. The oil compns. provided are formulated for and achieve transdermal delivery, for example by topical administration. For example, antiperspirant effects of topical Labrafac Lipopihle WL 1349 was demonstrated in subjects with excessive sweating and may be used effectively in treating hyperhidrosis.
Raynaud disease
Rosacea
Sebaceous gland
Seborrhea
Skin, neoplasm
Skin disease
Skin hyperpigmentation
Skin infection
Sunscreens
Surfactants
Sweat gland
Topical drug delivery systems
Transdermal drug delivery systems
(oil compns. for treatment and/or prevention of dermatol. conditions)


RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oil compns. for treatment and/or prevention of dermatol. conditions)
AB  A shaving aid compn. is provided comprising a hydrophilic surfactant, such as triethanolamine stearate, at 5-20% by wt., an org. polyhalogenic agent at 3-10% by wt. that both promotes post application foaming, increases lubricity, and reduces skin irritation. The shaving aid is optionally used to deliver one or more therapeutics to the skin of a subject and is therefore operable to prevent or treat a skin condition, such as acne. Shaving compns. comprising triethanolamine stearate surfactant and CF-61 and CF-76 post-foaming agents were exemplified. Inclusion of 5% benzoyl peroxide reduced acne vulgaris and pseudofolliculitis barbaein humans.

IT  Essential oils
   RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) 
   (Melaleuca alternifolia; high lubrication shaving compns. comprising surfactants, org. polyhalogenic post-foaming agents and therapeutic agents for preventing or treating skin condition)

IT  Dermatological agents
   (anti-acne agents; high lubrication shaving compns. comprising surfactants, org. polyhalogenic post-foaming agents and therapeutic agents for preventing or treating skin condition)

IT  Acne
   (vulgaris; high lubrication shaving compns. comprising surfactants, org. polyhalogenic post-foaming agents and therapeutic agents for preventing or treating skin condition)

   RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) 
   (high lubrication shaving compns. comprising surfactants, org. polyhalogenic post-foaming agents and therapeutic agents for preventing or treating skin condition)
AB The present invention relates to methods and topical preparations for treatment of acne or acneiform conditions, particularly, but not limited to acne vulgaris, with products generated from culture of stem or progenitor cells. For example, mesenchymal stem cells, obtained from placenta using collagenase and phosphate-buffered saline (PBS), were suspended in α-MEM culture media supplemented with fetal bovine serum (FBS) and antibiotic, and the culture medium was changed every 2-3 days. Upon confluence, cells were trypsinized, washed, and cultured in Roswell Park Memorial Institute (RPMI) media without phenol red or FBS for 24 h. The conditioned media was collected and sterile filtered to exclude cells and cellular debris. The media was then mixed at a 1:1 vol. ratio with a moisturizing cream and used for topical treatment of a female with history of severe acne. After 3 days 18 of the inflammatory lesions and 1 of the noninflammatory lesions had resolved. At the end of 10 days only 2 noninflammatory lesions remained on the patient's face.

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 9, 62

ST stem cell conditioned culture media topical acne

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(3CB2; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT ATP-binding cassette transporters
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ABCG2, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ASMA, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(BLB; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Bois; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT CD antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD133; topical compns. comprising conditioned media of cultured stem...
cells for treatment of acne)

**CD antigens**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD29, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**CD antigens**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD54, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**CD antigens**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD63, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**CD antigens**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD9, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**CD antigens**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD90, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**CXC chemokine receptors**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CXCR4, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Proteins**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Crio, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Alcohols**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C1-12; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Alcohols**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C16-18, cetostearyl alc.; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Enzyme inhibitors**

(DNA methyltransferase inhibitors; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Hematopoietin receptors**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FLT3 receptors, ligand; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Histocompatibility antigens**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, class I, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Intercellular adhesion molecules**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICAM-1, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Proteins**

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Kirre; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

**Fats and Glyceridic oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Kuki nut; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

**IT** Antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Ly-6A, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MEPE, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Marhoram; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

**IT** Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

**IT** Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Muashi-1; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NANOG, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Octamer transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Oct-3, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PODXL (podocalyxin-like protein), biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Paired box transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Pax6; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(RC-2; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SH-3, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SH-4, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Transcription factor SOX

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SOX2, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT** Antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSEA-3 (stage-specific embryonic antigen 3), biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)
Science IP Order: 3550000  Client Reference: 3456-789

IT  Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSEA-4 (stage-specific embryonic antigen 4), biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(STRO-1, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Tra-1-60, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Tra-1-81, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Umbilical cord
(Warton's jelly; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Wnt proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Wnt-3A; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Keloid
(acne; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Wnt proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(agonists; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(allspice; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT  Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(almond; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT  Proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(angiopoietin-like 2; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(angiopoietin-like 3; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT  Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(animal; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT  Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anise; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT  Dermatological agents
(anti-acne agents; topical compns. comprising conditioned
media of cultured stem cells for treatment of **acne**

**Fats and Glyceridic oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(apricot kernel; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Solvants**

(aprotic; topical compns. comprising conditioned media of cultured stem cells for treatment of **acne**)

**Fats and Glyceridic oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(argan; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Fats and Glyceridic oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(avocado; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(basil, Ocimum basilicum; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(bergamot; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Fats and Glyceridic oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(berry; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Activated leukocyte cell adhesion molecules**

CD34 antigens
CD44 antigens
Endoglin
Melanoma cell adhesion molecules
Vascular cell adhesion molecule 1
Vimentins
c-Kit proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(camphor; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cassia; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cedarwood; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(celery seed; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chamomile; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**Fats and Glyceridic oils**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chili; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cinnamon; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(clary sage; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Stem cell
(cloned; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT
Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(clove; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Retinoids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combination with; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Acne
(comedo; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT
Culture media
(conditioned; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT
Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cumin; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Skin
(dermis; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Stem cell
(embryonic; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT
Skin
(epidermis; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(eucalyptus; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Tooth
(exfoliated, stem cells derived from; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT
Blood serum
(fetal bovine serum (FBS); topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fish; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT
Hair
(follicle, stem cells of; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT
Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(geranium; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ginger; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Amino acid transporters
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(glutamate-aspartate transporter; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gourd; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(grapefruit; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hazelnut; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hemp seed; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Lanolin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydrogenated; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hyssop; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Controlled-release drug delivery systems
(immediate-release; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(jasmine; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(juniper; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(laurel leaf; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lavender; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lemon; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lemongrass; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lime; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Alcohols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linear, esters, ceraphyls; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(macadamia nut; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(manuka; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Triglycerides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(medium-chain; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Stem cell
(mesenchymal stem cell; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mustard; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Perfumes
(myrrh; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Stem cell
(neural; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nutmeg; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Biomarkers
(of stem cells; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Resins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(olibanum; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(orange, sweet; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oregano; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Solvents
(org.; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(p27rex-1, biomarker; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(patchouli; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peppermint; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Physiological saline solutions
(phosphate-buffered; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Sebaceous gland
(pilosebaceous; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pine leaf; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pine seed; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poppyseed; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Glycoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(prominin 1; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Solvents
(protic; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pumpkin seed; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Endometrium
(regenerative cells of; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rice bran; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rose; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rosemary; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rosewood; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sage, *Salvia officinalis*; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sandalwood; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sassafras; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Fats and Glyceridic oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sesame; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Hedgehog protein
**RL:** BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(sonic; topical compns. comprising conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sour orange neroli; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sour orange; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(spearmint; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Embryo, animal
(stem cell; topical compns. comprising conditioned media of cultured stem cells for treatment of **acne**)

**IT** Adipose tissue
Endothelium
Heart
Intestine
Kidney
Liver
Osteoblast
Osteoclast
Parthenogenesis
(stem cells derived from; topical compns. comprising conditioned media of cultured stem cells for treatment of **acne**)

**IT** Cord blood
Placenta
(stem cells of; topical compns. comprising conditioned media of cultured stem cells for treatment of **acne**)

**IT** Fats and Glyceridic oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(teaseed; topical compn. derived from conditioned media of cultured stem cells for treatment of **acne**)

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thyme, *Thymus vulgaris*; topical compn. derived from conditioned media
of cultured stem cells for treatment of acne)

**IT**  
Combination chemotherapy  
Controlled-release drug delivery systems  
Cosmetic liquids  
Cosmetic packs  
Pharmaceutical carriers  
Pharmaceutical emulsions  
Pharmaceutical excipients  
Pharmaceutical gels  
Pharmaceutical ointments  
Pharmaceutical patches  
Topical drug delivery systems  
  (topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

**IT**  
Canola oil  
Coconut oil  
Corn oil  
Cottonseed oil  
Essential oils  
Essential oils  
Hydrocarbon oils  
Hydrocarbon oils  
Isoalkanes  
Jojoba oil  
Linseed oil  
Oils  
Olive oil  
Palm kernel oil  
Palm oil  
Paraffin oils  
Peanut oil  
Petrolatum  
Polysiloxanes  
Rape oil  
Safflower oil  
Soaps  
Soybean oil  
Sunflower oil  

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

**IT**  
Acne  
Animal tissue culture  
Anti-inflammatory agents  
Chelating agents  
Fever and Hyperthermia  
Hematopoietic precursor cell  
Histone deacetylase inhibitors  
Human  
Hypoxia  
Inflammation  
Nonpolar solvents  
Polar solvents  
Scar  
Stem cell  
Surfactants  
Thickening agents  
  (topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

**IT**  
Nestins
IT Bone morphogenetic protein 2
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fibronectins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Growth factors, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Hepatocyte growth factor
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Interleukin 11
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Interleukin 5
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Interleukin 6
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Leukemia inhibitory factor
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Transforming growth factor β
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Alcohols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Glycols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT Polyoxyalkylenes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)
IT Alcohols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(trihydric; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(truffle; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Bombesin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type BB2, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

IT Collagens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type I, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(valerian; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(vegetable; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Acne
(vulgaris; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(walnut kernel oil; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Vitamins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(water-insol.; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Fats and Glyceridic oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wheat germ; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wintergreen; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ylang-ylang; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT Integrins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(β1, biomarker; topical comps. comprising conditioned media of cultured stem cells for treatment of acne)

IT 9001-78-9, Alkaline phosphatase 9027-73-0, CD73 9028-86-8, Aldehyde dehydrogenase 9054-63-1, CD13 antigen 120178-12-3, Telomerase reverse transcriptase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(biomarker; topical compn. comprising conditioned media of cultured stem cells for treatment of acne)

IT 69-72-7, Salicylic acid, biological studies 94-36-0, Benzoyl peroxide, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combination with; topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT 9037-42-7, DNA methyltransferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT 9076-57-7, Histone deacetylase, inhibitor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compn. derived from conditioned media of cultured stem cells for treatment of acne)

IT 9001-12-1, Collagenase 9014-42-0, Thrombopoietin 9061-61-4, Nerve growth factor 11096-26-7, Erythropoietin 62683-29-8, Colony-stimulating factor, 67763-96-6, IGF-1 83869-56-1, Granulocyte-macrophage colony-stimulating factor 106096-93-9, BFGF 143011-72-7, Granulocyte colony-stimulating factor 1199555-26-4, α-MEM
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)

IT 56-81-5, Glycerol, biological studies 57-55-6, Propylene glycol, biological studies 59-52-9, Dimercaprol 60-00-4, Ethylenediaminetetraacetic acid, biological studies 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 67-63-0, Isopropyl alcohol, biological studies 107-15-3, Ethylenediamine, biological studies 637-12-7, Aluminum stearate 7664-38-2D, Phosphoric acid, di- and trialkyl esters 25322-68-3, Polyethylene glycol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compns. comprising conditioned media of cultured stem cells for treatment of acne)
The present invention relates to the preparation of compositions comprising benzoyl peroxide, with or without other additional active ingredients. The process involves introducing benzoyl peroxide, along with any other active ingredients present, into a fatty substance that contains and protects the ingredients that would otherwise be unstable when in contact with one another. The composition is designed to allow all ingredients to become available for skin contact or skin absorption when the fatty substance softens and/or melts as the composition is applied to the skin. The benzoyl peroxide may be pre-micronized to a particle distribution size of about d90 of 0.1 to 150 µ, preferably d90 of 10 to 15 µ. Further, pharmaceutical or cosmetic ingredients may be contained within the fatty substances, with or without benzoyl peroxide therein or may be present outside of the fatty substance but elsewhere within formulated pharmaceutical or cosmetic products using the active ingredients protected by the fatty substance. These compositions are useful in aqueous-based formulations to treat diseases by topical, transdermal and/or s.c. administration. Thus, a formulation contained tretinoin 0.1%, benzoyl peroxide 15.0%, water 49.25%, xanthan gum 0.3%, Polyoxyl 40 stearate 5.0%, stearic acid 17.0%, stearyl alcohol 3.0%, iso-Pr myristate 10.0%, BHT 0.1%, and sorbic acid 0.2 g.
(fatty; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Shear
(high; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(hydrogenated; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Carboxylic acids
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(hydroxy; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(kokum; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(mango kernel; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fluidization
(microfluidization; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Acne
Animal virus
Antibiotics
Antitumor agents
Antiviral agents
Beeswax
Butter
Ceiba pentandra
Controlled-release drug delivery systems
Cosmetics and Personal care products
Drug delivery systems
Emulsifying agents
Fungi
Fungicides
Grease (food-derived)
Mammary gland, neoplasm
Melanoma
Melting point
Neoplasm
Particle size distribution
Rosacea
Skin
Stability
Tinea pedis
Topical drug delivery systems
Transdermal drug delivery systems
Vitiligo
Wart
Witch hazel
(pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Alkanes
Carnauba wax
Castor oil
Coal tar
Cocoa butter
Coconut oil
Corticosteroids
Cottonseed oil
Estrogens
Fats and Glyceridic oils
Glucocorticoids
Glycerides
Hydrocarbon oils
Jojoba oil
Lanolin
Lard
Olive oil
Palm oil
Paraffin oils
Petroleum
Polyesters
Polyoxyalkylenes
Progestogens
Retinoids
Steroids
Tallow
Triglycerides
Vitamins
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Resins
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(podophyllum; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Polyethers
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(polyester-, block, diblock; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Polyesters
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(polyether-, block, diblock; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Pharmaceutical injections
(s.c. injections; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(shea butter; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Nail disease
Tinea (skin disease)
(tinea unguium; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(vegetable; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(wheat germ; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT Antibiotics
(β-lactam; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT 9004-95-9, Ethoxylated cetyl alcohol
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(Brij C 10, Brij 52; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT 9002-92-0, Ethoxylated lauryl alcohol
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(Brij L 23; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT 50-18-0 50-23-7 50-24-8 50-78-2 50-81-7, L-Ascorbic acid,
biological studies 51-21-8 56-25-7 57-10-3, Hexadecanoic acid,
biological studies 57-10-3D, Hexadecanoic acid, esters 57-11-4,
Octadecanoic acid, biological studies 57-11-4D, Octadecanoic acid,
esters 57-62-5 59-05-2 60-54-8 67-45-8 68-26-8, Retinol
69-72-7, biological studies 70-10-0 76-25-5 77-52-1 79-14-1,
biological studies 94-36-0, biological studies 97-00-7
106-79-6 108-46-3, 1,3-Benzenediol, biological studies 111-01-3
111-46-6, biological studies 112-37-8, Undecanoic acid 112-53-8,
1-Dodecanol 112-86-7 112-95-8, Eicosane 114-07-8, Erythromycin
123-76-2 124-18-5, Decane 124-94-7 126-07-8 130-26-7 143-07-7,
Dodecanoic acid, biological studies 154-21-2 302-79-4, Retinoic acid
334-48-5, Decanoic acid 338-98-7 356-12-7 378-44-9 472-15-1
508-02-1 536-59-4 538-24-9 544-63-8, Tetradecanoic acid, biological studies
564-25-0 593-45-3, Octadecane 626-86-8 629-94-7, Henelicosane
777-11-7 859-18-7 918504-65-1, Zinc oxide (ZnO), biological studies 1397-89-3, Amphotericin B 1400-61-9,
Nystatin 1403-66-3, Gentamicin 1404-04-2, Neomycin 1404-26-8,
Polymyxin B 1405-84-7, Bacitracin 1406-16-2, Vitamin D 1406-18-4,
Vitamin E 2022-85-7 2098-66-0 2135-17-3 2152-44-5 2398-96-1
3055-97-8 3093-35-4 3116-76-5 4419-39-0 4759-48-2 5593-20-4
5633-20-5, Docosanol 56420-45-2, Sulfur, biological studies 7704-34-9, Sulfur
7733-02-0 7761-88-8, Nitric acid silver(I) salt (1:1), biological studies
9004-98-2, Brij 98 9005-00-9, Brij S10 10118-90-8
10540-29-1 11056-06-7, Bleomycin 11103-57-4, Vitamin A 11111-12-9,
Cephalosporin 12001-76-2, Vitamin B 12650-69-0 15387-18-5
18323-44-9 21462-39-5 22832-87-7 22916-47-8 23214-92-8
23593-75-1 24169-02-6 24729-96-2 25036-49-1 25322-68-3
27196-00-5, Tetradecanol 27523-40-6 28069-65-0 29342-05-0
30303-65-2, Docosanol 30369-62-4 39809-25-1 50799-83-9 56049-79-7
56093-49-9, Selenium sulfide 56420-45-2 59277-89-3 60628-96-8
61318-91-0 64872-76-0 65277-42-1 65899-73-2 67392-87-4
67915-31-5 78613-35-1 80474-14-2 84625-61-6 85213-14-5, Adipic
acid-dipropylene glycol-phthalic anhydride-trimethylolpropane alternating
copolymer 86386-73-4 90566-53-3 91161-71-6 99011-02-6
101530-10-3 101828-21-1 104227-87-4 104987-11-3 105102-22-5
106685-40-9 107868-30-4 112809-51-5 114977-28-5 118292-40-3
120511-73-1 124832-26-4 130726-68-0 130784-32-0 137234-62-9
153559-49-0 171228-49-2 184475-35-2 918504-65-1 1006879-72-6
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical or cosmetic compns. comprising benzoyl peroxide)
The present invention relates to methods for treating, preventing, minimizing, and/or diminishing signs of aging in the skin comprising administering to the subject in need thereof a nanoemulsion compn. The nanoemulsion comprises at least one drug or non-drug active agent, an active agent having antiaging and/or anti-wrinkle properties, an active cosmetic substance, an antiviral agent, an anti-acne active agent, or any combination thereof. For example, skin permeation of two different active ingredients, benzoyl peroxide or adapalene from nanoemulsion were evaluated in vitro in a skin model. There was an increase in the delivery of the second active incorporated in the nanoemulsion to the epidermis and dermis, as compared to a com. prepn.
Bath preparations
Bile
Chelating agents
Controlled-release drug delivery systems
Cosmetic aerosols
Cosmetic creams
Cosmetic emulsions
Cosmetic foams
Cosmetic gels
Cosmetic liquids
Cosmetic lotions
Cosmetic nanoemulsions
Cosmetic ointments
Cosmetic powders
Cosmetic sprays
Deodorants
Foundations (cosmetics)
Human
Humectants
Hydration, physiological
Melasma
Nonpolar solvents
Pharmaceutical capsules
Pharmaceutical microcapsules
Polar solvents
Scar
Sebaceous gland
Shampoos
Skin cleansers
Skin conditioners
Skin emollients
Skin hyperpigmentation
Skin-lightening cosmetics
Sunscreens
Suntanning products
Surfactants
Topical drug delivery systems
Viscosity
Wrinkle-preventing cosmetics

(antiaging and wrinkle treatment methods using nanoemulsion compns.)

IT
50-00-0D, Formaldehyde, polymers with alkoxylated alkylphenol 50-21-5,
Lactic acid, biological studies 50-21-5D, Lactic acid, C12-15 alkyl
esters 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid,
biological studies 52-51-7, Bronopol 55-56-1, Chlorohexidine
56-40-6, Glycine, biological studies 56-40-6D, Glycine, alkyl(dimethyl
derivs. 56-81-5, Glycerol, biological studies 56-81-5D, Glycerol,
monoesters 56-81-5D, Glycerol, monoesters with lanolin fatty acids
57-09-6, Hexadecyltrimethylammonium bromide 57-55-6, Propylene glycol,
biological studies 57-88-5, Cholesterol, biological studies 59-02-9,
α-Tocopherol 59-50-7, Chlorocresol 59-52-9, Dimercaprol
60-00-4, Edetic acid, biological studies 60-29-7, Diethyl ether,
biological studies 60-33-3, Linoleic acid, biological studies 62-76-0,
Sodium oxalate 64-17-5, Ethanol, biological studies 64-18-6, Formic
acid, biological studies 64-19-7, Acetic acid, biological studies
65-85-0, Benzoic acid, biological studies 67-56-1, Methanol, biological
studies 67-63-0, Isopropyl alcohol, biological studies 67-64-1,
Acetone, biological studies 67-66-3, Chloroform, biological studies
67-68-5, Dimethyl sulfoxide, biological studies 68-12-2,
Dimethylformamide, biological studies 68-26-8, Retinol 68-26-8D,
Vitamin A, derivs. 69-72-7, Salicylic acid, biological studies

(antiaging and wrinkle treatment methods using nanoemulsion compns.)
The present invention relates to the preparation of compositions comprising benzoyl peroxide, with or without other additional active ingredients. The process involves introducing benzoyl peroxide, along with any other active ingredients present, into a fatty substance that contains and protects the ingredients that would otherwise be unstable when in contact with one another. The composition is designed to allow all ingredients to become available for skin contact or skin absorption when the fatty substance softens and/or melts as the composition is applied to the skin. The benzoyl peroxide may be pre-micronized to a particle distribution size of about d90 of 0.1 to 150 µ, preferably d90 of 10 to 15 µ. Further, pharmaceutical or cosmetic ingredients may be contained within the fatty substances, with or without benzoyl peroxide therein or may be present outside of the fatty substance but elsewhere within formulated pharmaceutical or cosmetic products using the active ingredients protected by the fatty substance. These compositions are useful in aqueous-based formulations to treat diseases by topical, transdermal and/or subcutaneous administration. Thus, a formulation contained tretinoin 0.1%, benzoyl peroxide 15.0%, water 49.25%, xanthan gum 0.3%, Polyoxyl 40 stearate 5.0%, stearic acid 17.0%, stearyl alcohol 3.0%, iso-Pr myristate 10.0%, BHT 0.1%, and sorbic acid 0.2 g.

INCL 424401000; 514714000; 424400000; 514337000; 514595000; 514024000; 514029000; 514646000; 514772000


NCL 424/401.000; 424/400.000; 514/024.000; 514/029.000; 514/337.000; 514/559.000; 514/569.000; 514/646.000; 514/714.000; 514/772.000

ST pharmaceutical cosmetic benzoyl peroxide

IT Resins

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Manila elemi; pharmaceutical or cosmetic compositions comprising benzoyl peroxide)
**Essential oils**
- RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (Melaleuca; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Fats and Glyceridic oils**
- RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (animal; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Skin disease**
- (bacterial; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Materials**
- (fatty; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Shear**
- (high; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Fats and Glyceridic oils**
- RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (hydrogenated; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Carboxylic acids**
- RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (hydroxy; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Fats and Glyceridic oils**
- RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (kokum; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Fats and Glyceridic oils**
- RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (mango kernel; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Fluidization**
- (microfluidization; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

**Acne**
- Animal virus
- Antibiotics
- Antitumor agents
- Antiviral agents
- Beeswax
- Butter
- Ceiba pentandra
- Cosmetics and Personal care products
- Drug delivery systems
- Emulsifying agents
- Fungi
- Fungicides
- Grease (food-derived)
- Mammary gland, neoplasm
- Melanoma
- Melting point
- Neoplasm
Particle size distribution
Rosacea
Skin
Stability
Tinea pedis
Topical drug delivery systems
Transdermal drug delivery systems
Vitiligo
Wart
Witch hazel
(pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT
Alkanes
Carnauba wax
Castor oil
Coal tar
Cocoa butter
Coconut oil
Corticosteroids
Cottonseed oil
Estrogens
Fats and Glyceridic oils
Glucocorticoids
Glycerides
Hydrocarbon oils
Jojoba oil
Lanolin
Lard
Olive oil
Palm oil
Paraffin oils
Petroleum
Polyesters
Polyoxyalkylenes
Progestogens
Retinoids
Steroids
Tallow
Triglycerides
Vitamins

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT
Resins

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(podophyllum; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT
Polyethers

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(polyester-, block, diblock; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT
Polyesters

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(polyether-, block, diblock; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT
Pharmaceutical injections
(s.c. injections; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT  Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(shea butter; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT  Nail disease
Tinea (skin disease)
(tinea unguium; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT  Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(vegetable; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT  Fats and Glyceridic oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(wheat germ; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT  Antibiotics
(β-lactam; pharmaceutical or cosmetic compns. comprising benzoyl peroxide)

IT  50-18-0, Cyclophosphamide  50-23-7, Hydrocortisone  50-24-8,
Prednisolone  50-78-2, Acetylsalicylic acid  50-81-7, Vitamin C,
biochemical studies 51-21-8, Fluorouracil  56-25-7, Cantharidin
57-10-3, Palmitic acid, biochemical studies 57-10-3D, Palmitic acid,
esters  57-11-4, Stearic acid, biochemical studies 57-11-4D, Stearic
acid, esters  57-62-5, Chlortetracycline  59-05-2, Methotrexate
60-54-8, Tetracycline  67-45-8, Purazolidone  68-26-8, Retinol
69-72-7, Salicylic acid, biochemical studies 70-10-0, Ticlatone
76-25-5, Triamcinolone acetonide  77-52-1, Ursolic acid  79-14-1,
Glycolic acid, biochemical studies 94-36-0, Benzoyl
peroxide, biochemical studies 97-00-7, 2,4-Dinitrochlorobenzene
106-79-6, Dimethyl sebacate  108-46-3, Resorcinol, biochemical studies
111-01-3, Squalane  111-46-6, Diethylene glycol, biochemical studies
112-37-8, Undecanoic acid  112-53-8, 1-Dodecanol  112-86-7, Erucic acid
112-95-8, Eicosane  114-07-8, Erythromycin  123-76-2, Levulinic acid
124-18-5, Decane  124-94-7, Triamcinolone  126-07-8, Griseofulvin
130-26-7, Cloquimol  143-07-7, Lauric acid, biochemical studies
154-21-2, Lincomycin  302-79-4, Retinoic acid  334-48-5, Decanoic acid
338-98-7, Isoflupredone acetate  356-12-7, Fluocinonide  378-44-9,
Betamethasone  472-15-1, Betulinic acid  508-02-1, Oleanolic acid
536-59-4, Perillyl alcohol  538-24-9, Trilaurin  544-63-8, Myristic
acid, biochemical studies 564-25-0, Doxycycline  593-45-3, Octadecane
626-86-8, Adipic acid monoethyl ester  629-94-7, Heneicosane  777-11-7,
Haloprogin  859-18-7, Lincomycin hydrochloride  1143-38-0, Anthralin
1314-13-2, Zinc oxide, biochemical studies 1397-89-3, Amphotericin B
1400-61-9, Nystatin  1403-66-3, Gentamicin  1404-04-2, Neomycin
1404-26-9, Polymyxin B  1405-87-8, Bacitracin  1406-16-2, Vitamin D
1406-18-4, Vitamin E  2022-85-7, Flucytosine  2098-66-0, Cyproterone
2135-17-3, Flumethasone  2152-44-5, Betamethasone  17-valerate
2398-96-1, Tolnaftate  3055-97-8, Heptaethylene glycol monododecyl ether
3093-35-4, Halcinonide  3116-76-5, Dicloxacillin  4419-39-0,
Becloptomethasone  4759-48-2, Betamethasone dipropionate  5633-20-5, Oxybutynin  6713-27-5, Moronic acid
7681-93-8, Natamycin  7704-34-9, Sulfur, biochemical studies  7733-02-0,
Zinc sulfate  7761-88-8, Silver nitrate, biochemical studies  10118-90-8,
Minocycline  10540-29-1, Tamoxifen  11056-06-7, Bleomycin  11103-57-4,

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical or cosmetic compns. comprising benzoyl peroxide)
AB A substantially surface active agent-free and foam adjuvant-free compn. which includes a hydrophobic solvent, a wax and a propellant. A substantially surface active agent-free and foam adjuvant-free compn., further comprising, a tetracycline antibiotic, or one or more other active agents. A method of treatment, using a substantially surface active agent-free and substantially foam adjuvant-free compn. For example, a foamable compn. of the present invention was formulated from heavy mineral oil 79, paraffin 51-53 20, minocycline hydrochloride 1, and propellant AP-70 8 part.

IPCI A61K0009-12 [I,A]
IPCR A61K0009-12 [I,A]
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 5, 62

IT Essential oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca; surfactant-free, water-free, foamy compns. and breakable foams and their uses)

IT Dermatological agents
(anTI-ACNE agents; surfactant-free, water-free, foamy compns. and breakable foams and their uses)

IT Acne
(comedo; surfactant-free, water-free, foamy compns. and breakable foams and their uses)

IT Abscess
Acaricides
Acne
Allergy inhibitors
Alopecia
Analgesics
Anti-infective agents
Anti-inflammatory agents
Antiaging cosmetics
Antibacterial agents
Antibiotics
Antidandruff hair preparations
Antidepressants
Antihistamines
Antimicrobial agents
Antioxidants
Antiproliferative agents
Antitumor agents
Antiviral agents
Astringents
Atopic dermatitis
Beeswax
Blister
Bullous pemphigoid
Burn
Cellulitis
Cholesteatoma
Corn
Cosmetic foams
Decubitus ulcer
Dermatological agents
Disinfectants
Ectodermal dysplasia
Eczema
Erysipelas
Erythema nodosum
Erythroderma
Foams
Folliculitis
Fungicides
Furunculosis
Hair growth inhibitors
Hair growth stimulants
Herpes
Herpes labialis
Hirsutism
Human
Human herpesvirus 3
Hyperhidrosis
Hypnotics and Sedatives
Hypolipemic agents
Ichthyosis
Immunomodulators
Immunostimulants
Immunosuppressants
Impetigo
Injury
Insect repellents
Insecticides
Kaposi sarcoma
Keratosis
Lichen planus
Lubricants
Lymphadenitis
Mastocytosis
Measles
Melanoma
Mucosal drug delivery systems
Myositis
Natural products, pharmaceutical
Necrosis
Neurodermatitis
Nonsteroidal anti-inflammatory drugs
Ophthalmic drug delivery systems
Oxidizing agents
Parasiticides
Pediculus humanus capitis
Pemphigus
Pesticides
Pharmaceutical foams
Pigmentation disorders
Pityriasis lichenoides
Pityriasis rosea
Pruritus
Psoriasis
Psorasis
Purpura (disease)
Radical scavengers
Rhus toxicodendron
Rubella
Scar
Scleroderma
Skin
Skin, neoplasm
Skin disease
Skin infection
Skin rash
Skin ulcer
Skin-lightening cosmetics
Staphylococcal scalded-skin syndrome
Sunburn
Sunscreens
Sunspots
Suntanning products
Tinea (skin disease)
Tinea pedis
Toxic epidermal necrolysis
Transdermal drug delivery systems
UV stabilizers
Urticaria
Varicella
Vasoconstrictors
Vasodilators
Vitiligo
Wound healing promoters
Wrinkle-preventing cosmetics
Zea mays
(surfactant-free, water-free, foamable compns. and breakable foams and their uses)

IT Acne
(vulgaris; surfactant-free, water-free, foamable compns. and breakable foams and their uses)

IT 50-81-7, Vitamin C, biological studies 57-83-0, Progesterone, biological studies 58-95-7, Tocopheryl acetate 65-85-0D, Benzoic acid, C12-15 alkyl derivs. 68-26-8, Vitamin A 74-98-6, Propane, biological studies 75-28-5, Isobutane 94-36-0, Benzoyl peroxide

RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surfactant-free, water-free, foamable compns. and breakable foams and their uses)
A topical therapeutic hydrophobic breakable compn. includes a carrier comprising (a) about 60% to 99% by wt. of at least one hydrophobic oil; (b) at least one viscosity-modifying agents selected from the group consisting of a fatty alc., a fatty acid and a wax; and (c) a tetracycline antibiotic, characterized in that at least part of the tetracycline antibiotic is suspended in the compn. The viscosity of the compn. is at least about 30% higher than the viscosity of the carrier without the tetracycline antibiotic, and is higher than the viscosity of the hydrophobic oil and the tetracycline antibiotic without the viscosity modifying agents,. The amt. of viscosity modifying agents can optionally be reduced by at least an amt. by wt. that would have increased the viscosity of the carrier without the tetracycline antibiotic by at least 30%. The tetracycline is chem. stable in the compn. for at least 6 mo, wherein more than about 90% of the tetracycline has not broken down. When the compn. is packaged in an aerosol container to which is added a liquefied or compressed gas propellant, the compn. affords upon release from the container a breakable foam of at least good quality that breaks easily upon application of shear force. Thus, a mineral oil-based oleaginous formulation with improved viscosity contained minocycline HCl, a mixt. of heavy and light mineral oils, cyclomethicone, stearyl alc., beeswax, stearic acid, hydrogenated castor oil, behenyl alc., cetostearyl alc., and silica. The formulation viscosity was directly related to the concn. of the tetracycline, reaching a plateau when the active ingredient is present at a concn. of about 0.50%.

AB

IPC A61K0031-65 [I,A]; A61K0008-02 [I,A]
IPCR A61K0031-65 [I,A]
CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT **Essential oils**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Melaleuca alternifolia; topical tetracycline compns. with carriers contg. hydrophobic oils and viscosity-modifying agents)

IT Dermatological agents

(anti-acne agents; topical tetracycline compns. with carriers contg. hydrophobic oils and viscosity-modifying agents)

IT **Acne**

(comedo; topical tetracycline compns. with carriers contg. hydrophobic oils and viscosity-modifying agents)

IT **Acne**

(nodular papulopustular acne; topical tetracycline compns. with carriers contg. hydrophobic oils and viscosity-modifying agents)

IT AIDS (disease)

Abscess

Acaricides

**Acne**

Allergy inhibitors

Alopecia

Anal disease

Analgesics

Anthelmints

Anti-infective agents

Anti-inflammatory agents

Antibacterial agents

Antibiotics

Antidepressants

Antihistamines

Antimicrobial agents

Antiproliferative agents

Antitumor agents

Antiviral agents

Anus neoplasm

Astringents

Atopic dermatitis

Barrier cosmetics

Beeswax

Blepharitis

Blindness

Blister

Bullous pemphigoid

Callosity

Candidiasis

Cataract

Cellulitis

Cervix, neoplasm

Chlamydia infection

Cholesteatoma

Combination chemotherapy

Condyloma acuminatum

Conjunctivitis

Constipation

Crohn disease

Decubitus ulcer

Disinfectants

Drug bioavailability

Drug toxicity

Drugs
Ear disease
Ectodermal dysplasia
Eczema
Endometritis
Erysipelas
Erythema nodosum
Erythroderma
Eye disease
Eye disease
Female reproductive system disease
Folliculitis
Fungicides
Furunculosis
Giant cell arteritis
Glaucoma
HIV infection
Hair growth stimulants
Hemorrhoid
Hepatitis B
Herpes
Herpes labialis
Hirsutism
Human herpesvirus 3
Human herpesvirus 3
Human papillomavirus
Hydrophobicity
Hyperhidrosis
Hypnotics and Sedatives
Hypolipemic agents
Ichthyosis
Immunomodulators
Immunostimulants
Immunosuppressants
Impetigo
Insect repellents
Insecticides
Iritis
Kaposi sarcoma
Keratoconus
Lichen planus
Lubricants
Lyme disease
Lymphadenitis
Macular degeneration
Mastocytosis
Measles
Melanoma
Molluscum contagiosum virus
Mouth disease
Myasthenia gravis
Neurodermatitis
Nevus
Nonsteroidal anti-inflammatory drugs
Nose disease
Oophoritis
Oxidizing agents
Pediculus humanus capitis
Pemphigus
Pesticides
Pharmaceutical aerosols
Pharmaceutical carriers
Pharmaceutical foams
Photosensitivity disorders
Photosensitizers, pharmaceutical
Pigmentation disorders
Pityriasis lichenoides
Pityriasis rosea
Propellants (sprays and foams)
Prophylaxis
Pruritus
Pruritus
Psoriasis
Pterygium
Purpura (disease)
Radical scavengers
Reproductive system, neoplasm
Respiratory system disease
Retinal detachment
Rhus toxicodendron
Rosacea
Rubella
Sarcoidosis
Scabies
Scar
Scar
Scleritis
Scleroderma
Seborrhea
Sinusitis
Skin, neoplasm
Skin disease
Skin rash
Skin ulcer
Skin-lightening cosmetics
Staphylococcal scalded-skin syndrome
Staphylococcal scalded-skin syndrome
Sunburn
Sunless tanning products
Tinea (skin disease)
Tinea pedis
Topical drug delivery systems
Toxic epidermal necrolysis
Trachoma
Transdermal drug delivery systems
Urticaria
Uveitis
Vagina, neoplasm
Vaginal disease
Varicella
Varicella
Vasoconstrictors
Vasodilators
Viscosity
Vision disorders
Vitiligo
Vulva disease
Wart
Wound healing promoters
Wrinkle-preventing cosmetics
(topical tetracycline compns. with carriers contg. hydrophobic oils and
viscosity-modifying agents)

**Acne**
(vulgaris; topical tetracycline compns. with carriers contg. hydrophobic oils and viscosity-modifying agents)

Stearyl propionate 53824-77-4, Propylene glycol dicaprate 56235-92-8
57569-76-3, Glycereth-7 triacetate 58958-60-4, Isostearyl neopentanoate
59130-69-7, Cetyl 2-ethylhexanoate 59231-34-4, Isodecyl oleate
59587-44-9, 2-Ethylhexyl pelargonate 60908-77-2, Isohexadecane
63793-60-2, Polypropylene glycol myristyl ether 65591-14-2, Arachidyl
propionate 66009-41-4, Stearyl heptanoate 68171-33-5, Isopropyl
isostearate 71566-49-9, 2-Ethylhexyl isononanoate 72269-52-4
72576-80-8, Isostearyl palmitate 83826-43-1, Octyldodecyl myristate
84605-09-4 90052-75-8, Octyldodecyl stearoyl stearate 93385-14-9,
Triisocetyl citrate 93596-79-3, Polypropylene glycol isocetyl ether
93682-38-3, Isostearyl malate 93705-18-1 94247-28-6, Isocetyl behenate
97338-28-8 102767-64-6, Propellant A 46 111517-88-5, Propylene glycol
ricinoleate 113431-53-1, Diisostearyl fumarate 125804-07-1
125804-08-2 125804-16-2, Isostearyl behenate 125804-18-4, Tridecyl
isononanoate 127358-80-9, Isostearyl linoleate 127770-27-8, Isocetyl
palmitate 135326-54-4, Propylene glycol myristyl ether acetate
138208-67-0, Isohexyl decanoate 138208-68-1, Isocetyl salicylate
144610-93-5, Myristyl neopentanoate 159317-32-5, Isostearyl glycolate
163564-45-2, Isostearyl isononanoate 172670-81-4, Isononyl octanoate
190282-37-2, Diethylene glycol diisononanoate 195868-36-1, Phenyl
trimethicone 308122-33-0, 2-Octyldodecyl hydroxystearate 1008098-31-4,
Isostearyl citrate 1186139-12-7 1257338-52-5, Schercemol DISD
1286715-16-9 1286715-17-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical tetracycline compns. with carriers contg. hydrophobic oils and
viscosity-modifying agents)
A surfactant-free oleaginous foamable compn. comprising a hydrophobic solvent, a petrolatum, a paraffin wax, a fatty alc., a fatty acid and/or a wax and/or shea butter, with and without a propellant is provided. A substantially surface active agent-free compn. further comprises a tetracycline antibiotic, or a vitamin D deriv., or one or more other active agents. A method of using a substantially surface active agent-free compn. for intradermal delivery of the active agent into the skin with minimal or negligible transdermal delivery for treatment, among others, eye infections and dermatol. or mucosal disorders is described. A minocycline oleaginous compn. contg. soybean oil, octyldodecanol, medium-chain triglycerides oil and coconut oil was proposed.

**IPCI** A61K0009-12 [I,A]
**IPCR** A61K0009-12 [I,A]
**CC** 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

**IT** Essential oils
**RL:** THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca; surfactant- and water-free foamable compns., breakable foams and gels, and therapeutic uses thereof)

**IT** Dermatological agents
(anti-acne agents; surfactant- and water-free foamable compns., breakable foams and gels, and therapeutic uses thereof)

**IT** Acne
(nodular papulopustular; surfactant- and water-free foamable compns., breakable foams and gels, and therapeutic uses thereof)

**IT** AIDS (disease)
Abscess
Acaricides
Acinetobacter

*Acne*
Albinism
Allergy
Allergy inhibitors
Alopecia
Anal disease
Analgesics
Anthelmintics
Anti-infective agents
Anti-inflammatory agents
Antibacterial agents
Antibiotics
Antidepressants
Antihistamines
Antimicrobial agents
Antioxidants
Antiproliferative agents
Antitumor agents
Antiviral agents
Anus neoplasm
Arthralgia
Arthritis
Aspergillus niger
Astringents
Atopic dermatitis
Bacterial infection
Bacteroides
Barrier cosmetics
Beeswax
Blister
Bullous pemphigoid
Candida albicans
Cellulitis
Cervix, neoplasm
Chlamydia infection
Cholesteatoma
Constipation
Crohn disease
Decubitus ulcer
Dermatomycosis
Drug toxicity
Drugs
Dysmenorrhea
Dysplastic nevus
Ear disease
Ectodermal dysplasia
Eczema
Endometriosis
Endometritis
Erysipelas
Erythema nodosum
Erythroderma
Escherichia coli
Female reproductive system, neoplasm
Female reproductive system disease
Folliculitis
Fungicides
Furunculosis
Gestational trophoblastic disease  
HIV infection  
Haemophilus  
Hair growth stimulants  
Hemorrhoid  
Hepatitis B  
Herpes  
Herpes labialis  
Herpes simplex  
Human herpesvirus 3  
Human papillomavirus  
Hyperhidrosis  
Hyperkeratosis  
Hypnotics and Sedatives  
Hypolipemic agents  
Ichthyosis  
Immunomodulators  
Immunostimulants  
Immunosuppressants  
Impetigo  
Inflammation  
Insect repellents  
Insecticides  
Kaposi sarcoma  
Keloid  
Lichen planus  
Lubricants  
Lymphadenitis  
Lymphogranuloma venereum  
Mastocytosis  
Measles  
Melanoma  
Melasma  
Molluscum contagiosum virus  
Myalgia  
Mycobacterium leprae  
Mycosis  
Neisseria meningitidis  
Neoplasm  
Neurodermatitis  
Nocardia  
Nonsteroidal anti-inflammatory drugs  
Nose disease  
Oophoritis  
Ophthalmic drug delivery systems  
Osteoarthritis  
Ovary, neoplasm  
Oxidizing agents  
Pain  
Parasitic infection  
Parasiticides  
Pediculus humanus capitis  
Pemphigus  
Pesticides  
Pharmaceutical carriers  
Pharmaceutical foams  
Photosensitizers, pharmaceutical  
Pigmentation disorders  
Pityriasis lichenoides  
Pityriasis rosea
Premenstrual syndrome
Preservatives
Propellants (sprays and foams)
Prophylaxis
Propionibacterium acnes
Pruritus
Pseudomonas aeruginosa
Psoriasis
Purpura (disease)
Radical scavengers
Respiratory system disease
Rhus diversiloba
Rhus toxicodendron
Rubella
Scabies
Scar
Scleroderma
Sexual disorders
Sexually transmitted diseases
Skin disease
Skin ulcer
Skin-lightening cosmetics
Stability
Staphylococcal scalded-skin syndrome
Staphylococcus aureus
Streptococcus
Streptococcus pyogenes
Sunburn
Sunless tanning products
Surfactants
Tinea (skin disease)
Tinea pedis
Toxic epidermal necrolysis
Trichomonas vaginalis
Urticaria
Uterine cervicitis
Vagina, neoplasm
Vaginal disease
Varicella
Vasoconstrictors
Vasodilators
Vesiculobullous
Viral infection
Vitiligo
Vulva disease
Wound
Wound healing promoters
(surfactant- and water-free foamable compns., breakable foams and gels, and therapeutic uses thereof)

IT Acne
(vulgaris; surfactant- and water-free foamable compns., breakable foams and gels, and therapeutic uses thereof)

122-62-3, Dioctyl sebacate 123-95-5, Butyl stearate 124-07-2D,
Octanoic acid, alkyl esters 140-25-0, Benzyl laurate 142-91-6,
Isopropyl palmitate 149-57-5D, Ethylhexanoic acid, cetaryl esters
293-51-6, Cyclotetrasiloxane 294-40-6, Cyclopentasiloxane 295-01-2,
Cyclohexasiloxane 443-48-1, Metronidazole 538-23-8, Glyceryl
triocanoate 540-10-3, Cetyl palmitate 540-97-6, Dow Corning 246 Fluid
556-67-2, Dow Corning 244 Fluid 564-25-0, Doxycycline 620-67-7,
Glycerol triheptanoate 129-70-9, Cetyl acetate 661-19-8, Behenyl
alcohol 1190-63-2, Hexadecyl stearate 1323-03-1, Myristyl laurate
1406-16-2, Vitamin D 2152-44-5, Betamethasone valerate 2599-01-1,
Cetyl myristate 2915-57-3 3234-85-3, Myristyl myristate 3687-45-4,
Oleyl oleate 3687-46-5, Decyl oleate 6221-95-0, Myristyl propionate
6283-92-7, Lauryl lactate 6309-51-9, Isoamyl laurate 6938-94-9,
Diisopropyl adipate 7384-98-7, Propylene glycol dicaprylate 7425-14-1
7491-02-3, Diisopropyl sebacate 7735-26-4, Diethylene glycol dioctanoate
9003-13-8, Polyesterobutyl ether 9003-21-4, Polyisobutylene
9006-65-9, Dimethicone 9006-65-9D, Dimethicone, PEG/PPG derivs.
9035-85-2, PEG cetyl ether 9064-14-6, Polypropylene glycol lauryl ether
10118-90-8, Minocycline 10401-55-5, Cetyl ricinoleate 11103-57-4, Vitamin A 12001-76-2, Vitamin B
12001-79-5, Vitamin K 13552-80-2, Glyceryl tristearate 13614-98-7,
Minocycline hydrochloride 14303-70-9, Propyl myristate 15763-02-7,
Dioctyl malate 16958-85-3, Octyl palmitate 17673-56-2, Oleyl erucate
17955-88-3, Caprylyl methicone 22047-49-0, Ethylhexyl stearate
22204-53-1, Naproxen 24390-14-5, Doxycycline hyclate 25231-21-4,
Polypropylene glycol stearoyl stearyl ether 25322-69-4D, Polypropylene glycol, alkyl
ethers 25339-09-7, Isooctyl stearate 26896-18-4D, Isodecanoic acid, cetaryl esters 27841-06-1, Neopentyl glycol dicaprate
29710-25-6 29710-31-4, Cetyl octanoate 29806-73-3 30399-84-9,
Isostearic acid 31161-71-4, Benzyl myristate 31335-74-7, Neopentyl glycol dicaprylate 31692-79-2, Dimethiconol 31807-55-3, Isohexadecane
32222-06-3, Calcirol 34316-64-8, Hexyl laurate 34513-50-3, Octyldecanol 34689-06-0, Stearyl caprate 35274-05-6,
Cetyl lactate 36078-10-1, Dodecyl oleate 36148-84-2 36311-34-9,
Isohexadecanol 36653-82-4, Cetyl alcohol 37220-82-9, Glyceryl oleate 37286-64-9, Polypropylene glycol methyl ether 41395-89-5, Isodecyl
isostearate 41669-30-1, Isooctyl isostearate 41755-60-6, Benzyl palmitate 41231-25-9, Isononyl isononanoate 41313-27-1, Isotridecyl
isononanoate 41321-28-2, Isooctyl lactate 42233-14-7, Arachidyl behenate 42557-10-8 52581-71-2 52663-48-6
53824-77-4, Propylene glycol dicaprate 56235-92-8 57569-76-3
58958-60-4, Isonosteryl myristate 59130-69-7 59231-34-4, Isodecyl
oleate 59587-44-9 60908-77-2, Isohexadecane 63793-60-2,
Polypropylene glycol myristylether 65591-14-2, Arachidyl propionate
66009-41-4, Stearyl heptanoate 68171-33-5, Isopropyl isostearate
71566-49-9 72269-52-4 72576-80-8, Isooctyl palmitate 83826-43-1,
Octydodecyl myristate 83919-23-7, Mometasone furoate 84605-09-4
90052-75-8, Octydodecyl stearoyl stearate 91161-71-6, Terbinafine
93385-14-9, Triisocetyl citrate 93596-79-9 93682-38-3, Isooctylmalate 94247-28-6, Isoctyl behenate 97338-28-8 111517-88-5,
Propylene glycol ricinoleate 112965-21-6, Calcipotriol 112965-21-6, Calcipotriol 113431-53-1
125804-07-1 125804-08-2, 2-Octydodecyl behenate 125804-16-2
125804-18-4, Tridecyl isononanoate 127358-80-9, Isonosteryl linoleate
127770-27-8, Isoctyl palmitate 135326-54-4, Propylene glycol myristyl
ether acetate 138208-67-0, Isohexyl decanoate 138208-68-1, Isocetyl
salicylate 144610-93-5 156048-34-9 159317-32-5, Isonosteryl glycolate
163564-45-2, Isonosteryl isononanoate 172670-81-4, Isononyl octanoate
19028-37-2, Diethylene glycol diisononanoate 195868-36-1,
Phenytrimethicone 308122-33-0, 2-Octydodecyl hydroxyxystearate
383419-35-0 1008098-31-4 1286715-16-9 1286715-17-0 1287647-89-5
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surfactant- and water-free foamable compns., breakable foams and gels, and therapeutic uses thereof)
The present invention relates to methods for treating and preventing acne or Propionibacterium acnes infection in a subject comprising topically administering to the subject in need thereof an anti-acne nanoemulsion compn. Thus, nanoemulsions comprised, in an aq. medium, soybean oil, Tween 20 as a nonionic surfactant, ethanol, cetlypyridinium chloride (CPC) as a cationic surfactant, EDTA, and water, and optionally, a thickening agent for the gel formulation. The nanoemulsions showed relevant microbiol. and bactericidal activity against a collection of recent clin. isolates of P. acnes, including multidrug-resistant strains. Combinations of the nanoemulsion with 0.5% benzoyl peroxide or 2% salicylic acid were as effective as nanoemulsion alone.

IPCI A61K0009-107 [I,A]; A61K0009-00 [I,A]; A61K0008-06 [I,A]
IPCR A61K0009-107 [I,A]; A61K0008-06 [I,A]; A61K0009-00 [I,A]
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
ST antibacterial nanoemulsion topical acne Propionibacterium infection
IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Chile oil; nanoemulsion compns. for treatment and prevention of acne)
IT Alcohols
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C1-12; nanoemulsion compns. for treatment and prevention of acne)
IT Alcohols
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C11-15-secondary, ethoxylated; nanoemulsion compns. for treatment and prevention of acne)
IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Kuki nut oil; nanoemulsion compns. for treatment and prevention of acne)
IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Marhoram flower oil; nanoemulsion compns. for treatment and prevention of acne)

IT Polysiloxanes
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Me Ph; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca; nanoemulsion compns. for treatment and prevention of acne)

IT Bacterial infection
(Propionibacterium acnes; nanoemulsion compns. for treatment and prevention of acne)

IT Saponins
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Quillaja bark; nanoemulsion compns. for treatment and prevention of acne)

IT Amides
Carbohydrates
Waxes
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkoxylated; nanoemulsion compns. for treatment and prevention of acne)

IT Phenols
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyl, ethoxylated; nanoemulsion compns. for treatment and prevention of acne)

IT Betaines
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyl; nanoemulsion compns. for treatment and prevention of acne)

IT Quaternary ammonium compounds
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; nanoemulsion compns. for treatment and prevention of acne)

IT Quaternary ammonium compounds
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyltrimethyl, chlorides; nanoemulsion compns. for treatment and prevention of acne)

IT Quaternary ammonium compounds
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl; nanoemulsion compns. for treatment and prevention of acne)

IT Quaternary ammonium compounds
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyltrimethyl, chlorides; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(allspice oil; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(almond; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(animal; nanoemulsion compns. for treatment and prevention of acne)

IT Polyelectrolytes
Surfactants
(anionic; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(anise; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(apricot kernel; nanoemulsion compns. for treatment and prevention of acne)

IT Solvents
(aprotic; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(avocado; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(basil, Ocimum basilicum; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(bay leaf oil; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(bergamot; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(berry oil; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(camphor; nanoemulsion compns. for treatment and prevention of acne)

IT Antiflatulents
(carminatives; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(cassia bark oil; nanoemulsion compns. for treatment and prevention of acne)

IT Polyelectrolytes
Surfactants
(cationic; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(cedarwood; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(celery seed; nanoemulsion compns. for treatment and prevention of acne)

IT Polysiloxanes
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(cetyl Me, di-Me, cetyl dimethicone; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(chamomile; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(cinnamon; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(clary sage; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(clove; nanoemulsion compns. for treatment and prevention of acne)

IT Monoglycerides
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(coco monoglycerides; nanoemulsion compns. for treatment and prevention of acne)

IT Amides
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(coco, N-(hydroxyethyl), ethoxylated; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(cumin; nanoemulsion compns. for treatment and prevention of acne)

IT Cyclosiloxanes
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(di-Me; nanoemulsion compns. for treatment and prevention of acne)
acne

IT Quaternary ammonium compounds
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(dialkyldimethyl, chlorides; nanoemulsion compns. for treatment and prevention of acne)

IT Fatty acids
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
esters, Ceraphyls; nanoemulsion compns. for treatment and prevention of acne

IT Carboxylic acids
Fatty acids
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
esters; nanoemulsion compns. for treatment and prevention of acne

IT Castor oil
Fatty acids
Lanolin
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(ethoxylated; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
eucalyptus; nanoemulsion compns. for treatment and prevention of acne

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(fish; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
geranium; nanoemulsion compns. for treatment and prevention of acne

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
ginger; nanoemulsion compns. for treatment and prevention of acne

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
gourd oil; nanoemulsion compns. for treatment and prevention of acne

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
grape seed; nanoemulsion compns. for treatment and prevention of acne

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
grapefruit; nanoemulsion compns. for treatment and prevention of acne

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(hazelnut; nanoemulsion compns. for treatment and prevention of 
acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(hemp oil; nanoemulsion compns. for treatment and prevention of 
acne)

IT Castor oil
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(hydrogenated, ethoxylated; nanoemulsion compns. for treatment and 
prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(hyssop oil; nanoemulsion compns. for treatment and prevention of 
acne)

IT Controlled-release drug delivery systems 
(immediate-release; nanoemulsion compns. for treatment and prevention 
of acne)

IT Propionibacterium acnes 
(infection; nanoemulsion compns. for treatment and prevention of 
acne)

IT Surfactants 
(ionic; nanoemulsion compns. for treatment and prevention of 
acne)

IT Essential oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(jasmine; nanoemulsion compns. for treatment and prevention of 
acne)

IT Essential oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(juniper; nanoemulsion compns. for treatment and prevention of 
acne)

IT Essential oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(lavender; nanoemulsion compns. for treatment and prevention of 
acne)

IT Essential oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(lemon; nanoemulsion compns. for treatment and prevention of 
acne)

IT Essential oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(lemongrass; nanoemulsion compns. for treatment and prevention of 
acne)

IT Essential oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(lime; nanoemulsion compns. for treatment and prevention of 
acne)

IT Fats and Glyceridic oils 
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(macadamia nut; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(manuka oil; nanoemulsion compns. for treatment and prevention of acne)

IT Triglycerides
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(medium-chain; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(mustard; nanoemulsion compns. for treatment and prevention of acne)

IT Perfumes
(myrrh; nanoemulsion compns. for treatment and prevention of acne)

IT Acne
Antibacterial agents
Bile
Buffers
Chelating agents
Controlled-release drug delivery systems
Human
Nonpolar solvents
Pharmaceutical nanoemulsions
Polar solvents
Preservatives
Prophylaxis
Sebaceous gland
Sebum
Stability
Surfactants
Topical drug delivery systems
Viscosity
(nanoemulsion compns. for treatment and prevention of acne)

IT Canola oil
Coconut oil
Corn oil
Cottonseed oil
Cyclosiloxanes
Essential oils
Glycols
Hydrocarbon oils
Isoalkanes
Jojoba oil
Linseed oil
Monoterpenes
Oils
Olive oil
Palm oil
Paraffin oils
Peanut oil
Petrolatum
Phenolic resins
Phosphates
Polyesters
Polymers
Polyoxyalkylenes
Polysiloxanes
Quaternary ammonium compounds
Rape oil
Safflower oil
Sesquiterpenes
Soybean oil
Steroids
Sulfates
Sunflower oil
Terpenes

RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nanoemulsion compns. for treatment and prevention of **acne**)

**IT Retinoids**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nanoemulsion compns. for treatment and prevention of **acne**)

**IT Surfactants**
(nonionic; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Essential oils**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nutmeg; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Chenopodium Valeriana**

(oil; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Resins**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(olibanum; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Essential oils**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(orange, sweet; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Essential oils**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oregano; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Solvents**
(org.; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Essential oils**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(patchouli; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Essential oils**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peppermint; nanoemulsion compns. for treatment and prevention of **acne**)

**IT Essential oils**
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (pine leaf; nanoemulsion compns. for treatment and prevention of
  acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (pine seed; nanoemulsion compns. for treatment and prevention of
  acne)

IT Polyoxyalkylenes
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (polyoxyalkylene--; nanoemulsion compns. for treatment and prevention of
  acne)

IT Polyesters
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (polyester--; nanoemulsion compns. for treatment and prevention of
  acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (poppyseed; nanoemulsion compns. for treatment and prevention of
  acne)

IT Solvents
  (protic; nanoemulsion compns. for treatment and prevention of
  acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (pumpkin seed; nanoemulsion compns. for treatment and prevention of
  acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (rice bran; nanoemulsion compns. for treatment and prevention of
  acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (rose; nanoemulsion compns. for treatment and prevention of
  acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (rosemary; nanoemulsion compns. for treatment and prevention of
  acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (rosewood; nanoemulsion compns. for treatment and prevention of
  acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
  (sage, Salvia officinalis; nanoemulsion compns. for treatment and
  prevention of acne)

IT Carboxylic acids
Sulfonic acids
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (salts; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (sandalwood; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (sassafras; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (sesame; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (sour orange neroli; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (sour orange; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (spearmint; nanoemulsion compns. for treatment and prevention of acne)

IT Amines
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (tallow alkyl, 1,3-diaminopropane derivs., ethoxylated; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (tangerine peel oil; nanoemulsion compns. for treatment and prevention of acne)

IT Fats and Glyceridic oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (teaseed; nanoemulsion compns. for treatment and prevention of acne)

IT Essential oils
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses) (thyme, Thymus vulgaris; nanoemulsion compns. for treatment and prevention of acne)

IT Pharmaceutical gels
Topical drug delivery systems
( topical gels; nanoemulsion compns. for treatment and prevention of acne)

IT Alcohols
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(trihydric; nanoemulsion compns. for treatment and prevention of acne)

**IT** Quaternary ammonium compounds
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (trimethoxysilyl; nanoemulsion compns. for treatment and prevention of acne)

**IT** Fats and Glyceridic oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (truffle oil; nanoemulsion compns. for treatment and prevention of acne)

**IT** Fats and Glyceridic oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (vegetable; nanoemulsion compns. for treatment and prevention of acne)

**IT** Fats and Glyceridic oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (walnut kernel oil; nanoemulsion compns. for treatment and prevention of acne)

**IT** Vitamins
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (water-insol.; nanoemulsion compns. for treatment and prevention of acne)

**IT** Fats and Glyceridic oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (wheat germ; nanoemulsion compns. for treatment and prevention of acne)

**IT** Essential oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (wintergreen; nanoemulsion compns. for treatment and prevention of acne)

**IT** Essential oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (yarrow; nanoemulsion compns. for treatment and prevention of acne)

**IT** Essential oils
**RL:** NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study);
**USES** (Uses)
  (ylang-ylang; nanoemulsion compns. for treatment and prevention of acne)

**IT** Surfactants
  (zwitterionic; nanoemulsion compns. for treatment and prevention of acne)

**IT** 60-54-8, Tetracycline 69-72-7, Salicylic acid, biological studies
  94-36-0, Benzoyl peroxide, biological studies
114-07-8, Erythromycin 18323-44-9, Clindamycin
**RL:** NANO (Nanomaterial); PAC (Pharmacological activity); THU (Therapeutic use);
**USES** (Uses)
  (nanoemulsion compns. for treatment and prevention of acne)

**IT** 50-21-5D, Lactic acid, C12-15 alkyl esters 50-70-4, Sorbitol, biological studies
50-81-7, Ascorbic acid, biological studies 52-51-7, Bronopol
55-56-1, Chlorohexidine 56-81-5, Glycerol, biological studies
56-81-5D, Glycerol, lanolin esters 56-81-5D, Glycerin, mono- and
diesters 57-09-0, Hexadecyltrimethylammonium bromide 57-55-6,
Propylene glycol, biological studies 57-88-5, Cholesterol, biological
studies 59-02-9, α-Tocopherol 59-50-7, Chlorocresol 59-52-9,
Dimercaprol 60-00-4, Ethylenediaminetetraacetic acid, biological studies
60-29-7, Diethyl ether, biological studies 60-33-3, Linoleic acid,
biological studies 64-17-5, Ethanol, biological studies 64-18-6,
Formic acid, biological studies 64-19-7, Acetic acid, biological studies
65-85-0, Benzoic acid, biological studies 67-56-1, Methanol, biological
studies 67-63-0, Isopropyl alcohol, biological studies 67-64-1,
Acetone, biological studies 67-66-3, Chloroform, biological studies
67-68-5, Dimethyl sulfoxide, biological studies 68-12-2,
Dimethylformamide, biological studies 71-23-8, n-Propanol, biological
studies 71-36-3, n-Butanol, biological studies 71-43-2, Benzene,
biological studies 75-05-8, Acetonitrile, biological studies 75-09-2,
Dichloromethane, biological studies 76-22-2, Camphor 77-92-9, Citric
acid, biological studies 78-70-6, Linalool 81-23-2, Dehydrocholic acid
81-25-4, Cholic acid 83-44-3, Deoxycholic acid 83-46-5,
β-Sitosterol 89-78-1, Menthol 89-83-8, Thymol 97-78-9,
N-Lauroysarcosine 100-51-6, Benzyl alcohol, biological studies
102-76-1, Triacetin 106-22-9, Citronellol 106-23-0, Citronellal
106-24-1, Geraniol 106-25-2, Nerol 107-15-3, Ethylenediamine,
biological studies 108-88-3, Toluene, biological studies 108-95-2,
Phenol, biological studies 109-76-2D, 1,3-Propanediamine, N-tallow
derivs., ethoxylated 109-99-9, Tetrahydrofuran, biological studies
110-27-0, Isopropyl myristate 110-44-1, Sorbic acid 110-54-3, Hexane,
biological studies 111-02-4, Squalene 112-10-7, Isopropyl stearate
112-80-1, Oleic acid, biological studies 118-60-5 121-54-0 122-18-9,
Benzylidimethylhexadecylammonium chloride 122-62-3, Doxyethyl sebacate
122-99-6, Phenoxyethanol 123-03-5, Cetylpyridinium chloride 123-46-6
123-91-1, 1,4-Dioxane, biological studies 123-95-5, Butyl stearate
124-03-8, Ethylhexadecylidammonium bromide 126-73-8, Tri-n-butyl
phosphate, biological studies 126-92-1, Sodium octyl sulfate 128-13-2,
Ursodeoxycholic acid 128-37-0, Butylated hydroxytoluene, biological studies
134-03-2, Sodium ascorbate 134-09-8, Menthol anthranilate
136-44-7, Glycerol PABA 137-16-6, N-Lauroylsarcosine sodium salt
137-66-6, Ascorbyl palmitate 138-86-3, Limonene 139-07-1, Dodecyl
dimethyl benzylammonium chloride 139-08-2,
Benzylidimethyltetradecylammonium chloride 139-88-8, Niaproof 4
141-78-6, Ethyl acetate, biological studies 142-50-7, Nerolidol
142-91-6, Isopropyl palmitate 143-28-2, Oleyl alcohol 143-62-4,
Digitoxigenin 145-42-6, Sodium taurocholate 151-21-3, Sodium lauryl
sulfate, biological studies 275-51-4, Azulene 302-95-4, Sodium
deoxycholate 360-65-6, Glycodeoxycholic acid 361-09-1, Sodium cholate
474-25-9, Chenodeoxycholic acid 475-31-0, Glycocholic acid 489-84-9,
Guaiazulene 502-61-4, Farnesene 512-85-6, Ascaridole 515-69-5,
Bisabolol 529-05-5, Chamazulene 536-59-4, Perillyl alcohol 540-10-3,
Cetyl palmitate 540-84-1, Isococaine 541-02-6,
Decamethylcyclopentasiloxane 541-05-9, Hexamethylcyclotrisiloxane
542-44-9, Glycerol palmitate 546-80-5, Triton GR-5M
568-11-9, Isopropyl n-butyrate 863-57-0, glycerol monobutyrate sodium salt
1118-68-9, alkyl derivs. 1119-09-4, Dodecyltrimethylammonium bromide
1120-24-1, Trimethyl(tetradecyl)ammonium bromide 1120-33-1, Myristyl
lactate 1123-38-2, Glycerol ricinoleate 1123-83-7, Glycerol distearate
1130-85-4 1138-10-9 1138-39-2, Sorbitan monooleate 1138-41-6,
Sorbital monooleate 1138-43-8, Sorbitan monooleate 1138-45-0, N,N-Dimethyl
Dodecylamine N-oxide 1138-46-1, Lithium dodecyl sulfate
2281-11-0 2311-46-8, Isopropyl n-hexanoate 2311-59-3, Isopropyl
n-decanoate 2386-53-0, Sodium 1-dodecanesulfonate 2386-54-1, Sodium
1-butanesulfonate 2420-29-3, Hexaethylene glycol monoocadecyl ether

(nanoemulsion compns. for treatment and prevention of acne)

IT 27306-79-2, Polyoxyethylene myristyl ether 27321-96-6, Polyoxyethylene cholesteryl ether 27458-93-1, Isostearyl alcohol 27479-28-3, Quaternium 14 27638-00-2, Glycerin dilauroate 27668-52-6 27841-06-1D,

**IT** 99-96-7D, 4-Hydroxybenzoic acid, esters  
RL: NANO (Nanomaterial); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (parabens; nanoemulsion compns. for treatment and prevention of **acne**)
AB  The present invention describes systems and methods for treating disorders and/or conditions assoc'd. with the dermal level of the skin. Such disorders include acne, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, dermal infection, and/or actinic keratosis. Methods generally involve administering nanoemulsions (e.g., nanoparticle compns.) comprising at least one therapeutic agent, such as botulinum toxin. In some embodiments, nanoemulsions are prepd., e.g., by high pressure microfluidization, and comprise a particle size distribution exclusively between 10 nm and 300 nm.
Human
Hyperhidrosis
Lupus erythematosus
Nanoencapsulation
Natural products, pharmaceutical
Oral drug delivery systems
Papaya
Particle size distribution
Permeation enhancers
Personal deodorants
Pharmaceutical aerosols
Pharmaceutical creams
Pharmaceutical gels
Pharmaceutical injections
Pharmaceutical nanoemulsions
Pharmaceutical nanoparticles
Pharmaceutical ointments
Pharmaceutical patches
Pharmaceutical powders
Pharmaceutical sprays
Pharmaceutical creams
Pharmaceutical gels
Pharmaceutical injections
Pharmaceutical nanoemulsions
Pharmaceutical nanoparticles
Pharmaceutical ointments
Pharmaceutical patches
Pharmaceutical powders
Pharmaceutical sprays
Pharmaceutical topical drugs
Pharmaceutical transdermal delivery systems
Urtica

(nanoemulsions comprising drugs such as botulinum toxin for dermal delivery for treating skin diseases)

IT
51-21-8, 5-Fluorouracil 52-01-7, Spironolactone 53-06-5, Cortisone
57-10-3, Palmitic acid, biological studies 57-88-5D, Cholesterol, esters
58-08-2, Caffeine, biological studies 59-05-2, Methotrexate 60-54-8,
Tetracycline 63-89-8, Dipalmitoylphosphatidylcholine 66-97-7, Psoralen
67-71-0, Methylsulfonylmethane 67-97-0D, Vitamin D3, analogs 68-26-8,
Retinol 69-72-7, Salicylic acid, biological studies 76-03-9,
Trichloroacetic acid, biological studies 83-44-3, Deoxycorticosterone
54-36-0, Benzoyl peroxide, biological studies
98-92-0, Nicotinamide 110-27-0, Isopropyl myristate 110-40-7, Diethyl sebacate 112-80-1, Oleic acid, biological studies 114-07-8,
Erythromycin 123-95-5, Butyl stearate 123-99-9, Azelaic acid,
biochemical studies 124-22-1, Dodecylamine 124-30-1, Stearylamine
127-07-1, Hydroxyurea 143-27-1, Hexadecylamine 143-28-2, Oleyl alcohol
144-80-9, Sulfacetamide 154-42-7, Thioguanine 302-79-4, Tretinoin
382-67-2, Desoximetasone 443-48-1, Metronidazole 446-86-6,
Azathioprine 475-31-0, Glycocholic acid 506-26-3, γ-Linolenic acid
538-23-8, Caprylic triglyceride 564-25-0, Doxycycline 599-79-1,
Sulfasalazine 621-71-6, Capric triglyceride 1143-38-0, Dithranol
1190-63-2, Hexadecyl stearate 1323-38-2, Glycerol ricinoleate
1327-41-9, Aluminum chlorhydrate 1338-39-2, Span 20 1403-66-3,
Gentamicin 1405-87-4, Bacitracin 1406-05-9, Penicillin 1406-11-7,
Polymyxin B 2197-63-9, Dicetyl phosphate 3116-76-5, Dicloxacillin
<table>
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<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Description</th>
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<tr>
<td>Triclosan</td>
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<td>4004-05-1, DOPE</td>
<td>4235-95-4</td>
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<td>4759-48-2, Aluminum, -zirconium compds.</td>
<td>7446-70-0</td>
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<td>7446-70-0, Aluminum chloride, biological studies</td>
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<td>7440-66-6, Zinc, biological studies</td>
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<td>7440-67-7D, Zirconium, -aluminum compds.</td>
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<td>7704-34-9, Sulfur, biological studies</td>
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<tr>
<td>7784-25-0, Ammonium alum</td>
<td>7784-25-0</td>
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</table>
The present invention is directed to compositions for anti-acne sunscreen. The sunscreen composition has the unique ability to treat and prevent acne in addition to screening both UVA and UVB radiation. In particular, the sunscreen composition includes a sunscreen base, at least one UVA deactivator, at least one UVB deactivator, and at least one anti-acne agent. The UVA deactivator may be avobenzone and the UVB deactivator may be selected from one of the following: oxybenzone, octisalate, octyl methoxycinnamate, or a mixture thereof. No formulation example is presented.

INCL 424060000; 424059000
IPCI A61K0008-33 [I,A]; A61K0008-30 [I,A]; A61Q0017-04 [I,A]
IPCR A61K0008-33 [I,A]; A61K0008-30 [I,A]; A61Q0017-04 [I,A]
NCL 424/060.000; 424/059.000
CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 63
ST anti acne sunscreen avobenzone oxybenzoneoxybenzone octisalate octyl methoxycinnamate

IT Essential oils
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
   (Melaleuca alternifolia; anti-acne sunscreen composition contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Fats and Glyceridic oils
RL: BSU (Biological study, unclassified); BIOL (Biological study)
   (almond, ethoxylated; anti-acne sunscreen composition contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Achillea
Anacyclus pyrethrum
Antibacterial agents
Arnica montana
Boswellia serrata
Cosmetic creams
Cosmetic gels
Cosmetic liquids
Cosmetic lotions
Cosmetic ointments
Cosmetic packs
Cucumber
Cucumis sativus
Cyclooxygenase 2 inhibitors
Evodia rutaecarpa
Filipendula
Filipendula ulmaria
Hamamelis virginiana
Human
Rumex crispus
Salix alba
Shampoos
Skin cleansers
Sunscreens
Witch hazel

(anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Soaps
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Cyclosiloxanes
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(di-Me; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Essential oils
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(eucalyptus; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Natural products, pharmaceutical

(licorice; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Cosmetics and Personal care products

(patches, strips, serums, scrubs; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Glycyrrhiza glabra

(root ext.; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Acne

(treating agent; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT Proteins
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(α-binding; anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT 52-01-7, Spiroloxolactone 56-81-5, Glycerine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT 67392-87-4, Drospirenone
RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(anti-acne sunscreen compn. contg. avobenzone and oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)

IT 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-78-2, Acetylsalicylic
acid 53-03-2, Prednisone 53-06-5, Cortisone 57-13-6, Urea, 
biological studies 57-63-6, Ethinyl estradiol 59-05-2, Methotrexate 
60-33-3, Linoleic acid, biological studies 60-54-8, Tetracycline 
64-19-7, Acetic acid, biological studies 69-72-7, Salicylic acid, 
biological studies 79-14-1, Glycolic acid, biological studies 80-08-0, 
Atrimone 94-36-0, Benzoyl peroxide, 
biological studies 103-90-2, Acetaminophen 108-46-3, Resorcinol, 
biological studies 114-07-8, Erythromycin 117-39-5, Quercetin 
123-99-9, Azelaic acid, biological studies 144-80-9, Sulfacetamide 
302-79-4, Tretinoin 443-48-1, Metronidazole 446-86-6, Azathioprine 
564-25-0, Doxycycline 738-70-5, Trimethoprim 992-21-2, Lymecycline 
1314-13-2, Zinc oxide, biological studies 2375-03-3, Solumedrol 
4759-48-2, Isotretinoin 7704-34-9, Sulfur, biological studies 
7733-02-0, Zinc sulfate 10043-01-3, Alum 10118-90-8, Minocycline 
13463-41-7, Pyrithione zinc 18323-44-9, Clindamycin 22916-47-8, 
Miconazole 35891-70-4, Myriocin 53123-88-9, Sirolimus 59865-13-3, 
Cyclosporine 65277-42-1, Ketoconazole 83905-01-5, Azithromycin 
99011-02-6, Imiquimod 109871-11-3, Tacrolimus 106685-40-9, Adapalene 
162359-55-9, Fingolimod 
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) 
(anti-acne sunscreen compn. contg. avobenzone and 
 oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate) 
IT 118-60-5, Octisalate 131-57-7, Oxybenzone 5466-77-3, Octyl 
 methoxycinnamate 70356-09-1, Avobenzone 
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); 
USES (Uses) 
(anti-acne sunscreen compn. contg. avobenzone and 
 oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate) 
IT 521-18-6, 5α-Dihydrotestosterone 
RL: BSU (Biological study, unclassified); BIOL (Biological study) 
(inhibitors; anti-acne sunscreen compn. contg. avobenzone and 
 oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate) 
IT 329900-75-6 
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) 
(inhibitors; anti-acne sunscreen compn. contg. avobenzone and 
 oxybenzoneoxybenzone, octisalate, or octyl methoxycinnamate)
Peptide-based antiacne reagents, formed by coupling a skin-binding peptide with an antiacne agent, are described. The skin-binding peptide portion of the peptide-based antiacne reagent binds strongly to the skin, thus keeping the antiacne agent coupled to the skin for a long lasting effect. Skin care compns. comprising the peptide-based antiacne reagents are also provided as well as a method of treating or preventing skin acne.

**INCL**: 514012000; 514773000; 514162000; 514718000; 514002000; 514013000; 514014000; 514015000

**IPCI**: A61K0047-48 [I,A]; A61K0031-60 [I,A]; A61K0031-085 [I,A]; A61K0038-00 [I,A]; A61K0038-10 [I,A]; A61K0038-08 [I,A]; A61P0017-10 [I,A]

**IPCR**: A61K0047-48 [I,A]; A61K0031-085 [I,A]; A61K0031-60 [I,A]; A61K0038-00 [I,A]; A61K0038-10 [I,A]; A61K0038-08 [I,A]; A61P0017-10 [I,A]

**NCL**: 514/001.100; 514/162.000; 514/718.000; 514/773.000

**CC**: 1-12 (Pharmacology)

**Section cross-reference(s)**: 62, 63

**ST** antiacne skin binding peptide antimicrobial acne

**IT** Essential oils

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Melaleuca alternifolia; peptide-based antiacne reagents)

**IT** DNA

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(assocd. peptide-skin complexes; peptide-based antiacne reagents)

**IT** Proteins

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(attacins; peptide-based antiacne reagents)

**IT** Eubacteria Ribosome Yeast

(display; peptide-based antiacne reagents)

**IT** mRNA

RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(display; peptide-based antiacne reagents)

**IT** Keratins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(keratolytics; peptide-based antiacne reagents)

**IT** Peptides

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(lantibiotic; peptide-based antiacne reagents)

**IT** Acne Antibiotics Antimicrobial agents
Antimicrobial peptides
Combinatorial library
Cosmetics and Personal care products
Dermatological agents
Human
Latex
Peptide library
Phage display
Pharmaceutical capsules
Protein sequences
Topical drug delivery systems
  (peptide-based antiacne reagents)

IT Polymers
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (peptide-based antiacne reagents)

IT Antimicrobial peptides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (peptide-based antiacne reagents)

IT Bile salts
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (peptide-based antiacne reagents)

IT Retinoids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (peptide-based antiacne reagents)

IT Sebaceous gland
  (sebocyte, sebostats; peptide-based antiacne reagents)

IT Amino acids
Amino acids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (sulfur-contg.; peptide-based antiacne reagents)

IT Amino acids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (D-; sulfur-contg.; peptide-based antiacne reagents)

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700814-38-6  700814-41-1  700814-44-4  700814-47-7  700814-50-2
700814-52-4  700814-55-7  700814-57-9  700814-60-4  700814-65-9
700814-71-7  700814-76-2  846056-18-6  846056-19-7  846056-20-0
846056-21-1  846056-22-2  846056-23-3  847143-38-8  847143-41-3
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936251-56-8  940910-74-7  1159631-98-7  1159631-99-8  1159632-00-4
1160082-33-6
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  (amino acid sequence; peptide-based antiacne reagents)
IT 9003-53-6, Polystyrene 9003-55-8, Styrene-Butadiene copolymer 9011-14-7, Poly(methyl methacrylate) 9017-21-4, Polyvinyltoluene
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide-based antiacne reagents)

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide-based antiacne reagents)
TITLE: Anti-infection augmentation foamable compositions and kit and uses thereof

INVENTOR(S): Tamarkin, Dov; Friedman, Doron; Eini, Meir

PATENT ASSIGNEE(S): Foamix Ltd., Israel


LANGUAGE: English

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This invention relates to anti-infective foamable compn. and kits include a foamable carrier; a therapeutically safe and effective concn. of an anti-infective agent; an augmenting agent selected from the group consisting of a keratolytic agent and a skin penetration enhancer; and a propellant. The compn. is housed in a container and upon release is expandable to form a breakable foam. The foamable carrier is selected to generate a foam of good or excellent quality in the presence of the augmenting agent and anti-infective agent. Methods for treating, alleviating or preventing a disorder of the skin, a body cavity or mucosal surface, wherein the disorder involves a fungal, bacterial, or viral infection as one of its etiol. factors, is described. Thus, foamable compn. was prepd. contg. PEG 400 91.65%, hydroxypropyl cellulose 0.475, steareth 2 1.88%, salicylic acid 5.0%, and ciclopiroxolamine 1.0%.
7681-93-8, Natamycin  7722-84-1, Hydrogen peroxide, biological studies  
8065-41-6, Aureofungin  9002-92-0, Laureth 4  9004-32-4, Sodium  
carboxymethyl cellulose  9004-64-2, Klucel EF  9004-65-3, Hydroxy propyl  
methyl cellulose  9004-67-5, Methyl cellulose  9004-95-9, Polyethylene  
glycol cetyl ether  9004-99-3, PEG-40 stearate  9005-00-9, Steareth 21  
9005-65-6, Polysorbate 80  9005-67-8, Polysorbate 60  10158-64-2D,  
Xylaric acid, deriv.  10401-55-5, Cetyl ricinoleate  11006-22-7,  
Flavofungin  11014-70-3, Levorin  11016-07-2, Perimycin  11078-21-0,  
Filipin  11096-49-4, Partricin  11099-07-3, Glyceryl stearate  
11103-57-4D, Vitamin A, deriv.  11121-32-7, Mepartricin  11138-66-2,  
Xanthan gum  12001-76-2D, Vitamin B, deriv.  12001-79-5D, Vitamin K,  
deriv.  12633-72-6, Amphotericin  12633-72-6D, Amphotericin, Me derivs.  
12650-69-0, Mupirocin  12676-71-0, Niphimycin  12689-28-0, Proticin  
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Permanganate  14380-61-1, Hypochlorite  14797-73-0, Perchlorate  
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31566-31-1, Glyceryl monostearate  33012-62-3, Ribaric acid  34513-50-3,  
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38083-17-9, Climazole  41621-49-2, Ciclopinoxolamine  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(anti-infection augmentation foamable compns. and kit and uses thereof)
AB This invention relates to compn. consisting of tea tree oil used alone or in combination with conventional over-the-counter strength anti-acne agents. A system is created whereby Tea tree oil is used in combination with other anti-acne therapies, particularly benzoyl peroxide. Subsequent steps utilize conventional anti-acne treatments.

INCL 424074000; 424769000; 514568000

IPCI A61K0008-97 [I,A]; A61K0031-192 [I,A]; A61K0036-61 [I,A]

IPCR A61K0008-97 [I,A]; A61K0031-192 [I,A]; A61K0036-61 [I,A]

NCL 424/074.000; 424/769.000; 514/568.000

CC 62-4 (Essential Oils and Cosmetics)

Section cross-reference(s): 63

ST tea tree oil benzoyl peroxide acne

IT Essential oils
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(Melaleuca; tea tree oil and benzoyl peroxide for treatment of acne)

IT Acne
Cosmetics and Personal care products
(tea tree oil and benzoyl peroxide for treatment of acne)

IT 69-72-7, Salicylic acid, biological studies 94-36-0, Benzoyl peroxide, biological studies 302-79-4, Tretinoin
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(tea tree oil and benzoyl peroxide for treatment of acne)
The present invention relates to a new topical cosmetic compn. formulated for concealing wrinkles and for eliminating or reducing damages to the skin appearance resulted from a wide variety of disorders, such as for example, acne. The compn. comprises water, optionally contg. 25 to 400 ppm of Ag, hydrophobic particles, preferably hydrophobic silica, having a diam., ranged from about 5 to about 150 nm, and/or hydrophilic particles, preferably hydrophilic silica, having a diam., ranged from about 5 to about 150 nm and a sol. electrolyte, capable of releasing free ions in an aq. environment. Thus, a hypotonic compn. for treating acne comprised Dead Sea salt 0.2, zinc sulfate 1, hydrophobic silica 5, hydrophilic silica 5, **tea tree oil** 2, sea buckthorn **oil** 3, vitamin A 0.1, vitamin E acetate 0.1, methylparaben 0.1, propylene glycol 2, and water 80%, resp. A compn. comprising water, optionally contg. Ag 25 to 400 ppm, 10 wt.% Aerosil 380, 2.5 wt.% Aerosil R812, 1 to 20 wt.% Dead Sea salt, and optionally one or more conventional skincare and/or anti-acne agent, selected from evening primrose **oil**, sweet almond oil, sea buckthorn **oil**, **tea tree oil**, Finsolv TN, (C12-15 alkyl benzoate), octyl hydroxystearate, salicylic acid, vitamin C, citric acid, azelaic acid, **benzoyl peroxide**, zinc acetate and sulfur. The compn. was highly effective in treating acne. The concn. of the salt in such compn. was detd. according to the treated skin type (dried, oily, etc.) and the particular acne type, grade and state of the treated individual. Compns. contg. higher concns. of salt (10 to 20 wt.%) are preferred for treating an oily skin and an intensive acne state.
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RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(cosmetic compn. contg. silica particles, electrolytes and optionally silver for concealing wrinkles and treating and/or improving skin disorders and hair loss)
AB This invention relates to improved compns. and methods for treating skin conditions contg. sebum redn. agents; keratolytic agents and anti-inflammatory agents that results in unexpectedly superior control of skin conditions such as acne.

INCL 424070140

IPCI A61K0007-06 [ICM,7]; A61K0007-11 [ICS,7]

IPCR A61K0008-368 [I,A]; A61K0008-42 [I,A]; A61K0008-44 [I,A]; A61K0008-63 [I,A]; A61K0008-64 [I,A]; A61K0008-67 [I,A]; A61K0008-97 [I,A]; A61Q00007-00 [I,A]; A61Q00009-00 [I,A]; A61Q00019-00 [I,A]

NCL 424/070.140

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 62

ST bacterial lipase inhibitor antiinflammatory acne sebum skin prepn

IT Essential oils

RL: COS (Cosmetic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Melaleuca; topical treatment of skin conditions)

IT Acne

Anti-inflammatory agents
Antibacterial agents
Skin preparations (pharmaceutical)

Sebum

(topical treatment of skin conditions)

IT 56-40-6, Glycine, biological studies 58-95-7, Tocopheryl acetate 69-72-7, Salicylic acid, biological studies 94-36-0, Benzoyl peroxide, biological studies 97-59-6, Allantoin 108-46-3, Resorcinol, biological studies 114-07-8, Erythromycin 515-69-5, α-Bisabolol 7488-56-4, Selenium disulfide
9081-34-9, 5-Alpha-reductase  18323-44-9, Clindamycin  68797-35-3,
Dipotassium glycyrrhizinate
RL: COS (Cosmetic use); PAC (Pharmacological activity); THU (Therapeutic
use); BIOL (Biological study); USES (Uses)
(topical treatment of skin conditions)
AB A pharmaceutical or cosmetic carrier or compn. for topical application, characterized by rheol. properties which render the carrier or compn. semi-solid at rest and a liq. upon application of shear forces, is described. The compn. or carrier are prep'd. by mixing (by wt.) 1-25% of a solidifying agent, such as a long-chain fatty alc. and a fatty acid, and 75-99% of a hydrophobic solvent, such as an animal, mineral, silicone, or plant-derived oil, wherein at least one of them has therapeutic or cosmetic benefits, in the presence or absence of a biol. active substance. For example, behenic acid (10 g) was heated to 80° and mixed with light paraffin oil (90 g) preheated to the same temp. Then glycerin (10 g), tristearin (10 g), and an antioxidant mixt. (1 g) were added by agitation. Bifunazole (1.2 g) and diflucortolone valerate (0.12 g) were added and the mixt. was poured into containers (5 g tubes) and was allowed to cool spontaneously. While the mixt. cooled to ambient temp. it gradually turned into a semisolid, i.e., an ointment contg. the antifungal agent.

IPCI A61K0007-00 [ICM,7]; A61K0009-00 [ICS,7]; A61K0009-06 [ICS,7]; A61K0009-08 [ICS,7]; A61K0009-10 [ICS,7]; A61K0009-70 [ICS,7]; A61K0047-00 [ICS,7]; A61K0047-02 [ICS,7]; A61K0047-10 [ICS,7]
Essential oils

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Melaleuca; topical compns. contg. fatty acid, fatty alc. and oil for pharmaceutical and cosmetic uses)

Acne

Antibacterial agents
Antibiotics
Antihistamines
Antiulcer agents
Antiviral agents
Autoimmune disease
Cosmetics
Eczema
Erythema
Fungicides
Immunosuppressants
Mucous membrane
Psoriasis
Seborrhea
Skin preparations (pharmaceutical)
Wound healing promoters
(topical compns. contg. fatty acid, fatty alc. and oil for pharmaceutical and cosmetic uses)

IT 50-23-7, Hydrocortisone 56-75-7, Chloramphenicol 60-54-8, Tetracycline 67-73-2, Fluocinolone acetonide 76-25-5, Triamcinolone acetonide 94-36-0, Benzoyl peroxide, biological studies

98-92-0, vitamin B3 106-14-9, 12-Hydroxystearic acid 114-07-8,
COMPNS. AND METHODS FOR INHIBITING SKIN IRRITATION

AB Compns. and methods are provided for inhibiting skin irritation attributable to chem. irritants or environmental conditions, by the application of an anti-irritant amt. of water-sol. strontium cation. The compns. can be antiperspirants, deodorants, sunscreens, insect repellents, depilatories, hair dyes, hair bleaches, mouthwashes, ointments, suppositories, etc. Glycolic acid (6% in 10% ethanol-in-water) was used as a skin irritant. Strontium nitrate was coadministered as an anti-irritant to subject panels and was shown to inhibit cumulative irritation by 64-84% at concns. ranging from 250 nM to 500 nM.

INCL 424401000

IPCI A61K0007-48 [ICM,7]


NCL 424/401.000; 424/722.000; 424/760.000; 514/847.000; 514/848.000; 514/859.000; 514/881.000; 514/887.000

CC 62-4 (Essential Oils and Cosmetics)

Section cross-reference(s): 63

IT Essential oils

RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Melaleuca; strontium compds. for reducing skin irritation due to ingredients in compns.)

IT Acne

(inhibitors; strontium compds. for reducing skin irritation due to
ingredients in compns.)

IT 50-21-5, Lactic acid, biological studies 57-13-6, Urea, biological studies 58-08-2, Caffeine, biological studies 64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7, biological studies 76-03-9, Trichloroacetic acid, biological studies 76-93-7, biological studies 77-92-9, biological studies 79-14-1, biological studies 87-69-4, biological studies 90-64-2, Mandelic acid 90-80-2


RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(strontium compds. for reducing skin irritation due to ingredients in compns.)
AB An improved skin treatment compn. is provided. The compn. comprises calamine 8-20%, an antioxidant 0.05-3%, an herbal antibacterial substance 0.25-4%, and a base 25-60%. These ingredients are combined with a base, preferably comprised of water and glycerin, to prep. the inventive compn. A topical compn. for the treatment of acne contained water 25.25, glycerin 20, calamine 18, ZnO 18, witch hazel 5, ascorbic acid 0.88, peroxide (3% strength) 5, golden seal 2, ethanol 5, tea tree oil 0.7, and vitamin E 0.16%.

INCL 424195100
IPCI A61K0035-78 [ICM,6]; A61K0039-385 [ICS,6]; A61K0033-32 [ICS,6]
NCL 424/726.000; 424/616.000; 424/641.000; 424/737.000; 514/458.000; 514/474.000; 514/557.000; 514/714.000; 514/725.000; 514/859.000
CC 63-6 (Pharmaceuticals)
ST topical calamine antioxidant herbal antibacterial acne
IT Essential oils
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Melaleuca; anti-acne compns. contg. calamine and antioxidants and antibacterials)

IT Acne
Aloe barbadensis
Clover (Trifolium pratense)
Echinacea
Garlic (Allium sativum)
Golden seal (Hydrastis)
Tabebuia
Witch hazel (anti-acne compns. contg. calamine and antioxidants and antibacterials)

IT Tocopherols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (anti-acne compns. contg. calamine and antioxidants and antibacterials)

IT Carboxylic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hydroxy; anti-acne compns. contg. calamine and antioxidants and antibacterials)

IT Drug delivery systems (topical; anti-acne compns. contg. calamine and antioxidants and antibacterials)

IT 50-81-7, Ascorbic acid, biological studies 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol, biological studies 64-17-5, Ethyl alcohol, biological studies 67-63-0, Isopropyl alcohol, biological
studies 94-17-7, p-Chlorobenzoyl peroxide 94-36-0,
Benzoyl peroxide, biological studies 110-05-4,
tert-Butyl peroxide 110-22-5, Acetyl peroxide 1314-13-2, Zinc oxide,
biological studies 1338-23-4, Methyl ethyl ketone peroxide. 1406-18-4,
Vitamin E 7235-40-7, β-Carotene 7722-84-1, Hydrogen peroxide,
biological studies 8011-96-9, Calamine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-acne compns. contg. calamine and antioxidants and
antibacterials)
Cosmetic and pharmaceutical delivery vehicles comprising a volatile cyclosiloxane, a particulate carbohydrate and an oil or a glyceride ester

Berndt, Dieter
Safe & Dry Co., Inc., USA
English

A novel delivery system for cosmetic and topical pharmaceutical products contains a volatile cyclosiloxane, a particulate carbohydrate and an oil or a glyceride ester. The carbohydrate and oil or glyceride ester are included in wt. ratios which will produce a translucent film after the evapn. of the volatile cyclosiloxane from the compn. In addn., a no. of other components may also be added to the delivery system including bioactive agents such as antiperspirant salts and antifungal agents, film-formers, surfactants, emollients, fragrances, coloring agents, preservatives, medicinal agents and related components depending upon the desired characteristics and the purpose for which the system and final product is designed. An antiperspirant compn. contained cyclomethicone 45, starch 10, white petrolatum 15, iso-Pr palmitate 5, zirconium aluminum chlorhydrex 25, and fragrance q.s. 100%.

INCL 424401000
IPCI A61K0009-48 [ICM,6]

58-95-7, Tocopheryl acetate 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 76-22-2, Camphor 89-78-1, Menthol 94-36-0, Benzoyl peroxide, biological studies 112-80-1, Oleic acid, biological studies 404-86-4, Capsaicin 463-40-1, 540-97-6, Dodecamethylcyclohexasiloxane 541-02-6 556-67-2 1314-13-2, Zinc oxide, biological studies 1327-41-9D, Aluminum chlorhydioxide, salts 1406-16-2, Vitamin d 1406-18-4, Vitamin e 7704-34-9, Sulfur, biological studies 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, ethers, biological studies 9004-53-9, Dextrin 9005-25-8, Starch, biological studies 9005-79-2, Glycogen, biological
studies 9005-82-7, Amylose 9037-22-3, Amylopectin 11103-57-4, Vitamin a 18428-88-1, Zirconyl hydroxychloride 134910-86-4, Aluminum zirconium tetrachlorhydrrex glycine
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cosmetic and pharmaceutical delivery vehicles comprising volatile cyclosiloxane, particulate carbohydrate and oil or glyceride ester)
AB
Cosmetic and pharmaceutical comps. for inhibiting skin irritation attributable to chem. irritants or environment conditions, contain an anti-irritant amt. of aq.-sol. trivalent aluminum cation or divalent tin cation. A soln. of 250 mM stannous chloride decreased the skin irritation caused by application of 7.5% lactic acid in 10% ethanol by 50%.

PRIORITY APPLN. INFO.:
US 1994-362058 A 19941221
JP 1996-520010 A 19951221
WO 1995-US16765 W 19951221

IPCI A61K0007-00 [ICM,6]

CC
62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 63

IT
Acne
(inhibitors; anti-irritant skin formulations contg. aluminum or tin cations)

IT
Essential oils
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca, ext.; anti-irritant skin formulations contg.
aluminum or tin cations)

IT 50-21-5, Lactic acid, biological studies 50-21-5D, Lactic acid, salts
64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7,
biological studies 69-72-7D, salts 76-03-9, Trichloroacetic acid,
biological studies 76-93-7, biological studies 77-92-9, biological
studies 77-92-9D, salts 79-14-1, biological studies 79-14-1D, salts
87-69-4, biological studies 90-64-2, Mandelic acid 90-80-2,
Gluconolactone 94-36-0, Benzoyl peroxide,
biological studies 98-79-3 108-95-2, Phenol, biological studies
116-31-4, Retinal 127-17-3, Pyruvic acid, biological studies 144-62-7,
Ethanedioic acid, biological studies 302-79-4, Tretinoin 404-86-4,
Capsaicin 526-95-4, Gluconic acid 5393-81-7, α-Hydroxy decanoic
acid 6915-15-7, Malic acid 70424-62-3 126094-21-1
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(anti-irritant skin formulations contg. aluminum or tin cations)
Cosmetic and pharmaceutical compns. for inhibiting skin irritation attributable to chem. irritants or environment conditions, contain an anti-irritant amt. of aq.-sol. divalent magnesium cation or divalent manganese cation, or trivalent lanthanide cations of at. nos. 56-71. A soln. of 250 mM manganese acetate decreased the skin irritation caused by application of 7.5% lactic acid in 10% ethanol by 65%.

IT Acne
(inhibitors; anti-irritant skin formulations contg. magnesium, manganese, or lanthanide cations)

IT Essential oils
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Melaleuca, ext.; anti-irritant skin formulations contg. magnesium, manganese, or lanthanide cations)

IT 50-21-5, Lactic acid, biological studies 64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7, biological studies 69-72-7, salts 76-03-9, Trichloroacetic acid, biological studies 76-93-7, biological studies 77-92-9, biological studies 79-14-1, biological studies 79-14-1, magnesium and manganese and lanthanide salts 87-69-4, biological studies 90-64-2, Mandelic acid 90-80-2, Gluconolactone 94-36-0, Benzoyl peroxide, biological studies 98-79-3 108-95-2, Phenol, biological studies 116-31-4, Retinal 127-17-3, Pyruvic acid, biological studies 144-62-7, Ethanedioic acid, biological studies 302-79-4, Tretinooin 404-86-4, Capsaicin 526-95-4, Gluconic acid 5393-81-7, α-Hydroxy decanoic acid 6915-15-7, Malic acid 10024-66-5, Manganese citrate 70424-62-3 126094-21-1
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(anti-irritant skin formulations contg. magnesium, manganese, or lanthanide cations)
Cosmetic and pharmaceutical compositions for inhibiting skin irritation attributable to chem. irritants or environment conditions, contain an anti-irritant amt. of ag.-sol. potassium or lithium cation. A soln. of 250 mM lithium acetate decreased the skin irritation caused by application of 7.5% lactic acid in 10% ethanol by 70%.

IT  Acne

IT  Essential oils

IT  Lactic acid, biological studies  50-21-5, Lactic acid, salts 64-19-7, Acetic acid, biological studies 68-26-8, Retinol 69-72-7, biological studies 69-72-7, salts 76-03-9, Trichloroacetic acid, biological studies 76-93-7, biological studies 77-92-9, biological studies 77-92-9, salts 79-14-1, biological studies 79-14-1, salts 87-69-4, biological studies 90-64-2, Mandelic acid 90-80-2, Gluconolactone 94-36-0, Benzoyl peroxide, biological studies 98-79-3 108-95-2, Phenol, biological studies 116-31-4, Retinal 127-17-3, Pyruvic acid, biological studies 144-62-7, Ethanedioic acid, biological studies 302-79-4, Tretinoin 404-86-4, Capsaicin 526-95-4, Gluconic acid 5393-81-7, α-Hydroxy decanoic acid 6915-15-7, Malic acid 70424-62-3 126094-21-1

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (anti-irritant skin formulations contg. potassium or lithium cations)
AB The cosmetic soap is composed of 0.01-5% tea tree oil, 1-10% benzoyl peroxide and the rest of cosmetic soap base without over-fat. The used tea tree oil comprises 2-6% 1,8-cineole and more than 30% terpinene-4-ol. The proper contents of the components reduce pimple by sterilizing pimple and removing sebum, and give good workability during soap making process.

IPI C11D0009-50 [ICM,6]
IPCR C11D0009-50 [I,A]
CC 46-2 (Surface Active Agents and Detergents)
Section cross-reference(s): 62
ST tea tree oil benzoyl peroxide soap
IT Essential oils
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(Melaleuca; make-up soap compns. contg. tea tree oil and benzoyl peroxide)
IT Soaps
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(make-up soap compns. contg. tea tree oil and benzoyl peroxide)
IT 94-36-0, Benzoyl peroxide, uses
RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(make-up soap compns. contg. tea tree oil and benzoyl peroxide)
The present invention describes novel nanoparticle compositions, and systems and methods utilizing them for treating disorders and/or conditions associated with the epidermal and/or dermal level of the skin. Such disorders include acne, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, dermal infection, actinic keratosis, facial wrinkles, muscle contracture, and headache. Methods generally involve administering nanoparticle compositions to the skin.

Utilizing them for treating disorders and/or conditions associated with the epidermal and/or dermal level of the skin. Such disorders include acne, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, dermal infection, actinic keratosis, facial wrinkles, muscle contracture, and headache. Methods generally involve administering.

From them, and current treatments are not very successful and often have undesirable side effects. For example, according to studies, acne often leads to reduced self esteem, and sometimes even to depression or suicide (see, e.g., Goodman, 2006, Aust. Fam. Physician. . .

Known to have a particular biological effect on sebaceous glands include botulinum toxin, cleansers or soaps, a topical bactericidal (e.g., benzoyl peroxide, triclosan, and/or chlorhexidine gluconate), topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.), oral antibiotics (e.g., erythromycin, tetracycline, oxytetracycline, doxycycline, minocycline, . . . treatments (e.g., estrogen/progestogen oral contraceptives, low dose spironolactone, cortisone, etc.), a keratolytic (i.e., a substance that dissolves keratin plugging pores), benzoyl peroxide, a topical retinoid (e.g., tretinoin [RETIN-A®], adapalene [DIFFERIN®], and tazarotene [TAZORAC®], retinol, isotretinoin, etc.), oral retinoids (e.g., isotretinoin [ACCUTANE®], AMNESTEEM.TM., SOTRET.TM., CLARAVIS.TM.), retinoic acids, a natural product with anti-acne activity (e.g., aloe vera, aruna, haldi [i.e., turmeric], papaya, etc.), azelaic acid (brand names AZELEX.TM., FINACEA® FINAVIN® SKINOREN, etc.), anti-inflammatory agents (e.g., naproxen, ibuprofen, rofecoxib, etc.), nicotinamide (i.e., vitamin B3), tea tree oil (melaleuca oil), aminolevulinic acid, azithromycin, methylaminolevuninate, nadifloxacin, PRK124, talarozole, zileuton, rofecoxib, zinc, an agent described in Krowchuk (2000, Pediatric. . .

Disorders, or conditions include, but are not limited to, a condition associated with sweat glands or sebaceous glands, such as acne; hyperhidrosis; unwanted sweating; bromhidrosis; body odor; chromhidrosis; hair loss; psoriasis; actinic keratosis; dermal infection; eczematous dermatitis (e.g., atopic dermatitis, etc.); . . .

Form of reducing the frequency of that symptom. To give but a
few examples, where the condition in question is acne, symptoms of that condition are reduced when the (e.g., diameter, volume, etc.) and/or severity (e.g., redness, inflammatory response, etc.) of...

In some embodiments, the present invention provides methods and compositions for the treatment and/or prevention of one or more of acne, unwanted sweating, body odor, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis, eczematous dermatitis (e.g., atopic dermatitis, etc.), excess...

. . . some permanent redness with papules and/or pustules, which typically last 1 to 4 days. This subtype is commonly confused with acne. "Phymatous rosacea" is most commonly associated with rhinophyma, an enlargement of the nose. Symptoms include thickening skin, irregular surface nodularities...

In some embodiments, provided compositions are useful for treating and/or preventing acne vulgaris (commonly referred to as "acne"), a skin disease caused by changes in the pilosebaceous units (i.e., skin structures comprising a hair follicle and its associated sebaceous gland). In some embodiments, acne is inflammatory. In some embodiments, acne is noninflammatory. While not life-threatening, acne vulgaris can cause significant problems for affected individuals. Depending on its severity and other factors, recalcitrant acne can be psychologically debilitating, and can impose significant financial and emotional costs on those whom it afflicts. Despite some recent successes in acne therapy, treatment failures are still common, especially in adult women. While many adults "outgrow" this disease, there are some who continue to be afflicted during much of adulthood, despite continued medical advances. Unfortunately, the most potent acne medication in current use is administered systemically via a treatment that is teratogenic, an important issue for many women. There is an unfilled need for a more localized and effective treatment for acne, one with minimal side effects.

In general, acne develops as a result of blockages in follicles. The pathology centers on the pilosebaceous units, comprising a sebaceous gland, a follicle (i.e., pore), and a vellus hair. Among the first events leading to acne are hyperkeratinization and formation of a plug of keratin and sebum (a "microcomedo"), obstructing the upper region of a follicle...

. . . an increase in sebum production occur with increased androgen production at adrenarche. A microcomedo may enlarge to form an open comedo (a "blackhead") or closed comedo (a "whitehead"). In these conditions the naturally occurring largely commensal bacteria Propionibacterium acnes can cause inflammation, leading to inflammatory lesions (papules, infected pustules, or nodules) in the dermis around the microcomedo or comedo, which results in redness and may result in scarring or hyperpigmentation.

. . . sulfate (DHEAS). Increased androgen levels are thought to cause sebaceous glands to enlarge and to increase sebum production. While most acne patients have normal hormone levels, there are reasons to conclude that increased sebum production plays a role in acne. For example, there may be a correlation between the rate of sebum production and the severity of acne. In addition, acne patients typically produce sebum that is deficient in linoleic acid, which is a potential cause of abnormal keratinization and follicular...

. . . acnes, a relatively slow growing, typically aerotolerant anaerobic gram positive, diphtheroid bacterium, often colonizes the sebaceous follicles. P. acnes exacerbates acne by acting as a chemo-attractant for neutrophils. Neutrophils ingest P. acnes, and in doing so release various hydrolytic enzymes that...

Follicles are lined with squamous epithelium, a layer of cells that is contiguous with the skin surface. In an acne-prone individual, the
shedding of cells from this lining is often impeded, perhaps due to an increased level of intercellular adhesion that promotes the retention of cells. Retained cells can obstruct follicles, resulting in comedones. Such inhibited shedding may be related to abnormalities in epidermal differentiation and/or to abnormal sebum composition (e.g., a deficiency in... can irritate keratinocytes, causing the release of interleukin-1, which in turn can cause follicular hyperkeratinization. In general, each of these acne-causing routes, which are not mutually exclusive, is associated with follicular obstruction.

DETD Several factors are known to be linked to acne, including, but not limited to, family and/or genetic history (see, e.g., Ballanger et al., 2006, Dermatology, 212:145-149; incorporated herein by.

DETD In some embodiments, acne treatments work via one or more of the following mechanisms: (1) normalizing shedding into the pore to prevent blockage; (2). . .

DETD The present invention provides methods of treating and/or preventing acne comprising administration of a provided composition to a subject suffering from, susceptible to, and/or displaying symptoms of acne. In some embodiments, such a provided composition is administered locally to an affected site (e.g., face, neck, back, arms, chest,. . .

DETD In some embodiments, provided compositions for treatment of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD Exemplary current treatments for acne include, but are not limited to, botulinum toxin, cleansers or soaps; topical bactericidals (e.g., benzoyl peroxide, triclosan, chlorhexidine gluconate, etc.); topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.); oral antibiotics (e.g., tetracycline, doxycycline, minocycline,. . . ibuprofen, rofecoxib [Tehrani and Dharmalingam, 2004, Indian J. Dermatol. Venereol. Leprol., 70:345-348; incorporated herein by reference], etc.); nicotinamide [vitamin B3]; tea tree oil [melaleuca oil]; rofecoxib; zinc (Dreno et al., 1989, Acta Derm. Venereol., 69:541-3; and Dreno et al., 2001, Dermatology, 203:135-40; . . .

DETD Alternative or additional current therapies for the treatment and/or prevention of acne include, but are not limited to, phototherapy (e.g., alternating blue and red light); photodynamic therapy (e.g., intense blue/violet light); laser. . .

DETD It is known in the art that short-term improvement of acne can be achieved with sunlight, but studies have shown that sunlight worsens acne long-term. More recently, visible light has been successfully employed to treat acne (i.e., "phototherapy")--in particular, intense violet light (405 nm-420 nm) generated by purpose-built fluorescent lighting, dichroic bulbs, LEDs, and/or lasers. Used twice weekly, this has been shown to reduce the number of acne lesions by about 64% (Kawada et al., 2002, J. Dermatol. Sci., 30:129-35; incorporated herein by reference) and is even more. . .

DETD . . . some evidence that photodynamic therapy (e.g., therapy with intense blue/violet light (405 nm-425 nm)) can decrease the number of inflammatory acne lesion by 60%-70% in 4 weeks of therapy, particularly when P. acnes is pretreated with delta-aminolevulinic acid (ALA), which increases. . .

DETD Laser surgery has been in use for some time to reduce the scars left behind by acne, but research has been done on lasers for prevention of acne formation itself In general, laser is used to burn away the follicle sac from which the hair grows, to burn. . .

DETD Local heating therapies are sometimes used, for example, to kill bacteria in a developing pimple, thereby expediting healing.

DETD In some embodiments, provided compositions for treatment and/or prevention of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.
In some embodiments, provided compositions for treatment and/or prevention of acne are administered locally to an affected site (e.g., axillae, hands, feet, face, neck, back, arms, chest, etc.).

the skin. Hyperpigmentation is often due to skin damage due to sun exposure, medications, and/or inflammation (including inflammation due to acne vulgaris). Melasma is a condition of dark, irregular patches of skin found most usually on the upper cheek, nose, lips, . . .

In certain embodiments, the pharmaceutical pack or kit includes an additional approved therapeutic agent (e.g., benzoyl peroxide for treatment of acne; aluminum compounds for treatment of hyperhidrosis; etc.) for use in combination therapies. Optionally associated with such container(s) can be a. . .

What is claimed is:

composition, lotion, or pharmaceutical composition is administered for treatment of a condition or disorder selected from the group consisting of acne, hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, excess sebum-producing disorders, seborrhea, seborrheic dermatitis, rosacea, hair loss, psoriasis, dermal infections, viral. . .

What is claimed is:

wherein the nanoparticle composition, lotion, or pharmaceutical composition is administered for treatment of hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, acne, wrinkles, headache, or any combination thereof.
AB The present invention describes novel nanoparticle compositions, and systems and methods utilizing them for treating disorders and/or conditions. Methods generally involve administering nanoparticle compositions (e.g., nanoparticle compositions comprising at least one known therapeutic agent and/or independently active biologically active agent; and/or empty nanoparticle compositions) to a subject in need thereof.

SUMM . . . known to have a particular biological effect on sebaceous glands include botulinum toxin, cleansers or soaps, a topical bactericidal (e.g., benzoyl peroxide, triclosan, and/or chlorhexidine gluconate), topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.), oral antibiotics (e.g., erythromycin, tetracycline, oxytetracycline, doxycycline, minocycline,. . . treatments (e.g., estrogen/progesterone oral contraceptives, low dose spironolactone, cortisone, etc.), a keratolytic (i.e., a substance that dissolves keratin plugging pores), benzoyl peroxide, a topical retinoid (e.g., tretinoin [RETIN-A®], adapalene [DIFFERIN®], and tazarotene [TAZORAC®], retinol, isotretinoin, etc.), oral retinoids (e.g., isotretinoin [ACUCutan®, AMNEsteeM.TM., SOTRET.TM., CLARAVIS.TM.]), retinoic acids, a natural product with anti-acne activity (e.g., aloe vera, aruna, haldi [i.e., turmeric], papaya, etc.), azelaic acid (brand names Azelex.TM., FINacea®, FINEVin®, SKINOREN, etc.), anti-inflammatory agents (e.g., naproxen, ibuprofen, rofecoxib, etc.), nicotinamide (i.e., vitamin B3), tea tree oil (melaleuca oil), aminolevulinic acid, azithromycin, methylaminolevuninate, nadifloxacin, PRK124, talarozole, zileuton, rofecoxib, zinc, an agent described in Krowchuk (2000, Pediatric. . . SUMM . . . disorders, or conditions include, but are not limited to, a condition associated with sweat glands or sebaceous glands, such as acne; hyperhidrosis; unwanted sweating; bromhidrosis; body odor; chromhidrosis; hair loss; psoriasis; actinic keratosis; dermal infection; eczematous dermatitis (e.g., atopic dermatitis, etc.). . . SUMM . . . form of reducing the frequency of that symptom. To give but a few examples, where the condition in question is acne, symptoms of that condition are reduced when the (e.g., diameter, volume, etc.) and/or severity (e.g., redness, inflammatory response, etc.) of. . . DETD In some embodiments, the present invention provides methods and compositions for the treatment and/or prevention of one or more of acne, unwanted sweating, body odor, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis, eczematous dermatitis (e.g., atopic dermatitis, etc.), excess. . . DETD . . . some permanent redness with papules and/or pustules, which typically last 1 to 4 days. This subtype is commonly confused with
"Phymatous rosacea" is most commonly associated with rhinophyma, an enlargement of the nose. Symptoms include thickening skin, irregular surface nodularities.

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In general, acne develops as a result of blockages in follicles. The pathology centers on the pilosebaceous units, comprising a sebaceous gland, a follicle (i.e., pore), and a vellus hair. Among the first events leading to acne are hyperkeratinization and formation of a plug of keratin and sebum (a "microcomedo"), obstructing the upper region of a follicle... an increase in sebum production occur with increased androgen production at adrenarche. A microcomedo may enlarge to form an open comedo (a "blackhead") or closed comedo (a "whitehead"). In these conditions the naturally occurring largely commensal bacteria Propionibacterium acnes can cause inflammation, leading to inflammatory lesions (papules, infected pustules, or nodules) in the dermis around the microcomedo or comedo, which results in redness and may result in scarring or hyperpigmentation.

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acnes, a relatively slow growing, typically aerotolerant anaerobic gram positive, diphtheroid bacterium, often colonizes the sebaceous follicles. P. acnes exacerbates acne by acting as a chemo-attractant for neutrophils. Neutrophils ingest P. acnes, and in doing so release various hydrolytic enzymes that... can irritate keratinocytes, causing the release of interleukin-1, which in turn can cause follicular hyperkeratinization. In general, each of these acne-causing routes, which are not mutually exclusive, is associated with follicular obstruction.

Several factors are known to be linked to acne, including, but not...
limited to, family and/or genetic history (see, e.g., Ballanger et al., 2006, Dermatology, 212:145-149; incorporated herein by. . .

DETD In some embodiments, acne treatments work via one or more of the following mechanisms: (1) normalizing shedding into the pore to prevent blockage; (2). . .

DETD The present invention provides methods of treating and/or preventing acne comprising administration of a provided composition to a subject suffering from, susceptible to, and/or displaying symptoms of acne. In some embodiments, such a provided composition is administered locally to an affected site (e.g., face, neck, back, arms, chest,. . .

DETD In some embodiments, provided compositions for treatment of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD Exemplary current treatments for acne include, but are not limited to, botulinum toxin; cleansers or soaps; topical bactericidals (e.g., benzoyl peroxide, triclosan, chlorhexidine gluconate, etc.); topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.); oral antibiotics (e.g., erythromycin, tetracycline, oxtetracycline, doxycycline, minocycline,. . . ibuprofen, rofecoxib [Tehrani and Dharmalingam, 2004, Indian J. Dermatol. Venereol. Leprol., 70:345-348; incorporated herein by reference], etc.); nicotinamide [vitamin B3]; tea tree oil [melaleuca oil]; rofecoxib; zinc (Dreno et al., 1989, Acta Derm. Venereol., 69:541-3; and Dreno et al., 2001, Dermatology, 203:135-40;. . .

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DETD It is known in the art that short-term improvement of acne can be achieved with sunlight, but studies have shown that sunlight worsens acne long-term. More recently, visible light has been successfully employed to treat acne (i.e., "phototherapy")--in particular, intense violet light (405 nm-420 nm) generated by purpose-built fluorescent lighting, dichroic bulbs, LEDs, and/or lasers. Used twice weekly, this has been shown to reduce the number of acne lesions by about 64% (Kawada et al., 2002, J. Dermatol. Sci., 30:129-35; incorporated herein by reference) and is even more. . .

DETD . . . some evidence that photodynamic therapy (e.g., therapy with intense blue/violet light (405 nm-425 nm)) can decrease the number of inflammatory acne lesion by 60%-70% in 4 weeks of therapy, particularly when P. acnes is pretreated with delta-aminolevulinic acid (ALA), which increases. . .

DETD Laser surgery has been in use for some time to reduce the scars left behind by acne, but research has been done on lasers for prevention of acne formation itself. In general, laser is used to burn away the follicle sac from which the hair grows, to burn. . .

DETD Local heating therapies are sometimes used, for example, to kill bacteria in a developing pimple, thereby expediting healing.

DETD In some embodiments, provided compositions for treatment and/or prevention of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD In some embodiments, provided compositions for treatment and/or prevention of acne are administered locally to an affected site (e.g., axillae, hands, feet, face, neck, back, arms, chest, etc.).

DETD . . . the skin. Hyperpigmentation is often due to skin damage due to sun exposure, medications, and/or inflammation (including inflammation due to acne vulgaris). Melasma is a condition of dark, irregular patches of skin found most usually on the upper cheek, nose, lips,. . .

DETD . . . In certain embodiments, the pharmaceutical pack or kit includes an additional approved therapeutic agent (e.g., benzoyl peroxide for
treatment of acne; aluminum compounds for treatment of hyperhidrosis; etc.) for use in combination therapies. Optionally associated with such container(s) can be a. . .

CLM What is claimed is:
. . . composition, lotion, or pharmaceutical composition is administered for treatment of a condition or disorder selected from the group consisting of acne, hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, excess sebum-producing disorders, seborrhea, seborrheic dermatitis, rosacea, hair loss, psoriasis, dermal infections, viral. . .

CLM What is claimed is:
. . . 36, wherein the nanoparticle composition, lotion, or pharmaceutical composition is administered for treatment of unwanted sweating, bromhidrosis, body odor, chromhidrosis, acne, wrinkles, headache, or any combination thereof.
AB The present invention describes systems and methods for treating disorders and/or conditions associated with the dermal level of the skin. Such disorders include acne, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, dermal infection, and/or actinic keratosis, among others. Methods generally involve administering provided compositions to the skin.

SUMM ... suffer from them. Current treatments are not very successful and often have undesirable side effects. For example, according to studies, acne often leads to reduced self esteem, and sometimes even to depression or suicide (see, e.g., Goodman, 2006, Aust. Fam. Physician).

SUMM ... glands, sebaceous glands, hair follicles, etc.). Exemplary conditions or disorders associated with dermal structures include, but are not limited to, acne, hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, rosacea, hair loss, psoriasis, dermal infection (e.g., herpes simplex virus infection, human papillomavirus).

SUMM ... invention, provided compositions are useful in various cosmetic and medical applications. In some embodiments, provided compositions are utilized to treat acne. In some embodiments, provided compositions are utilized to treat hyperhidrosis. In some embodiments, provided compositions are utilized to treat acne. In some embodiments, provided compositions are utilized to treat unwanted sweating. In some embodiments, provided compositions are utilized to treat bromhidrosis. In some embodiments, provided compositions are utilized to treat acne. In some embodiments, provided compositions are utilized to treat body odor. In some embodiments, provided compositions are utilized to treat.

SUMM ... known to have a particular biological effect on sebaceous glands include botulinum toxin, cleansers or soaps, a topical bactericidal (e.g., benzoyl peroxide, triclosan, and/or chlorhexidine gluconate), topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.), oral antibiotics (e.g., erythromycin, tetracycline, oxytetracycline, doxycycline, minocycline, treatment (e.g., estrogen/progesterone oral contraceptives, low dose spironolactone, cortisone, etc.), a keratolytic (i.e., a substance that dissolves keratin plugging pores), benzoyl peroxide, a topical retinoid (e.g., tretinoin [RETIN-A®], adapalene [DIFFERIN®], and tazarotene [TAZORAC®], retinol, isotretinoin, etc.), oral retinoids
(e.g., isotretinoin [ACCUTANE®, AMNESTEEM.TM., SOTRET.TM.,
CLARAVIS.TM.]), retinoic acids, a natural product with anti-acne
activity (e.g., aloe vera, aruna, haldi [i.e., turmeric], papaya, etc.),
azelaic acid (brand names AZELEX.TM., FINACEA®, FINEVIN®,
SKINOREN, etc.), anti-inflammatory agents (e.g., naproxen, ibuprofen,
rofecoxib, etc.), nicotinamide (i.e., vitamin B3), tea tree oil
(melaleuca oil), aminolevulinic acid, azithromycin,
methylaminolevuninate, nadifloxacin, PRK124, tazarotene, zileuton,
SUMM . . . disorders, or conditions include, but are not limited to, a
condition associated with sweat glands or sebaceous glands, such as
acne; hyperhidrosis; unwanted sweating; bromhidrosis; body odor;
chromhidrosis; hair loss; psoriasis; actinic keratosis; dermal
infection; eczematous dermatitis (e.g., atopic dermatitis, etc.); . . .
SUMM . . . form of reducing the frequency of that symptom. To give but a
few examples, where the condition in question is acne, symptoms of
that condition are reduced when the size (e.g., diameter, volume, etc.)
and/or severity (e.g., redness, inflammatory response, etc.) . . .
DETD . . . odor. In some embodiments, the present invention provides
treatments for rosacea. In some embodiments, the present invention
provides treatments for acne. In some embodiments, the present
invention provides treatments for hair loss. In some embodiments, the
present invention provides treatments for. . .
DETD In some embodiments, the present invention provides methods and
compositions for the treatment and/or prevention of one or more of
acne, unwanted sweating, body odor, hyperhidrosis, bromhidrosis,
chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis,
eczematous dermatitis (e.g., atopic dermatitis, etc.), excess. . .
DETD . . . some permanent redness with papules and/or pustules, which
typically last 1 to 4 days. This subtype is commonly confused with
acne. "Phymatous rosacea" is most commonly associated with rhinophyma,
an enlargement of the nose. Symptoms include thickening skin, irregular
surface nodularities. . .
DETD Acne
DETD In some embodiments, provided compositions are useful for treating
and/or preventing acne vulgaris (commonly referred to as "acne"), a
skin disease caused by changes in the pilosebaceous units (i.e., skin
structures comprising a hair follicle and its associated sebaceous
gland). In some embodiments, acne is inflammatory. In some
embodiments, acne is noninflammatory. While not life-threatening,
acne vulgaris can cause significant problems for affected individuals.
Depending on its severity and other factors, recalcitrant acne can be
psychologically debilitating, and can impose significant financial and
emotional costs on those whom it affects. Despite some recent successes
in acne therapy, treatment failures are still common, especially in
adult women. While many adults "outgrow" this disease, there are some
who continue to be afflicted during much of adulthood, despite continued
medical advances. Unfortunately, the most potent acne medication in
current use is administered systemically via a treatment that is
teratogenic, an important issue for many women. There is an unfilled
need for a more localized and effective treatment for acne, one with
minimal side effects.
DETD In general, acne develops as a result of blockages in follicles. The
pathology centers on the pilosebaceous units, comprising a sebaceous
gland, a follicle (i.e., pore), and a vellus hair. Among the first
events leading to acne are hyperkeratinization and formation of a plug
of keratin and sebum (a "microcomedo"), obstructing the upper region of
a follicle. . . . an increase in sebum production occur with increased
androgen production at adrenarche. A microcomedo may enlarge to form an
open comedo (a "blackhead") or closed comedo (a "whitehead"). In
these conditions the naturally occurring largely commensual bacteria Propionibacterium acnes can cause inflammation, leading to inflammatory lesions (papules, infected pustules, or nodules) in the dermis around the microcomedo or *comedo*, which results in redness and may result in scarring or hyperpigmentation.

Increased androgen levels are thought to cause sebaceous glands to enlarge and to increase sebum production. While most acne patients have normal hormone levels, there are reasons to conclude that increased sebum production plays a role in acne. For example, there may be a correlation between the rate of sebum production and the severity of acne. In addition, acne patients typically produce sebum that is deficient in linoleic acid, which is a potential cause of abnormal keratinization and follicular.

DETD...sulfate (DHEAS). Increased androgen levels are thought to cause sebaceous glands to enlarge and to increase sebum production. While most acne patients have normal hormone levels, there are reasons to conclude that increased sebum production plays a role in acne. For example, there may be a correlation between the rate of sebum production and the severity of acne. In addition, acne patients typically produce sebum that is deficient in linoleic acid, which is a potential cause of abnormal keratinization and follicular.

DETD...acnes, a relatively slow growing, typically aerotolerant anaerobic gram positive, diphteroiher bacterium, often colonizes the sebaceous follicles. *P. acnes* exacerbates acne by acting as a chemo-attractant for neutrophils. Neutrophils ingest *P. acnes*, and in doing so release various hydrolytic enzymes that.

DETD...Follicles are lined with squamous epithelium, a layer of cells that is contiguous with the skin surface. In an acne-prone individual, the shedding of cells from this lining is often impeded, perhaps due to an increased level of intercellular adhesion that promotes the retention of cells. Retained cells can obstruct follicles, resulting in comedones. Such inhibited shedding may be related to abnormalities in epidermal differentiation and/or to abnormal sebum composition (e.g., a deficiency in...can irritate keratinocytes, causing the release of interleukin-1, which in turn can cause follicular hyperkeratinization. In general, each of these acne-causing routes, which are not mutually exclusive, is associated with follicular obstruction.

DETD...Several factors are known to be linked to acne, including, but not limited to, family and/or genetic history (see, e.g., Ballanger et al., 2006, Dermatology, 212:145-149; incorporated herein by.

DETD...In some embodiments, acne treatments work via one or more of the following mechanisms: (1) normalizing shedding into the pore to prevent blockage; (2).

DETD...The present invention provides methods of treating and/or preventing acne comprising administration of a provided composition to a subject suffering from, susceptible to, and/or displaying symptoms of acne. In some embodiments, such a provided composition is administered locally to an affected site (e.g., face, neck, back, arms, chest,.

DETD...In some embodiments, provided compositions for treatment of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD...Exemplary current treatments for acne include, but are not limited to, botulinum toxin, cleansers or soaps; topical bactericidal.

DETD...Alternative or additional current therapies for the treatment and/or prevention of acne include, but are not limited to, phototherapy (e.g., alternating blue and red light); photodynamic therapy (e.g., intense blue/violet light); laser.

DETD...It is known in the art that short-term improvement of acne can be achieved with sunlight, but studies have shown that sunlight worsens acne long-term. More recently, visible light has been successfully...
employed to treat acne (i.e., "phototherapy")—in particular, intense violet light (405 nm–420 nm) generated by purpose-built fluorescent lighting, dichroic bulbs, LEDs, and/or lasers. Used twice weekly, this has been shown to reduce the number of acne lesions by about 64% (Kawada et al., 2002, J. Dermatol. Sci., 30:129-35; incorporated herein by reference) and is even more...

DETD...some evidence that photodynamic therapy (e.g., therapy with intense blue/violet light (405 nm–425 nm)) can decrease the number of inflammatory acne lesion by 60%-70% in 4 weeks of therapy, particularly when P. acnes is pretreated with delta-aminolevulinic acid (ALA), which increases...

DETD Laser surgery has been in use for some time to reduce the scars left behind by acne, but research has been done on lasers for prevention of acne formation itself. In general, laser is used to burn away the follicle sac from which the hair grows, to burn...

DETD Local heating therapies are sometimes used, for example, to kill bacteria in a developing pimple, thereby expediting healing.

DETD In some embodiments, provided compositions for treatment and/or prevention of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD In some embodiments, provided compositions for treatment and/or prevention of acne are administered locally to an affected site (e.g., axillae, hands, feet, face, neck, back, arms, chest, etc.).

DETD...the skin. Hyperpigmentation is often due to skin damage due to sun exposure, medications, and/or inflammation (including inflammation due to acne vulgaris). Melasma is a condition of dark, irregular patches of skin found most usually on the upper cheek, nose, lips...

DETD...therapies employed may achieve a desired effect for the same disorder (for example, an empty nanoparticle composition useful for treating acne may be administered concurrently with a therapeutic agent and/or independently active biologically active agent that is also useful for treating acne), or they may achieve different effects (for example, an empty nanoparticle composition that is useful for treating acne may be administered concurrently with a therapeutic agent and/or independently active biologically active agent that is useful for alleviating adverse...

DETD...or at risk for conditions or disorders associated with the dermal level of the skin, including, but not limited to, acne, hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, rosacea, hair loss, actinic keratosis, psoriasis, eczematous dermatitis (e.g., atopic dermatitis, etc.), excess...

DETD Exemplary Provided Compositions for Treatment of Acne

DETD Inclusion criteria include a diagnosis of acne.

DETD The clinical investigator wipes a region affected by acne with an alcohol wipe and then wipe dry with cotton gauze. Using a latex-gloved finger, the investigator massages the topical...

DETD...these results, the investigator concludes that topical treatment using empty nanoemulsions in accordance with the invention is effective in treating acne.

CLM What is claimed is:

9. The method of claim 8, wherein the condition or disorder of the sebaceous glands is acne.

CLM What is claimed is:
10. The method of claim 9, wherein the step of administering comprises administering the empty nanoparticle composition so that acne is reduced or onset is delayed.

CLM
What is claimed is:
. . . of claim 1, wherein the condition or disorder associated with a dermal structure is selected from the group consisting of acne, hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, excess sebum-producing disorders, seborrhea, seborrheic dermatitis, rosacea, hair loss, psoriasis, dermal infections, viral.

CLM
What is claimed is:
. . . of claim 1, wherein the condition or disorder associated with a dermal structure is selected from the group consisting of acne, hyperhidrosis, unwanted sweating, bromhidrosis, body odor, chromhidrosis, excess sebum-producing disorders, seborrhea, seborrheic dermatitis, rosacea, hair loss, psoriasis, dermal infections, viral.

CLM
What is claimed is:
77. The method of claim 75, wherein the condition or disorder is acne, hyperhidrosis, bromhidrosis, unwanted sweating, body odor, hair loss, or any combination thereof.

CLM
What is claimed is:
. . . wherein the step of administering comprises administering the at least one isolated component of an empty nanoparticle composition so that acne one or more symptoms is reduced or onset is delayed.
AB  The present invention provides surfactant compositions and associated methods and reagents, particularly useful for the treatment of dermatologic conditions. In some embodiments, provided compositions are formulated for and achieve transdermal delivery, for example by topical administration.

SUMM  .  .  .  surprising discovery, the present invention provides a teaching that certain surfactant agents are useful in the treatment and/or prevention of acne. In a still further surprising discovery, the present invention provides a teaching that certain surfactant agents are useful in the .  .  .

SUMM  .  .  .  disorders, or conditions include, but are not limited to, a condition associated with sweat glands or sebaceous glands, such as acne; hyperhidrosis; unwanted sweating; bromhidrosis; body odor; chromhidrosis; hair loss; psoriasis; actinic keratosis; dermal infection; eczematous dermatitis (e.g., atopic dermatitis, etc.); .  .  .

SUMM  .  .  .  form of reducing the frequency of that symptom. To give but a few examples, where the condition in question is acne, symptoms of that condition are reduced when the (e.g., diameter, volume, etc.) and/or severity (e.g., redness, inflammatory response, etc.) of .  .  .

DETD  In some embodiments, the present invention provides methods and compositions for the treatment and/or prevention of one or more of acne, unwanted sweating, body odor, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis, eczematous dermatitis (e.g., atopic dermatitis, etc.), excess. .  .

DETD  .  .  .  some permanent redness with papules and/or pustules, which typically last 1 to 4 days. This subtype is commonly confused with acne. "Phymatous rosacea" is most commonly associated with rhinophyma, an enlargement of the nose. Symptoms include thickening skin, irregular surface nodularities,.  .  .

DETD  Acne

DETD  In some embodiments, provided compositions are useful for treating and/or preventing acne vulgaris (commonly referred to as "acne"), a skin disease caused by changes in the pilosebaceous units (i.e., skin structures comprising a hair follicle and its associated sebaceous gland). In some embodiments, acne is inflammatory. In some embodiments, acne is noninflammatory. While not life-threatening, acne vulgaris can cause significant problems for affected individuals. Depending on its severity and other factors, recalcitrant acne can be psychologically debilitating, and can impose significant financial and emotional costs on those whom it afflicts. Despite some recent successes in acne therapy, treatment failures are still common, especially in adult women. While many adults "outgrow" this disease, there are some who continue to be afflicted during much of adulthood, despite continued medical advances. Unfortunately, the most potent acne medication in
current use is administered systemically via a treatment that is teratogenic, an important issue for many women. There is an unfilled need for a more localized and effective treatment for acne, one with minimal side effects.

DETD In general, acne develops as a result of blockages in follicles. The pathology centers on the pilosebaceous units, comprising a sebaceous gland, a follicle (i.e., pore), and a vellus hair. Among the first events leading to acne are hyperkeratinization and formation of a plug of keratin and sebum (a "microcomedo"), obstructing the upper region of a follicle.. . . an increase in sebum production occur with increased androgen production at adrenarche. A microcomedo may enlarge to form an open comedo (a "blackhead") or closed comedo (a "whitehead"). In these conditions the naturally occurring largely commensal bacteria Propionibacterium acnes can cause inflammation, leading to inflammatory lesions (papules, infected pustules, or nodules) in the dermis around the microcomedo or comedo, which results in redness and may result in scarring or hyperpigmentation.

DETD . . . sulfate (DHEAS). Increased androgen levels are thought to cause sebaceous glands to enlarge and to increase sebum production. While most acne patients have normal hormone levels, there are reasons to conclude that increased sebum production plays a role in acne. For example, there may be a correlation between the rate of sebum production and the severity of acne. In addition, acne patients typically produce sebum that is deficient in linoleic acid, which is a potential cause of abnormal keratinization and follicular. . .

DETD . . . acnes, a relatively slow growing, typically aerotolerant anaerobic gram positive, diphtheroid bacterium, often colonizes the sebaceous follicles. P. acnes exacerbates acne by acting as a chemo-attractant for neutrophils. Neutrophils ingest P. acnes, and in doing so release various hydrolytic enzymes that. . .

DETD Follicles are lined with squamous epithelium, a layer of cells that is contiguous with the skin surface. In an acne-prone individual, the shedding of cells from this lining is often impeded, perhaps due to an increased level of intercellular adhesion that promotes the retention of cells. Retained cells can obstruct follicles, resulting in comedones. Such inhibited shedding may be related to abnormalities in epidermal differentiation and/or to abnormal sebum composition (e.g., a deficiency in. . . can irritate keratinocytes, causing the release of interleukin-1, which in turn can cause follicular hyperkeratinization. In general, each of these acne-causing routes, which are not mutually exclusive, is associated with follicular obstruction.

DETD Several factors are known to be linked to acne, including, but not limited to, family and/or genetic history (see, e.g., Ballanger et al., 2006, Dermatology, 212:145-149; incorporated herein by. . .

DETD In some embodiments, acne treatments work via one or more of the following mechanisms: (1) normalizing shedding into the pore to prevent blockage; (2). . .

DETD The present invention provides methods of treating and/or preventing acne comprising administration of a provided composition to a subject suffering from, susceptible to, and/or displaying symptoms of acne. In some embodiments, such a provided composition is administered locally to an affected site (e.g., face, neck, back, arms, chest,. . .

DETD In some embodiments, provided compositions for treatment of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD Exemplary current treatments for acne include, but are not limited to, botulinum toxin, cleansers or soaps; topical bactericidals (e.g., benzoyl peroxide, triclosan, chlorhexidine gluconate, etc.); topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.); oral antibiotics (e.g., erythromycin, tetracycline, oxytetracycline, doxycycline, minocycline,. . . ibuprofen, rofecoxib
Alternative or additional current therapies for the treatment and/or prevention of acne include, but are not limited to, phototherapy (e.g., alternating blue and red light); photodynamic therapy (e.g., intense blue/violet light); laser. . .

It is known in the art that short-term improvement of acne can be achieved with sunlight, but studies have shown that sunlight worsens acne long-term. More recently, visible light has been successfully employed to treat acne (i.e., "phototherapy")—in particular, intense violet light (405 nm-420 nm) generated by purpose-built fluorescent lighting, dichroic bulbs, LEDs, and/or lasers. Used twice weekly, this has shown to reduce the number of acne lesions by about 64% (Kawada et al., 2002, J. Dermatol. Sci., 30:129-35; incorporated herein by reference) and is even more. . .

. . . some evidence that photodynamic therapy (e.g., therapy with intense blue/violet light (405 nm-425 nm)) can decrease the number of inflammatory acne lesion by 60%-70% in 4 weeks of therapy, particularly when P. acnes is pretreated with delta-aminolevulinic acid (ALA), which increases. . .

Laser surgery has been in use for some time to reduce the scars left behind by acne, but research has been done on lasers for prevention of acne formation itself. In general, laser is used to burn away the follicle sac from which the hair grows, to burn. . .

Local heating therapies are sometimes used, for example, to kill bacteria in a developing pimple, thereby expediting healing.

In some embodiments, provided compositions for treatment and/or prevention of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

In some embodiments, provided compositions for treatment and/or prevention of acne are administered locally to an affected site (e.g., axillae, hands, feet, face, neck, back, arms, chest, etc.).

. . . the skin. Hyperpigmentation is often due to skin damage due to sun exposure, medications, and/or inflammation (including inflammation due to acne vulgaris). Melasma is a condition of dark, irregular patches of skin found most usually on the upper cheek, nose, lips, . . .

What is claimed is:

. . . susceptible to hyperhidrosis; suffering from or susceptible to chromhidrosis; suffering from or susceptible to bromhidrosis; suffering from or susceptible to acne; suffering from or susceptible to seborrhea; suffering from or susceptible to psoriasis; suffering from or susceptible to body odor; or. . .

What is claimed is:

. . . The method of claim 14, wherein the active component further includes one or more additional active agents for treatment of acne, unwanted sweating, hyperhidrosis, body odor, bromhidrosis, chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis, eczematous dermatitis, excess sebum-producing disorders, burns, Raynaud’s. . .

What is claimed is:

30. The method of claim 14, wherein the active component further includes an anti-acne agent selected from the group consisting of a topical bactericidal, a topical antibiotic, a topical retinoid, and combinations thereof.
AB  The present invention provides paraben compositions and associated methods and reagents, particularly useful for the treatment of dermatologic conditions. In some embodiments, provided compositions are formulated for and achieve transdermal delivery, for example by topical administration.

SUMM  .  .  .  surprising discovery, the present invention provides a teaching that certain paraben agents are useful in the treatment and/or prevention of acne. In a still further surprising discovery, the present invention provides a teaching that certain paraben agents are useful in the .  .  .

SUMM  .  .  .  disorders, or conditions include, but are not limited to, a condition associated with sweat glands or sebaceous glands, such as acne; hyperhidrosis; unwanted sweating; bromhidrosis; body odor; chromhidrosis; hair loss; psoriasis; actinic keratosis; dermal infection; eczematous dermatitis (e.g., atopic dermatitis, etc.).

SUMM  .  .  .  form of reducing the frequency of that symptom. To give but a few examples, where the condition in question is acne, symptoms of that condition are reduced when the (e.g., diameter, volume, etc.) and/or severity (e.g., redness, inflammatory response, etc.) of .  .  .

DETD In some embodiments, the present invention provides methods and compositions for the treatment and/or prevention of one or more of acne, unwanted sweating, body odor, hyperhidrosis, bromhidrosis, chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis, eczematous dermatitis (e.g., atopic dermatitis, etc.), excess .  .  .

DETD  .  .  .  some permanent redness with papules and/or pustules, which typically last 1 to 4 days. This subtype is commonly confused with acne. "Phymatous rosacea" is most commonly associated with rhinophyma, an enlargement of the nose. Symptoms include thickening skin, irregular surface nodularities,.  .  .

DETD  Acne

DETD In some embodiments, provided compositions are useful for treating and/or preventing acne vulgaris (commonly referred to as "acne"), a skin disease caused by changes in the pilosebaceous units (i.e., skin structures comprising a hair follicle and its associated sebaceous gland). In some embodiments, acne is inflammatory. In some embodiments, acne is noninflammatory. While not life-threatening, acne vulgaris can cause significant problems for affected individuals. Depending on its severity and other factors, recalcitrant acne can be psychologically debilitating, and can impose significant financial and emotional costs on those whom it afflicts. Despite some recent successes in acne therapy, treatment failures are still common, especially in adult women. While many adults "outgrow" this disease, there are some who continue to be afflicted during much of adulthood, despite continued medical advances. Unfortunately, the most potent acne medication in
current use is administered systemically via a treatment that is teratogenic, an important issue for many women. There is an unfilled need for a more localized and effective treatment for acne, one with minimal side effects.

DETD In general, acne develops as a result of blockages in follicles. The pathology centers on the pilosebaceous units, comprising a sebaceous gland, a follicle (i.e., pore), and a vellus hair. Among the first events leading to acne are hyperkeratinization and formation of a plug of keratin and sebum (a "microcomedo"), obstructing the upper region of a follicle. . . . an increase in sebum production occur with increased androgen production at adrenarche. A microcomedo may enlarge to form an open comedo (a "blackhead") or closed comedo (a "whitehead"). In these conditions the naturally occurring largely commensual bacteria Propionibacterium acnes can cause inflammation, leading to inflammatory lesions (papules, infected pustules, or nodules) in the dermis around the microcomedo or comedo, which results in redness and may result in scarring or hyperpigmentation.

DETD . . . sulfate (DHEAS). Increased androgen levels are thought to cause sebaceous glands to enlarge and to increase sebum production. While most acne patients have normal hormone levels, there are reasons to conclude that increased sebum production plays a role in acne. For example, there may be a correlation between the rate of sebum production and the severity of acne. In addition, acne patients typically produce sebum that is deficient in linoleic acid, which is a potential cause of abnormal keratinization and follicular. . . .

DETD . . . acnes, a relatively slow growing, typically aerotolerant anaerobic gram positive, diphtheroid bacterium, often colonizes the sebaceous follicles. P. acnes exacerbates acne by acting as a chemo-attractant for neutrophils. Neutrophils ingest P. acnes, and in doing so release various hydrolytic enzymes that. . . .

DETD Follicles are lined with squamous epithelium, a layer of cells that is contiguous with the skin surface. In an acne-prone individual, the shedding of cells from this lining is often impeded, perhaps due to an increased level of intercellular adhesion that promotes the retention of cells. Retained cells can obstruct follicles, resulting in comedones. Such inhibited shedding may be related to abnormalities in epidermal differentiation and/or to abnormal sebum composition (e.g., a deficiency in. . . . can irritate keratinocytes, causing the release of interleukin-1, which in turn can cause follicular hyperkeratinization. In general, each of these acne-causing routes, which are not mutually exclusive, is associated with follicular obstruction.

DETD Several factors are known to be linked to acne, including, but not limited to, family and/or genetic history (see, e.g., Ballanger et al., 2006, Dermatology, 212:145-149; incorporated herein by. . . .

DETD In some embodiments, acne treatments work via one or more of the following mechanisms: (1) normalizing shedding into the pore to prevent blockage; (2). . . .

DETD The present invention provides methods of treating and/or preventing acne comprising administration of a provided composition to a subject suffering from, susceptible to, and/or displaying symptoms of acne. In some embodiments, such a provided composition is administered locally to an affected site (e.g., face, neck, back, arms, chest,. . . .

DETD In some embodiments, provided compositions for treatment of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD Exemplary current treatments for acne include, but are not limited to, botulinum toxin, cleansers or soaps; topical bactericidals (e.g., benzoyl peroxide, triclosan, chlorhexidine gluconate, etc.); topical antibiotics (e.g., externally-applied erythromycin, clindamycin, tetracycline, etc.); oral antibiotics (e.g., erythromycin, tetracycline, oxytetracycline, doxycycline, minocycline,. . . . ibuprofen, rofecoxib
Alternative or additional current therapies for the treatment and/or prevention of acne include, but are not limited to, phototherapy (e.g., alternating blue and red light); photodynamic therapy (e.g., intense blue/violet light); laser. 

DETD

It is known in the art that short-term improvement of acne can be achieved with sunlight, but studies have shown that sunlight worsens acne long-term. More recently, visible light has been successfully employed to treat acne (i.e., "phototherapy")—in particular, intense violet light (405 nm-420 nm) generated by purpose-built fluorescent lighting, dichroic bulbs, LEDs, and/or lasers. Used twice weekly, this has been shown to reduce the number of acne lesions by about 64% (Kawada et al., 2002, J. Dermatol. Sci., 30:129-35; incorporated herein by reference) and is even more. 

DETD

. . . some evidence that photodynamic therapy (e.g., therapy with intense blue/violet light (405 nm-425 nm)) can decrease the number of inflammatory acne lesion by 60%-70% in 4 weeks of therapy, particularly when P. acnes is pretreated with delta-aminolevulinic acid (ALA), which increases. 

DETD

Laser surgery has been in use for some time to reduce the scars left behind by acne, but research has been done on lasers for prevention of acne formation itself. In general, laser is used to burn away the follicle sac from which the hair grows, to burn. 

DETD

Local heating therapies are sometimes used, for example, to kill bacteria in a developing pimple, thereby expediting healing.

DETD

In some embodiments, provided compositions for treatment and/or prevention of acne are formulated into a cream, liniment, lotion, gel, sunscreen, etc.

DETD

In some embodiments, provided compositions for treatment and/or prevention of acne are administered locally to an affected site (e.g., axillae, hands, feet, face, neck, back, arms, chest, etc.).

DETD

. . . the skin. Hyperpigmentation is often due to skin damage due to sun exposure, medications, and/or inflammation (including inflammation due to acne vulgaris). Melasma is a condition of dark, irregular patches of skin found most usually on the upper cheek, nose, lips, . . .

CLM

What is claimed is:

. . . susceptible to hyperhidrosis; suffering from or susceptible to chromhidrosis; suffering from or susceptible to bromhidrosis; suffering from or susceptible to acne; suffering from or susceptible to seborrhea; suffering from or susceptible to psoriasis; suffering from or susceptible to body odor; or. . .

CLM

What is claimed is:

. . . The method of claim 14, wherein the active component further includes one or more additional active agents for treatment of acne, unwanted sweating, hyperhidrosis, body odor, bromhidrosis, chromhidrosis, rosacea, hair loss, psoriasis, actinic keratosis, eczematous dermatitis, excess sebum-producing disorders, burns, Raynaud's. . .

CLM

What is claimed is:

30. The method of claim 14, wherein the active component further includes an anti-acne agent selected from the group consisting of a topical bactericidal, a topical antibiotic, a topical retinoid, and combinations thereof.
AB A reversely thermo-reversible hydrogel composition comprising a water soluble block copolymer comprising at least two blocks of polyethylene oxide and at least one block of polypropylene oxide, and at least one associative gelling adjuvant having water solubility less than 0.5 g/100 ml, preferably less than 0.3 g/100 ml at 20° C., and being capable of forming water soluble inter-molecular complexes with the water soluble block copolymer in water. The hydrogel composition exhibits improved gelling efficiency, enhanced solubility and/or stability for water sparingly soluble and insoluble pharmaceutical agents. The hydrogel compositions are useful in a variety of pharmaceutical and cosmetic products and applications, such as esophageal, otic, vaginal, rectal, ophthalmic, treatments of disorders and imperfections of the skin, and treating and/or preventing alopecia and restoring and/or promoting hair growth.

SUMM . . . active ingredients in such aqueous liquid solutions. For example, the use of Salicylic acid or its derivatives for treating dandruff, acetone, skin wrinkling, skin pigmentation, warts, freckles, or skin-related problems is well known in the preparation of dermatologic and cosmetic formulations. . .

DETD . . . stabilize sparingly soluble or insoluble active ingredients. For example, the use of Salicylic acid or its derivatives for treating dandruff, acetone, skin wrinkling, skin pigmentation, warts, freckles, or skin-related problems is well known in the preparation of dermatologic and cosmetic formulations. . .

DETD . . . Botulinum toxin, interferon, substance P enkephalins, epidermal growth factor, eyederived growth factor, fibronectin, insulin-like growth factor and mesodermal growth factor;

(17) Acne treatment agents, such as salicylic acid and its derivatives, sulfur, lactic acid, glycolic, pyruvic acid, azelaic acid, benzoyl peroxide, urea,. . .

DETD . . . composition of cosmetic active ingredients. The cosmetic may be skincare products such as facial hydrogel, hands and foot care hydrogels; acetone treatment hydrogel, shaving hydrogel, cleansing hydrogel; antiperspirant; hair remover hydrogel, tooth whitening hydrogel, color makeup products such as makeup base,. . .

DETD . . . compositions of the present invention can be essential oils, moisture retention agents, skin-beautifying agents, sun screen, antiperspirants, vitamins, amino acids, anti-acne agents, antiseptics or antibacterial agents, zinc salts, tooth whitening agents, depilatory agents, fragrance oils, insect repellants, antioxidants, chelating agents, refrigerants,. . . or the nucleic acids include deoxyribo nucleic acid; and examples of the hormones include estradiol and ethenyl estradiol, and the like;

(8) Anti-acne agents, such as salicylic acid and its derivatives, sulfur, lactic acid, glycolic, pyruvic acid, azelaic acid, benzoyl peroxide, urea, tea tree oil, resorcinol and N-acetylcysteine, and retinoids,
such as retinoic acid, and its derivatives, and the like;

(9) Antiseptics or antibacterial agents.

DETD The following ACNE treatment hydrogel compositions are prepared:

CLM What is claimed is:

. . . agents, amoebacidal compounds, trichomonacidal agents, analgesics,
anti-arthritis, anti-asthmatics, anti-coagulants, anti-convulsants,
anti-depressants, anti-diabetics, anti-neoplastics, anti-psychotics,
anti-hypertensive agents, muscle relaxants, proteins, peptides, acne
treatment agents, lubricating agents, and mixtures thereof.

CLM What is claimed is:

29. The composition of claim 20, comprising an acne treatment
pharmaceutical hydrogel composition.

CLM What is claimed is:

30. The composition of claim 29, wherein the acne treatment
pharmaceutical hydrogel composition comprising at least one acne
treatment agent is selected from the group consisting of salicylic acid
or its derivatives, sulfur, lactic acid, glycolic acid, pyruvic acid,
azelaic acid, benzoyl peroxide, urea, resorcinol, N-acetylcysteine,
retinoids and their derivatives, and mixtures thereof.

CLM What is claimed is:

31. The composition of claim 30, wherein the acne treatment agent is
salicylic acid, or its derivatives.

CLM What is claimed is:

32. The composition of claim 29, wherein the acne treatment
pharmaceutical hydrogel comprising an alcohol-free composition.

CLM What is claimed is:

. . . is selected from the group consisting of essential oils, moisture
retention agents, skin-beautifying agents, sun screens, antiperspirants,
vitamins, amino acids, anti-acne agents, antiseptics, antibacterial
agents, zinc salts, tooth whitening agents, depilatory agents, fragrance
oils, insect repellants, antioxidants, chelating agents, refrigerants,
antinflammatory. . .

CLM What is claimed is:

. . . tooth whitening, antiseptic and antibacterial, depilatory,
antiperspirant or deodorant, insect repellent, perfume, sunscreen, baby
diaper rash, shaving, hair coloring, and anti-acne cosmetic hydrogel
compositions.

CLM What is claimed is:

59. The composition of claim 53, wherein the at least one cosmetic
active ingredient is an anti-acne agent selected from the group
consisting of salicylic acid and its derivatives, sulfur, lactic acid,
glycolic acid, pyruvic acid, azelaic acid, benzoyl peroxide, urea,
tea tree oil, resorcinol and N-acetylcysteine, retinoids and their
derivatives, and mixtures thereof.

CLM What is claimed is:

60. The composition of claim 59, wherein the anti-acne agent (s) is
salicylic acid or its derivatives.
The present invention relates to the field of carrier and delivery systems for active molecular compounds. In particular, the present invention provides aqueous dispersions for delivery of active molecular compounds.

SUMMARY

. . . the present invention in the preparation of a medicament for treating one or more conditions including, but not limited to: acne, infection, wound infection, etc.

DETAILED DESCRIPTION

Embodiments of the present invention provide ointments, creams, lotions, gels, and or liquids for the topical treatment of acne in a subject. Such compositions find use in treatment of acne in infants, children, adolescents, teenagers, and/or adults who would suffer from various forms of acne. In some embodiments, acne-treatment compositions find use in treating and/or killing Propionibacterium acnes, Staphylococcus aureus, etc. In some embodiments, the active agent in acne treatment compositions include, but are not limited to: benzethonium chloride, hydrophobically modified salicylate, salicylic acid, benzoyl peroxide, acetone, tea tree oil, isotretinoin (for rosacea, cystic acne), allantoin.

. . . anti-itch treatment. Active agents in anti-itch treatment compositions include, but are not limited to: benzethonium chloride, isotretinoin (for rosacea, cystic acne), clotrimazole, steroids (corticosteroid), hydrocortisone, allantoin, econasole nitrate, etc.
CONJUGATE-BASED ANTIFUNGAL AND ANTIBACTERIAL PRODRUGS

TITLE (ENGLISH): CONJUGATE-BASED ANTIFUNGAL AND ANTIBACTERIAL PRODRUGS

TITLE (FRENCH): PROMEDICAMENTS ANTIFONGIQUES ET ANTIBACTERIENS A BASE D'UN CONJUGUE

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The invention provides conjugate-based antifungal or antibacterial prodrugs formed by coupling at least one antifungal agent or antibacterial agent with at least one linker and/or carrier. The prodrugs are of formula: (i) (AFA)m-X-(L)n; (ii) [(AFA)m'-X]p-L; (iii) AFA-[X-(L)n']q; or (iv) (AFA)m"-X, wherein: AFA is an antifungal agent or an antibacterial agent; L is a carrier; X is a linker; m ranges from 1 to 10; n ranges from 2 to 10; m' is 1 to 10; p is 1 to 10; n' is 1 to 10; and q is 1 to 10, provided that q' and n are not both 1; and m" is 1 to 10. The invention also provides nanoparticles comprising the conjugate-based prodrugs. Additionally, the invention also provides non-conjugated antifungal and antibacterial agents in the form of nanoparticles.

In yet another aspect, the invention provides a method for treating or preventing acne comprising applying a personal care compositions described herein to the skin of a subject in need thereof. Compositions described herein can also be used in skin care compositions to treat or prevent acne. In some embodiments,
the composition described herein can be used to treat a fugal or bacterial infection. For example, the.

DETDEN

[0074] In some embodiments, the antibacterial agent is an antiacne agent. As used herein, the term "antiacne agent" refers to any chemical that is effective in the treatment of acne and/or the symptoms associated therewith. Antiacne agents are well known in the art such as U.S. Pat. App. Pub. No. 2006/0008538 and U.S. Pat. No. 5,607,980, content of both of which is incorporated herein by reference. Examples of useful antiacne agents include, but are not limited to keratolyses, such as salicylic acid, derivatives of salicylic acid, and resorcinol; retinoids, such as tretinoin, adapalene, tazarotene; sulfur-containing D- and L-amino acids and their derivatives and salts; lipoic acid; antibiotics and antimicrobials, such as benzoyl peroxide, triclosan, chlorhexidine gluconate, octopirox, tetracycline, 2,4,4'-trichloro-2'-hydroxy diphenyl ether, 3,4,4'-trichlorobanilide, nicotinamide, tea tree oil, rofecoxib, azelaic acid and its derivatives, phenoxyethanol.

DETDEN

[0075] Additionally, the antiacne agent may be an antimicrobial peptide having activity against P. acnes. Antimicrobial peptides are ubiquitous in nature and play an.

DETDEN

[00122] Beta hydroxyl acid (BHA) is oil-soluble. Accordingly, BHA works very well in clearing up whiteheads and blackheads by penetrating inside pores that are clogged with sebum and a buildup of dead cells. BHA is a powerful exfoliant.

DETDEN

new ones. It keeps the pores of the skin clear, hence minimizes clogging and actively breaks down all forms of acne. Salicylic acid loosens dry and damaged skin patches by softening epidermal protein- keratin. It remains on the skin surface long.

DETDEN

peel and shed, revealing new and smoother skin underneath. It is effective in clearing skin problems such as eczema, psoriasis, acne, and age spots; and helps stimulate collagen growth in the cells. One major side effect of AHA is increase in.

DETDEN

be incorporated into the compositions include those that improve or eradicate age spots, keratoses and wrinkles; local analgesics and anesthetics; antiacne agents; antibacterials; antiyeast agents; antifungal agents; antiviral agents; antidandruff agents; antidermatitis agents; antihistamine agents; antipruritic agents; antiemetics; or salicylic acid. Triclosan can act as a protective agent that increases the longetivity and effectiveness of other treatments of acne.

DETDEN

peel and shed, revealing new and smoother skin underneath. It is effective in clearing skin problems such as eczema, psoriasis, acne, and age spots; and helps stimulate collagen growth in the cells. One major side effect of AHA is increase in.
[00148] Beta hydroxyl acid (BHA) is oil-soluble. Accordingly, BHA works very well in clearing up whiteheads and blackheads by penetrating inside pores that are clogged with sebum and a buildup of dead cells. BHA is a powerful exfoliant.

DETDEN new ones. It keeps the pores of the skin clear, hence minimizes clogging and actively breaks down all forms of acne. Salicylic acid loosens dry and damaged skin patches by softening epidermal protein–keratin. It remains on the skin surface long.

DETDEN It has both exfoliating and anti-inflammatory effects. It is possibly more effective than tretinoin 0.025% gel in the treatment of acne.

DETDEN embodiments, the personal care composition is a skin care composition. A skin care composition can be used to or prevent acne. Skin care compositions are herein defined as compositions for the treatment of skin including, but not limited to, skin conditioners.

DETDEN as alpha-hydroxy acids and beta-hydroxy acids), and sunless tanning agents. Examples of common raw materials and suitable adjuvants for an acne treatment composition are described by Beumer et al. supra and Robinson et al., supra.

DETDEN [00228] In another aspect, a method is provided for treating or preventing acne, the method comprising applying a skin care composition described herein to the skin of subject in need thereof. After application,

DETDEN [00234] In some embodiments, the subject needs treatment for dandruff and/or acne.

DETDEN [00236] A subject can be one who is currently being treated for dandruff, acne, oral or vaginal candidiasis, ringworm (tinea infections of the body, scalp, beard, jock itch, athlete's foot), nail infection, or ear.

DETDEN [00238] In some embodiments of the aspects described herein, the method further comprising diagnosing a subject for dandruff, acne, oral or vaginal candidiasis, ringworm (tinea infections of the body, scalp, beard, jock itch, athlete's foot), nail infection, or ear.

DETDEN The conjugate-based prodrug of any of paragraphs 1-17, wherein the antibacterial agent is effective against P. acne.

DETDEN selected from the group consisting of those that improve or eradicate age spots, keratoses and wrinkles; local analgesics and anesthetics; antiacne agents; antibacterials; antyeast agents; antifungal agents; antiviral agents; antidandruff agents; antidermatitis agents; antihistamine agents; antipruritic agents; antiemetics; antimotionsickness agents; antiinflammatory.
49. A method for treating or preventing acne in a subject, the method comprising the step of applying a composition of any of paragraph 41-46 or 48 to.

DETDEL

[00386] Minimum Inhibitory Concentration (MIC): MIC is an index which measures the anti-acne efficacy. Generally, lower the MIC values of the composition higher its antibacterial efficacy, because of its inherent ability to inhibit.

CLMEN

The conjugate-based prodrug of any of claims 1 -17, wherein the antibacterial agent is effective against P. acne.

CLMEN

selected from the group consisting of those that improve or eradicate age spots, keratoses and wrinkles; local analgesics and anesthetics; antiacne agents; antibacterials; antifungal agents; antiviral agents; antidandruff agents; antidermatitis agents; antihistamine agents; antipruritic agents; antiemetics; antimotionsickness agents; antiinflammatory.

CLMEN

49. A method for treating or preventing acne in a subject, the method comprising the step of applying a composition of any of claim 41-46 or 48 to.
The present invention relates to pharmaceutical compositions and methods useful for the treatment of dermatological disorders, and in particular acne vulgaris and skin pigmentation disorders. Pharmaceutical compositions comprising one or more arginine, salicylic acid and/or azelaic acid that are useful for the treatment of dermatological diseases and the symptoms and underlying causes of such dermatological diseases are also disclosed.

La presente invention concerne des compositions pharmaceutiques et des procedes utiles dans le traitement de troubles dermatologiques, et en particulier de l'acne simple et des troubles de pigmentation de la peau. La presente invention concerne des compositions pharmaceutiques comprenant de l'arginine et/ou de l'acide salicylique et/ou de l'acide azelaique, utiles dans le traitement de maladies dermatologiques et des symptomes et causes sous-jaentes de ces maladies dermatologiques.

The present invention relates to pharmaceutical compositions and methods useful for the treatment of dermatological disorders, and in particular acne vulgaris and skin pigmentation disorders. Pharmaceutical compositions comprising one or more arginine, salicylic acid and/or azelaic acid that are useful.

La presente invention concerne des compositions pharmaceutiques et des procedes utiles dans le traitement de troubles dermatologiques, et en particulier de l'acne simple et des troubles de pigmentation de la peau. La presente invention concerne des compositions pharmaceutiques comprenant de l'arginine et/ou de l'acide salicylique et/ou de l'acide azelaique, utiles dans le traitement de maladies dermatologiques et des symptomes et causes sous-jaentes de ces maladies dermatologiques.

The present invention relates to pharmaceutical compositions and methods useful for the treatment of dermatological disorders, such as acne vulgaris and skin pigmentation disorders.
Dermatological disorders often associated with the production or overproduction of sebum are well known. One such dermatological disorder includes *acne vulgaris* (*acne*), which is the most common dermatological disorder treated by physicians. It is estimated that as many as 32 million Americans exhibit some form of unwanted *acne*. *Acne* affects more than eighty-five percent of teenagers, and although *acne* most commonly occurs during adolescence, the condition may commonly continue into adulthood. (William, J., *N Engl J Med*, (2005) 352).

*Acne* is an inflammatory dermatological disorder affecting the pilosebaceous units of affected subjects. *Acne* is cause by bacteria that infects the hair follicles, which in turn leads to the formation of comedones composed of sebum, keratin and further proliferation of microorganisms, which include for example, *Propionibacierium acnes* (*P. acnes* or *P. acneis*). It is further believed that *P. acnes* plays a role in the digestion of the sebum and keratin present in the comedones into inflammatory by-products which are responsible for further irritating the affected hair follicle, thereby resulting in further inflammation, the formation.

In many affected subjects, *acne* scarring and/or post-inflammatory hyperpigmentation (PIH) occurs as a result of inflammation of the pilo-sebaceous unit (PSU), and in some cases. By PIH generally present with irregular, darkly-pigmented spots occurring after inflammation due to a skin insult such as, for example *acne*. In some individuals PIH may resolve slowly but may persist for months. (Kenney, J., et al, *Clinics in Dermatology* (1989)).

The complications of *acne* are not limited to the skin of affected subjects. The physical symptoms of *acne* may contribute to the development of emotional and psychological distress, depression, anxiety and increased risks of suicide. (See, e.g., Kilkenny. *Paediat Child Health*, (2006) 42:793-796.) The emotional distress which is caused by, or is otherwise aggravated by, the symptoms of *acne* may be particularly troublesome for adolescent subjects.

Various topical agents are utilized in the treatment of *acne* and these include sulfur, resorcinol, salicylic acid, benzoyl peroxide, retinoids and topical antibiotics. For example, commercially available topical treatments include.

Systemically available treatments have also been used to treat *acne*, including, for example tetracycline antibiotics such as minocycline. Generally, subjects are prescribed an extended course of antibiotic therapy and despite.

Oral retinoids, such as isotretinoin, may also be effective; however their use is generally reserved for severe cases of *acne* due to the association of serious side effects, which may include teratogenicity, depression and suicidal ideation. Many of the available *acne* treatments are expensive and may cause considerable adverse effects. Furthermore, some medications may require continuous therapy and/or subjects may not.
Novel and effective therapies are needed for the treatment of acne, and in particular novel topical therapies that improve symptoms in a safe, rapid and effective manner are needed. There is...

DETDEN...compositions, as well as methods for treating subjects afflicted with or otherwise affected by one or more dermatological disorders (e.g., acne vulgaris and/or post-inflammatory hyperpigmentation (PIH)). The pharmaceutical compositions disclosed herein may be topically administered to a subject and are generally...

DETDEN...more dermatological disorders. Dermatological disorders for which the pharmaceutical compositions disclosed herein may be used to treat include, for example, acne, PIH, rosacea, dyspigmentation, uneven skin tones and melasma. The pharmaceutical composition may be administered to the subject at least once...

DETDEN...upon application to a subject the pharmaceutical compositions disclosed herein are preferably capable of improving the signs and symptoms of acne (e.g., reduce excessive sebum production and/or reduce hyperpigmentation caused by acne scarring). Accordingly, one aspect of the present inventions relates to methods of treating one or more dermatological disorders, including, but not limited to acne and PIH. For example, in one embodiment the present invention relates to a method of treating a subject with a...

DETDEN...of azelaic acid, salicylic acid and arginine to a subject. The dermatological disorders to be treated may include, for example, acne and/or PIH. In one embodiment of the present invention, the treated subject is an adolescent or an adult. In one...

DETDEN...one embodiment of the present invention the signs and symptoms of the dermatological disorders (e.g., sebum production, the presence of acne lesions, inflammation, and/or scarring) improve or are otherwise resolved following the administration of the pharmaceutical compositions of the present invention...

DETDEN...relates to novel pharmaceutical compositions and related methods of use for the treatment of dermatological disorders, which include, for example, acne vulgaris, acne rosacea and dermatological pigmentation disorders such as post-inflammatory hyperpigmentation (PIH) and melasma. Such pharmaceutical compositions are generally stable and comprise...

DETDEN...other components of the pharmaceutical composition (e.g., therapeutically-active agents) into the skin of an affected subject (e.g., a subject with acne). In some embodiments, the inclusion of one or more arginine compounds in the pharmaceutical compositions of the present invention may...

DETDEN...in the amount of one or more therapeutically-active agents necessary to achieve one or more clinical endpoints (e.g., resolution of acne symptoms or reduced pigmentation). In one embodiment, the synergy demonstrated by the pharmaceutical compositions of the present invention enable a...

DETDEN...relates to the ability of one or more therapeutic compounds or agents to...
improve the objective signs and symptoms of acne (e.g., a statistically significant reduction in mean inflammatory lesion count, erythema severity, pigmentation, acne scarring and/or sebum production). In other embodiments of the present invention, therapeutic activity relates to a subject's subjective perception regarding.

Acids. Azelaic acid is known for its anti-bacterial and comedolytic properties and has been used clinically for the treatment of acne and hyperpigmentation disorders. (Fitton, A., et al, Drugs (1991) 41 (5): 180-798.) Generally, azelaic acid is an effective and well-tolerated monotherapy in mild and moderate forms of acne and is comparable in its efficacy to other topical acne treatments, such as benzoyl peroxide. (Liu, R., et al, Arch. Dermatol. (2006) 142(8): 1047-1052.) Azelaic acid also inhibits the growth.

disorder" refers to any disease or condition of the skin, dermis, or any substructure therein. Dermatological disorders include, for example, acne vulgaris, pigmentation disorders such as post-inflammatory hyperpigmentation, dyspigmentation, melasma, uneven skin tone, or hyperpigmentation or dark spots resulting from aging or exposure to sunlight or ultraviolet radiation, acne rosacea, xeroderma, psoriasis, ectopic dermatitis, skin cancers, and any other disease or condition affecting the skin, dermis or structures therein. by topically administering such compositions to a subject affected by such dermatological disorder. In certain embodiments, the dermatological disorder is acne vulgaris. Acne vulgaris is a dermatological disorder resulting from the action of hormones and other substances on a subject's sebaceous glands and hair follicles, which result in plugged pores and outbreaks of lesions commonly referred to as pimples. Acne is frequently referred to as a disease of the pilosebaceous units (PSU), which are found over most of the body. each PSU consists of a sebaceous gland connected to a canal, called a follicle that contains a fine hair. Although acne is generally not viewed as a serious health threat, it can be a source of significant emotional distress and in.

Subjects affected by acne frequently present with a variety of topical lesions. The basic acne lesion, called the comedone, is simply an enlarged and plugged hair follicle. If the plugged follicle, or comedone, stays beneath the skin, it is referred to as a closed comedone and produces a white bump referred to as a whitehead. A comedone that reaches the surface of the skin and opens up is referred to as an open comedone or blackhead because it looks black on the skin's surface.

hyperpigmentation caused by acne scarring). In another embodiment, the present invention relates to the treatment of a subject with, for example, acne by topically administering on a regular basis (e.g., once daily) a topical pharmaceutical composition to the affected area of the.

Preferably, a therapeutically effective amount is sufficient to significantly and positively modify the condition to be treated (e.g., acne) while minimizing or avoiding serious adverse effects.

lycopene). In some embodiments, the pharmaceutical compositions disclosed herein may also comprise one or more antibacterial agents (e.g., azelaic acid, benzoyl peroxide and/or tea tree oil).
of a pharmaceutical composition in the form of a serum and that is useful for the treatment of, for example, **acne**.

Approximately 100g of **acne** serum was produced comprising a tripartite complex of azelaic acid, salicylic acid and arginine. Following exposure to freeze/thaw cycling at...

A total of 60 subjects with **acne vulgaris** participated in a clinical trial designed to demonstrate the safety and efficacy of the pharmaceutical compositions of the present.

In addition to a reduction in the presence of **acne** lesions, hyperpigmentation and **acne** scarring was also observed. No serious adverse reactions were observed or otherwise reported to the investigators during the investigation. The foregoing therefore provides that the compositions of the present invention provide an effective therapy for the treatment of **acne** and PIH, and in particular novel topical therapies that improve symptoms in a safe, rapid and effective manner.

43. The method of claim 42, wherein the dermatological disorder is **acne vulgaris**.

86. The method of claim 85, wherein the dermatological disorder is **acne vulgaris**.

91. The method of claim 90, wherein the dermatological disorder is selected from the group consisting of **acne vulgaris** and post-inflammatory hyperpigmentation (PIH).

125. The method of claims 90-124, wherein the symptoms of the dermatological disorder comprise one or more of sebum overproduction, **comedones** and **acne** scarring.
A personal care composition is disclosed comprising a di-amido gellant, wherein the di-amido gellant has a formula (I) wherein R1 and R2 are aminofunctional end-groups which may be the same or different, and L is a linking moiety of molecular weight from 14 to 500 g/mol. The personal care composition may take a variety of forms such as a leave-on composition or an emulsion and/or may comprise one or more actives or agents.

L'invention concerne une composition de soins personnels comprenant un agent gelifiant di-amido, dans lequel l'agent gelifiant di-amido a une formule (I) dans laquelle R1 et R2 sont des groupes terminaux aminofonctionnels qui peuvent etre identiques ou differentes, et L est une fraction de liaison de masse moleculaire de 14 a 500 g/mole. La composition de soins personnels peut revetir une diversite de formes, telles qu'une composition a application sans
rincage ou une emulsion et/ou peut comprendre un ou plusieurs actifs ou agents.

DETDEN  .  .  .
anti-wrinkle actives, anti-atrophy actives, flavonoids, N-acyl amino acid compounds, retinoids, peptides, particulate materials, UV actives, photostabilizers, anti-cellulite agents, desquamation actives, anti-acne actives, antioxidants, radical scavengers, conditioning agents, anti-inflammatory agents, tanning actives, skin lightening agents, botanical extracts, antimicrobial actives, antifungal actives, antibacterial. . .

DETDEN  .  .  .
anti-wrinkle actives, anti-atrophy actives, flavonoids, N-acyl amino acid compounds, retinoids, peptides, particulate materials, UV actives, photostabilizers, anti-cellulite agents, desquamation actives, anti-acne actives, antioxidants, radical scavengers, conditioning agents, anti-inflammatory agents, tanning actives, skin lightening agents, botanical extracts, antimicrobial actives, antifungal actives, antibacterial. . .

DETDEN
17. Anti-Acne Actives

DETDEN
The compositions of the present invention can comprise one or more anti-acne actives.

DETDEN
Suitable anti-acne actives include, but are not limited to, resorcinol, sulfur, salicylic acid, retinoids such as retinoic acid and its derivatives, sulfur-containing amino acids and their derivatives and salts (e.g., N-acetyl derivatives such as N-acetyl-L-cysteine), and lipoic acid. Other suitable anti-acne actives may be chosen from (i) antibiotics and antimicrobials such as benzoyl peroxide, octopirox, tetracycline, 2,4,4′-trichloro-2′-hydroxy diphenyl ether, 3,4,4′-trichlorobanilide, . . . as flavonoids; and (iii) bile salts such as scymnol sulfate and its derivatives, deoxycholate, and cholate. Further examples of suitable anti-acne actives are described in U. S. Patent No. 5,607,980.

DETDEN  .  .  .
% to about 30%, 25%, 20%, 10%, 7%, 5%, or 3%, by weight of the composition, of one or more anti-acne compounds.

DETDEN
Suitable actives useful herein include those selected from the group consisting of benzoyl peroxide, 3-hydroxy benzoic acid, glycolic acid, lactic acid, 4-hydroxy benzoic acid, 2-hydroxybutanoic acid, 2-hydroxypentanoic acid, 2-hydroxyhexanoic acid, phytic acid, lipoic. . . bitter orange, urea preparations, griseofulvin, 8-Hydroxyquinoline ciloquinol, thiobendazole, thiocarbamates, haloprogin, polyenes, hydroxypyridone, moholine, benzylamine, allylamines (such as terbinafine), tea tree oil, clove leaf oil, coriander, palmarosa, berberine, thyme red, cinnamon oil, cinnamic aldehyde, citronellic acid, hinokitol, ichthyol pale, ethylhexylglycerin, hexamidine. . .

DETDEN  .  .  .
be added to the composition herein. Examples of these functional classes include, but are not limited to: abrasives, absorbents, fragrances, anti-acne agents, anti-caking agents, antifoaming agents, antimicrobial agents (e.g., iodopropyl butylcarbamate), antifungal agents, antioxidants, binders, buffering agents, bulking agents,. . .
vessels and/or red blotchiness on mammalian skin, fine lines and wrinkles, dryness (e.g., roughness, scaling, flaking), cellulite, and acne.

anti-wrinkle actives, anti-atrophy actives, flavonoids, N-acyl amino acid compounds, retinoids, peptides, particulate materials, UV actives, photostabilizers, anti-cellulite agents, desquamation actives, anti-acne actives, anti-oxidants, radical scavengers, conditioning agents, anti-inflammatory agents, tanning actives, skin lightening agents, botanical extracts, antimicrobial actives, antifungal actives, antibacterial.
Methods and kits for treating or preventing an eye condition or for cleaning an eye area tissue are provided. A method of the invention includes administering an isoprenoidal essential oil to eye area tissue, chafing eye area tissue with an abrasive, and removing the abrasive. A kit according to the invention includes an isoprenoidal essential oil, an abrasive for chafing eye area tissue, and instruction for use for treating an eye condition or cleansing an eye area tissue. The invention also includes a composition of matter comprising an isoprenoidal essential oil and a plurality of abrasive particles in ophthalmologically acceptable base.

DETDEN

[00011] Although sometimes referred to as "acne rosacea" and confused with acne vulgaris (referred to commonly as "acne") because both cause irritation to the face, facial rosacea and acne are different, and therefore the treatments recommended to manage them are also different.

[00012] Acne is the most common skin condition in the United States. While it can occur at any age, it most commonly affects teenagers and young adults. Facial rosacea is distinguished from acne vulgaris by the presence of non-inflammatory comedones (follicles filled with sebum and sloughed off cells; commonly referred to as "whiteheads" and "blackheads") with acne and their absence in facial rosacea.

DETDEN

[00013] Although acne and rosacea sometimes co-exist in skin, they often occur do not overlap and dermatologists recommend different protocols for treatment of rosacea and acne. The goals with acne treatments are to reduce oil production, speed up skin turnover, control bacterial infection and reduce inflammation. In addition to cleansing the skin, acne may be treated with application of acetone, alcohol, antibiotics, astringents, benzoyl peroxide, retinoids and salicylic acid, and/or ingestion of oral. .
DETDEN

[00014] The effects of acne may be reduced but not eliminated by applying a sufficient amount of tea tree oil. Enshaieh et al. (Indian J. .. .

DETDEN

73(1):22-25) describe the difficulties of obtaining an acne treatment medicine that has an effect and is tolerated by patients. Enshaieh et al. report use of 5% tea tree oil to treat mild to moderate acne vulgaris and found that 5% tea tree oil was 3.55 times more effective in improving total acne lesions and 5.75 times more effective in reducing acne severity as measured by the Acne Severity Index (ASI). Bassett et al. (MedJAus), 1990, Oct. 15, 153(8):455-8 examined the effectiveness of 5% tea tree oil in reducing the number of inflamed and non-inflamed lesions in patients with acne. Application of 5% tea tree oil for twenty minutes two times a day for 45 minutes to patients suffering from acne reduced the number of lesions. The tea tree oil acted more slowly than the acne treatment (benzoyl peroxide) to which it was compared. Of note, even using frequent (e.g. twice daily) and relatively long application times over the course of many weeks, 5% tea tree oil treatment was of limited efficacy in treating acne.

DETDEN

[00015] U.S. Patent Application Publication 2005/0037034 to Rhoades describes a composition for treating comedonal acne associated with acne vulgaris and inflammatory acne. The composition contains an acne treatment agent together with abrasive particles in a base. A method of using the agent is described. The face is buffed or otherwise treated with the agent using, for example, a hand-held vibratory device. The acne treatment agent can be, for example, benzoyl peroxide, salicylic acid, retinol, hydroxyl acid, or tea tree oil.

DETDEN

[00016] Increasingly aggressive acne treatment modalities may be used, as shown by the use of oral medications such as isotretinoin, which has significant side effects on the entire body for individuals whose acne cannot be managed by other methods. Simple, effective and safe acne treatments are still lacking.

DETDEN

[00017] These acne treatments tend to be harsh, and harsh treatments have traditionally been thought to worsen the symptoms of rosacea. In particular, . . .

DETDEN . . .

the deeper layers of the skin. Epithelialization and collagen production are stimulated. It is used to counteract the effects of acne and photoaging and reduces acne scars, age spots, enlarged pores, fine lines, and the appearance of blemishes, other scars, stretch marks, undesired skin pigmentation, and . . .

DETDEN

[00064] Other constituents may be added, either singularly or in combination, including but not limited to acne treatment agent, alcohol, animal extract, anti-oxidant agent, anti-parasitic agent, antiseptic agent, anti-bacterial agent, ash, astringent, balm, binder, bleaching agents, collagen. . .
AB Topical formulations comprising an anti-irritant amount of aqueous-soluble strontium (Sr²⁺) cation, and method for using the same to inhibit skin irritation are disclosed.

ACLM . . . therapeutically active ingredient is selected from the group consisting of anti-inflammatory, antibiotic, local anesthetic, sunscreen, retinoid, antiperspirant, antihistamine, analgesic, contraceptive, anti-acne and anti-dandruff ingredients.

. . . therapeutically active ingredient is selected from the group consisting of anti-inflammatory, antibiotic, local anesthetic, sunscreen, retinoid, antiperspirant, antihistamine, analgesic, contraceptive, anti-acne and anti-dandruff ingredients.

. . . therapeutically active ingredient is selected from the group consisting of anti-inflammatory, antibiotic, local anesthetic, sunscreen, retinoid, antiperspirant, antihistamine, analgesic, contraceptive, anti-acne and anti-dandruff ingredients.

. . . the group consisting of steroidal or non-steroidal anti-inflammatory agents, aloe vera, chamomile, Alpha -bisabolol, Cola nitida extract, green tea extract, tea tree oil, licorice extract, allantoin, urea, caffeine or other xanthines and glycyrrhizic acid.

. . . the group consisting of steroidal or non-steroidal anti-inflammatory agents, aloe vera, chamomile, Alpha -bisabolol, Cola nitida extract, green tea extract, tea tree oil, licorice extract, allantoin, urea, caffeine or other xanthines and glycyrrhizic acid.
Non-Patent References

For this sample report, only the 2 references from HCAPLUS, the reference from Medline, the first 2 references from Embase are displayed below.

AB A review. Acne is the most common disease of the skin, yet only a fraction of acne sufferers are treated with prescription products by physicians. There is, however, a large and expanding market for over-the-counter (OTC) medications, many of which are not only effective but also well tolerated and cosmetically elegant. Given the presence of OTC acne medications on the television, the Internet, and store shelves, patients will be acutely aware of these OTC remedies and will have questions. Patients will expect dermatologists to advise them regarding products to use either as a sole therapy or in combination with prescription drugs. Recently, combinations of OTC acne medications in treatment regimens or "kits" have gained popularity and appear to have increased patient compliance. Quality-of-life outcomes from OTC medication use, in at least one study, have demonstrated good benefit. The most common OTC ingredients include benzoyl peroxide, a potent antibacterial agent, and salicylic acid, a mild comedolytic and antiinflammatory medication. Other, less-common OTC ingredients include sulfur, sodium sulfacetamide, and alpha hydroxy acids. Zinc, vitamin A, tea tree oil, and ayurvedic therapies also are available OTC for acne. Addnl. and better studies are needed to clarify the benefit of these latter medications.
sulfacetamide 7440-66-6, Zinc, biological studies 7704-34-9, Sulfur, biological studies 11103-57-4, Vitamin A
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effective over-the-counter acne treatments)
Acne vulgaris (acne) is a skin disease that can be caused by multiple chronic issues including: hyperkeratinization, sebaceous gland hyperplasia with seborrhea, Propionibacterium acnes proliferation and inflammation. The management of acne can be complex, often requiring aggressive combination therapy and a long-term therapeutic strategy. Tea tree oil is sometimes considered a good substitute for benzoyl peroxide in fighting acne. Isotretinoin (13-cis retinoic acid) is also incorporated as a potent pharmacol. inhibitor of sebum secretion. The key components of anti-acne actives, their formulations and recent patents, including nano-sized silver and modulating the CIDEA protein, are discussed.

**ABSTRACT:**

**Tea-tree** oil (an essential oil of the Australian native tree *Melaleuca alternifolia*) has long been regarded as a useful topical antiseptic agent in Australia and has been shown to have a variety of antimicrobial activities; however, only anecdotal evidence exists for its efficacy in the treatment of various skin conditions. We have performed a single-blind, randomised clinical trial on 124 patients to evaluate the efficacy and skin tolerance of 5% **tea-tree** oil gel in the treatment of mild to moderate acne when compared with 5% **benzoyl peroxide** lotion. The results of this study showed that both 5% **tea-tree** oil and 5% **benzoyl peroxide** had a significant effect in ameliorating the patients' acne by reducing the number of inflamed and non-inflamed lesions (open and closed **comedones**), although the onset of action in the case of **tea-tree** oil was slower. Encouragingly, fewer side effects were experienced by patients treated with **tea-tree** oil.

**CONTROLLED TERM:**

*Acne Vulgaris: DT, drug therapy  
Acne Vulgaris: PA, pathology  
Adolescent  
Adult  
**Benzoyl Peroxide: AD, administration & dosage**  
**Benzoyl Peroxide: AE, adverse effects**  
*Benzyol Peroxide: TU, therapeutic use**  
Child  
Gels  
Humans  
**Oils, Volatile: AD, administration & dosage**  
**Oils, Volatile: AE, adverse effects**  
*Oils, Volatile: TU, therapeutic use**  
**Plant Oils: AD, administration & dosage**  
**Plant Oils: AE, adverse effects**  
*Plant Oils: TU, therapeutic use**  
Prospective Studies  
Single-Blind Method  
Skin: PA, pathology  
Time Factors  
*Trees**

**CAS REGISTRY NO.:** 94-36-0 (Benzoyl Peroxide)

**CHEMICAL NAME:** Gels; Oils, Volatile; Plant Oils
Acne (Acne) is the most common skin disorder characterized by noninflammatory comedones or inflammatory papules, pustules, and nodules. Although acne does not pose serious threat to general health, it is one of the most socially distressing conditions especially for adolescents. The acne inflammation is triggered by pus forming bacteria recognized as Propionibacterium acne and Staphylococcus epidermidis. Acne therapy includes prolonged use of comedolytic agents, antibiotics and anti-inflammatory agents that are known to cause many side effects. Moreover, the widespread and long-term use of antibiotics over the years has unfortunately led to emergence of resistant strains. To avoid side effects, traditional or herbal formulations are preferred. Herbs are safe, efficacious and multifunctional. Medicinal plant extracts are known to have enormous therapeutic potential. Plant-based preparations with little or no side effects are cyclically returning to complement dermatological therapy. They serve as safer choice or in some cases is the only effective treatment.
pruritus: SI, side effect
review
Sargassum
Sargassum binderi
skin burning sensation: SI, side effect
systemic lupus erythematosus: SI, side effect
unspecified side effect: SI, side effect

CONTROLLED TERM:

Drug Descriptors:
acetylsalicylic acid: CM, drug comparison
algal extract: AN, drug analysis
Aloe vera extract: DT, drug therapy
Aloe vera extract: PD, pharmacology
Amphiroa extract: AN, drug analysis
antibiotic agent: AE, adverse drug reaction
antibiotic agent: CB, drug combination
antibiotic agent: DT, drug therapy
antibiotic agent: PO, oral drug administration
Azadirachta indica extract: DT, drug therapy
Azadirachta indica extract: PD, pharmacology
benzoyl peroxide: AE, adverse drug reaction
benzoyl peroxide: CB, drug combination
benzoyl peroxide: DT, drug therapy
benzoyl peroxide: TP, topical drug administration
Calendula extract: DT, drug therapy
Calendula extract: PD, pharmacology
clindamycin: DT, drug therapy
clindamycin: PO, oral drug administration
clindamycin: TP, topical drug administration
Cymbopogon citratus extract: AN, drug analysis
erythromycin: DT, drug therapy
erythromycin: PO, oral drug administration
erythromycin: TP, topical drug administration
guava extract: AN, drug analysis
Halimeda macroloba extract: AN, drug analysis
lupeol: AN, drug analysis
metronidazole: AE, adverse drug reaction
metronidazole: PO, oral drug administration
metronidazole: TP, topical drug administration
minocycline: AE, adverse drug reaction
minocycline: CM, drug comparison
minocycline: DT, drug therapy
minocycline: PO, oral drug administration
minocycline: TP, topical drug administration
Momordica charantia extract: DT, drug therapy
Momordica charantia extract: PD, pharmacology
phenylbutazone: CM, drug comparison
pinene: AN, drug analysis
red clover extract: DT, drug therapy
red clover extract: PD, pharmacology
retinoid derivative: AE, adverse drug reaction
retinoid derivative: CB, drug combination
retinoid derivative: DT, drug therapy
retinoid derivative: TP, topical drug administration
salicylic acid: DT, drug therapy
Sargassum binderi extract: AN, drug analysis
tea tree oil: DT, drug therapy
teatree oil: PD, pharmacology
tetracycline: DT, drug therapy
tetracycline: PO, oral drug administration
tetracycline: TP, topical drug administration
tetracycline derivative: AE, adverse drug reaction
tetracycline derivative: CM, drug comparison
tetracycline derivative: PO, oral drug administration
tetracycline derivative: TP, topical drug administration
triclosan: DT, drug therapy
triclosan: PO, oral drug administration
triclosan: TP, topical drug administration
Turbinaria conoides extract: AN, drug analysis
Turbinaria conoides extract: CM, drug comparison
turpentine: AN, drug analysis
unclassified drug
unindexed drug

SUPPLEMENTARY TERM: Acne vulgaris; Comedones; Propionibacterium acnes and staphylococcus epidermidis

CAS REGISTRY NO.: (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1; (benzoyl peroxide) 94-36-0; (clindamycin) 18323-44-9; (erythromycin) 114-07-8, 70536-18-4; (lupeol) 545-47-1; (metronidazole) 39322-38-8, 443-48-1; (minocycline) 10118-90-8, 11006-27-2, 13614-98-7; (phenylbutazone) 129-18-0, 50-33-9, 8054-70-4; (pinene) 80-56-8; (salicylic acid) 63-36-5, 69-72-7; (tetracycline) 23843-90-5, 60-54-8, 64-75-5, 8021-86-1; (triclosan) 3380-34-5; (turpentine) 9005-90-7
Harnessing the power of crowds: Crowdsourcing as a novel research method for evaluation of acne treatments.

Background: Crowdsourcing is a novel process of data collection that can provide insight into the effectiveness of acne treatments in real-world settings. Little is known regarding the feasibility of crowdsourcing as a means of collecting dermatology research data, the quality of collected data, and how the data compare to the published literature. Objective: The objective of this analysis is to compare acne data collected from a medical crowdsourcing site with high-quality controlled studies from peer-reviewed medical literature.

Methods: Crowdsourced data was collected from 662 online acne patients. Online patients reported data in a Likert-type format to characterize their symptom severity (740 total responses) and their treatment outcomes (958 total responses). The crowdsourced data were compared with meta-analyses and reviews on acne treatment from August 20, 2010 to August 20, 2011.

Results: We compared topical, oral systemic, alternative, phototherapy, and physical acne treatments of crowdsourced data to published literature. We focused on topical tretinoin due to the large number of online patient responses. While approximately 80% of tretinoin users observed clinical improvement after a 12-week treatment period in clinical trials, 46% of online users reported improvement in an unspecified time period. For most topical treatments, medication with high efficacy in clinical trials did not produce high effectiveness ratings based on the crowdsourced online data.

Conclusion: While limitations exist with the current methods of crowdsourced data collection, with standardization of data collection and use of validated instruments, crowdsourcing will provide an important and valuable platform for collecting high-volume patient data in real-world settings.
major clinical study
online analysis
*online system
peer review
phototherapy
priority journal
quality control
standardization
treatment outcome
treatment response

CONTROLLED TERM:

Drug Descriptors:
- **benzoyl peroxide**: DT, drug therapy
- **benzoyl peroxide**: TP, topical drug administration
- **benzoyl peroxide plus clindamycin**: DT, drug therapy
- **benzoyl peroxide plus clindamycin**: TP, topical drug administration
- **clindamycin**: TP, topical drug administration
- **cosmetic**
- **cotrimoxazole**: DT, drug therapy
- **cotrimoxazole**: PO, oral drug administration
- **doxycycline**: DT, drug therapy
- **doxycycline**: PO, oral drug administration
- **isotretinoin**: DT, drug therapy
- **isotretinoin**: PO, oral drug administration
- **oral contraceptive agent**: PO, oral drug administration
- **retinoic acid**: DT, drug therapy
- **retinoic acid**: TP, topical drug administration
- **salicylic acid**: TP, topical drug administration
- **tea tree oil**
- **tetracycline**: DT, drug therapy
- **tetracycline**: PO, oral drug administration

SUPPLEMENTARY TERM: **Acne**; Data collection

CAS REGISTRY NO.:
- (benzoyl peroxide) 94-36-0; (clindamycin) 18323-44-9;
- (cotrimoxazole) 8064-90-2; (doxycycline) 10592-13-9,
  17086-28-1, 564-25-0; (isotretinoin) 4759-48-2; (retinoic acid) 302-79-4;
  (salicylic acid) 63-36-5, 69-72-7;
- (tetracycline) 23843-90-5, 60-54-8, 64-75-5, 8021-86-1

CHEMICAL NAME:
- acnetrex; bactrim; benzaclin; doryx; retin a; roaccutane; stieva a
A review of pharmaceutical therapies available for the treatment of acne, including manifestations of disease, OTC drugs, role of keratolytic, antiseptic, antibiotic agents and available formulations in controlling the disease.

Hormonal products are also discussed.
Science IP Search Documentation

Search Strategy

FILE 'REGISTRY' ENTERED AT 08:55:25 ON 09 JAN 2013
L1 2 SEA ABB=ON "TEA TREE OIL"/CN

FILE 'HCAPPLUS' ENTERED AT 08:55:34 ON 09 JAN 2013
L2 0 SEA ABB=ON L1
L3 1676 SEA ABB=ON "ESSENTIAL OILS (L) MELALEUCA"/CT
L4 866 SEA ABB=ON TEA TREE OIL#
L5 1096 SEA ABB=ON TEA TREE(S)OIL#
L6 1951 SEA ABB=ON L3 OR L4 OR L5

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L7 1 SEA ABB=ON "BENZOYL PEROXIDE"/CN

FILE 'STNGUIDE' ENTERED AT 08:59:35 ON 09 JAN 2013
L8 QUE ABB=ON ACNE OR ANTIACNE# OR PIMPLE# OR BLACKHEAD# OR BLACK HEAD# OR WHITEHEAD# OR WHITE HEAD# OR COMEDONE# OR COMEDO OR COMEDOS OR ZIT OR ZITS
L9 QUE ABB=ON TEATREE OR TEA TREE
L10 QUE ABB=ON MELAELUCA
L11 QUE ABB=ON BENZOEYL PEROXIDE#

FILE 'REGISTRY' ENTERED AT 09:25:00 ON 09 JAN 2013
SEL L7 1- NAME

FILE 'STNGUIDE' ENTERED AT 09:26:00 ON 09 JAN 2013
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L12 QUE ABB=ON "BENZOYL PEROXIDE"/BI OR "BENZOYL SUPEROXIDE"/BI OR BENOXYL/BI OR BENZAGEL/BI OR LUCIDOL/BI OR BREVOXYL/BI OR "DIBENZOYL PEROXIDE"/BI OR "DIPHENYLGLYOXAL PEROXIDE"/BI OR Peroxyderm/BI OR SOLUGEL/BI OR PANOXYL/BI OR LOROXIDE/BI OR BENZASHAVE/BI OR BENZOPEROXIDE/BI OR ACETOXYL/BI OR ACNEZOYL/BI
EDIT QUE L12
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L18 1 SEA ABB=ON "TEA TREE OIL"/CN
L19 606 SEA ABB=ON L18/DCR
L20 1635 SEA ABB=ON L19 OR L9 OR L10
L21 33 SEA ABB=ON (L17 OR L11) AND L20 AND L8
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1 FILE CABA
4 FILE DDFU
30 FILE EMBASE
1 FILE IPA
6 FILE KOSMET
2 FILE MEDLINE
6 FILE SCISEARCH

L23
QUE ABB=ON L22
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ANSWER '4' FROM FILE BIOSIS
ANSWERS '5-7' FROM FILE DDFU
ANSWERS '8-32' FROM FILE EMBASE
ANSWER '33' FROM FILE IPA
ANSWERS '34-39' FROM FILE KOSMET
ANSWER '40' FROM FILE SCISEARCH
ANSWER '41' FROM FILE CABA

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L28
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L29
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L30
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L32
59 SEA ABB=ON L28
L33
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L34
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SEL L34 1- UN

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L35
9780 SEA ABB=ON 50118/UN
Removing Duplicates

FILE 'HCAPLUS' ENTERED AT 09:42:30 ON 09 JAN 2013

SEL L14 1- PN
L38 2 SEA ABB=ON L14 NOT P/DT
L39 26 SEA ABB=ON L14 AND P/DT

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/PN OR WO2004037225/PN OR WO2004103321/PN OR WO2004103353/PN
OR WO2007099396/PN OR WO2008152444/PN OR WO2010087964/PN OR
WO2011039637/PN OR WO2011039638/PN OR WO2012037000/PN OR
WO2012047733/PN OR AT237298/PN OR AU2001023937/PN OR AU20042406
15/PN OR AU2004313285/PN OR AU2006201878/PN OR AU2007355106/PN
OR AU2009261995/PN OR AU2010302350/PN OR AU782515/PN OR
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FILE 'HCAPLUS' ENTERED AT 09:46:20 ON 09 JAN 2013

L47  69 SEA ABB=ON L43
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FILE 'EPFULL, FRFULL, GBFULL, PATDPAFULL, PCTFULL, AUPATFULL, CANPATFULL, CNFULL, JPFULL' ENTERED AT 09:46:48 ON 09 JAN 2013

L50  185 SEA ABB=ON L49
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Non-Patent Literature References

FILE 'HCAPLUS, MEDLINE, ADISCTI, BIOSIS, DDFU, EMBASE, IPA, KOSMET, SCISEARCH, CABA' ENTERED AT 09:50:12 ON 09 JAN 2013

D L53 1-2 IIBIB AB HITIND
D L53 3 IALL
D L53 9-10 IALL
D L53 34 IALL

FILE 'INPAFAMDB' ENTERED AT 09:51:05 ON 09 JAN 2013

D L54 2 SEA ABB=ON (L9 OR L10) AND (L13 OR L11) AND L8
FILE 'HCAPLUS, WPINDEX, USPATFULL, USPAT2, EPFULL, GBFULL, PCTFULL, AUPATFULL, CANPATFULL, CNFULL, JPFULL, IFIPAT' ENTERED AT 09:52:27 ON 09 JAN 2013

L56 199 DUPLICATE REMOV L39 L40 L42 L52 L46 (0 DUPLICATES REMOVED)

ANSWERS '1-26' FROM FILE HCAPLUS
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ANSWERS '39-105' FROM FILE USPATFULL
ANSWERS '106-125' FROM FILE USPAT2
ANSWERS '126-130' FROM FILE EPFULL
ANSWER '131' FROM FILE GBFULL
ANSWERS '132-168' FROM FILE PCTFULL
ANSWERS '169-177' FROM FILE AUPATFULL
ANSWERS '178-191' FROM FILE CANPATFULL
ANSWERS '192-197' FROM FILE CNFULL
ANSWER '198' FROM FILE JPFULL
ANSWER '199' FROM FILE IFIPAT

D 1-26 IBIB AB HITIND
D 39-45 IBIB AB KWIC
D 132-135 IBIB AB KWIC
D 199 IBIB AB KWIC
Sources Used
For more information about individual databases, please see the STN Database Summary Sheets at http://stnguide.cas.org/

FILE REGISTRY (CAS Registry)
  STRUCTURE FILE UPDATES:  8 JAN 2013  HIGHEST RN 1416207-43-6
  DICTIONARY FILE UPDATES:  8 JAN 2013  HIGHEST RN 1416207-43-6

FILE HCAPLUS (Chemical Abstracts Plus)
  FILE COVERS 1907 - 9 Jan 2013  VOL 158 ISS 3
  FILE LAST UPDATED:  8 Jan 2013  (20130108/ED)
  REVISED CLASS FIELDS (/NCL) LAST RELOADED: November 2012
  USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: November 2012

FILE WPINDEX (Derwent World Patents Index)
  FILE LAST UPDATED:  7 Jan 2013 <20130107/UP>
  MOST RECENT UPDATE:  201302 <201302/DW>
  DERWENT WORLD PATENTS INDEX, COVERS 1963 TO DATE

FILE FRANCEPAT (French Patent Abstracts)
  FILE LAST UPDATED:  6 Nov 2009 <20091106/UP>
  FILE COVERS 1961 TO NOVEMBER 6, 2009 - FILE CLOSED

FILE JAPIO (Japan Patent Information Organization)
  FILE LAST UPDATED:  7 Jan 2013 <20130107/UP>

FILE KOREAPAT (Korean Patent Abstracts)
  FILE LAST UPDATED:  18 Dec 2012 <20121218/UP>

FILE RUSSIAPAT (Russian Patent Abstracts)
  FILE LAST UPDATED:  27 Dec 2012 <20121227/UP>
  FILE COVERS 1924 TO DATE

FILE STNINDEX

FILE MEDLINE (MEDLINE)
  FILE LAST UPDATED:  8 Jan 2013 (20130108/UP). FILE COVERS 1946 TO DATE.
  RECORDS LAST ADDED: 2 January 2013 (20130102/ED)

FILE ADISCTI (Adis Clinical Trials Insight)
  FILE COVERS 1998 TO 4 Jan 2013 (20130104/ED)
  FILE LAST UPDATED: 4 JAN 2013 (20130104/ED)

FILE BIOSIS (BIOSIS Previews)
  FILE COVERS 1926 TO DATE.
  RECORDS LAST ADDED: 2 January 2013 (20130102/ED)

FILE DDFU (Derwent Drug File for nonsubscribers)
  FILE LAST UPDATED: 22 Dec 2012 <20121222/UP>
  >>> FILE COVERS 1983 TO DATE <<<

FILE EMBASE (Excerpta Medica)
  FILE COVERAGE: Embase-originated material 1947 to 7 Jan 2013 (20130107/ED
  Unique MEDLINE content 1948 to present
  Emtree thesaurus updated on October 8, 2012. See NEWS for details.

FILE IPA (International Pharmaceutical Abstracts)
  FILE COVERS 1970 TO 4 DEC 2012 (20121204/ED)
FILE KOSMET (Cosmetic & Perfume Science and Technology)  
FILE LAST UPDATED: 8 JAN 2013 <20130108/UP>  
FILE COVERS 1968 TO DATE.

FILE SCISEARCH (Science Citation Index Expanded)  
FILE COVERS 1974 TO 7 Jan 2013 (20130107/ED)

FILE CABA (CAB Abstracts)  
FILE LAST UPDATED: 9 JAN 2013 <20130109/UP>  
FILE COVERS 1973 TO DATE

FILE USPATFULL (U.S. Patents Full Text)  
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 8 Jan 2013 (20130108/PD)  
FILE LAST UPDATED: 8 Jan 2013 (20130108/ED)  
HIGHEST GRANTED PATENT NUMBER: US8353061  
HIGHEST APPLICATION PUBLICATION NUMBER: US20120265827

FILE USPAT2 (U.S. Patents Full Text Latest Publications)  
FILE COVERS 2001 TO PUBLICATION DATE: 8 Jan 2013 (20130108/PD)  
FILE LAST UPDATED: 8 Jan 2013 (20130108/ED)  
HIGHEST GRANTED PATENT NUMBER: US8353061  
HIGHEST APPLICATION PUBLICATION NUMBER: US20120265827

FILE EPFULL (European Patents Full text)  
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FILE COVERS 1978 TO DATE

FILE FRFULL (French Patents Full Text)  
FILE LAST UPDATED: 8 JAN 2013 <20130108/UP>  
FILE COVERS 1902 TO DATE

FILE GBFULL (British Patents Full Text)  
FILE LAST UPDATED: 7 JAN 2013 <20130107/UP>  
FILE COVERS 1855 TO DATE

FILE PATDPAFULL (German Patents Full Text)  
FILE LAST UPDATED: 3 JAN 2013 <20130103/UP>  
MOST RECENT UPDATE WEEK: 201301 <201301/EW>  
FILE COVERS 1981 TO DATE

FILE PCTFULL (PCT Published Patent Applications Full Text)  
FILE LAST UPDATED: 7 JAN 2013 <20130107/UP>  
FILE COVERS 1978 TO DATE

FILE AUPATFULL (Australia Patents Full Text)  
FILE LAST UPDATED: 7 JAN 2013 <20130107/UP>  
FILE COVERS 1964 TO DATE.

FILE CANPATFULL  
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FILE COVERS 1906 TO DATE

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FILE COVERS 1985 TO DATE

FILE JPFULL  
FILE LAST UPDATED: 2 JAN 2013 <20130102/UP>
FILE COVERS APPLICATION YEARS FROM 2004 ONWARDS

FILE IFIREF (IFI Uniterm and U.S. Class Reference File)
FILE COVERS CURRENT DATA. LAST UPDATE: NOVEMBER 2009

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FILE COVERS 1950 TO PATENT PUBLICATION DATE: 3 Jan 2013 (20130103/PD)
FILE LAST UPDATED: 4 Jan 2013 (20130104/ED)
HIGHEST GRANTED PATENT NUMBER: US8347411
HIGHEST APPLICATION PUBLICATION NUMBER: US20130007934

FILE IFIPAT (IFI Patent Database)
FILE COVERS 1950 TO PATENT PUBLICATION DATE: 3 Jan 2013 (20130103/PD)
FILE LAST UPDATED: 4 Jan 2013 (20130104/ED)
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HIGHEST APPLICATION PUBLICATION NUMBER: US20130007934

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FILE COVERS 1790 TO DATE.