

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 September 2007 (27.09.2007)

PCT

(10) International Publication Number
WO 2007/107856 A1

(51) International Patent Classification:

C11B 9/02 (2006.01) *A61K 8/97* (2006.01)
C11B 9/00 (2006.01) *A61Q 19/08* (2006.01)

(21) International Application Number:

PCT/IB2007/000697

(22) International Filing Date: 21 March 2007 (21.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

06290451.1 21 March 2006 (21.03.2006) EP
60/831,666 19 July 2006 (19.07.2006) US

(71) Applicant (for all designated States except US): **CHANEL
PARFUMS BEAUTE** [FR/FR]; 135 avenue Charles de
Gaulle, F-92521 Neuilly sur Seine Cedex (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MAESTRO, Yan-
nick, Gérard** [FR/FR]; 4, rue des Vénitiens, F-13500 Mar-
tignes (FR). **LASSERRE, Christelle, Marie, Suzanne**
[FR/US]; 140 Essex Street #4, 07302 Jersey City NJ (US).

(74) Agent: **RENARD, Emmanuelle**; Cabinet Plasseraud, 52
rue de la Victoire, F-75440 Paris Cedex 9 (FR).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN,
IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR,
LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report
— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: MAGNOLIA CHAMPACA OIL, ITS PROCESS OF PREPARATION AND COMPOSITIONS COMPRISING IT

(57) Abstract: The invention relates to an oil extracted from flowers of at least one type of Magnolia champaca, to its process of preparation, to the cosmetic, pharmaceutical or dermatological compositions comprising it and to its use as polyfunctional active agent for the prevention and/or treatment of detrimental changes to the skin.



WO 2007/107856 A1

- 1 -

Magnolia champaca oil, its process of preparation and compositions comprising it

5 The invention relates to an oil extracted from the flowers of at least one type of Magnolia champaca, to its process of preparation, to a cosmetic, pharmaceutical or dermatological composition comprising it and to its use as polyfunctional active agent in a pharmaceutical, cosmetic or dermatological composition for the prevention and/or
10 treatment of detrimental changes in the skin due in particular to aging or to physiological mechanisms related to aging or to disorders connected with these mechanisms.

15 The skin is composed mainly of three layers, namely, starting from the outermost, the epidermis, the dermis and the hypodermis.

The external layer of the skin, the epidermis, is stratified and contributes greatly to providing protection
20 of the skin with regard to external attacks. The dermis is a connective tissue which provides both the functions of cohesion and of nutrition of the skin.

25 Skin aging results from two separate and independent processes which involve intrinsic or extrinsic factors.

Intrinsic or chronobiological aging corresponds to "normal" or physiological aging related to age.

30 Extrinsic aging corresponds to the aging brought about generally by the environment and more particularly to photoaging due to exposure to the sun.

35 The present invention is concerned with intrinsic or physiological skin aging and with extrinsic skin aging.

- 2 -

Skin aging results from a transformation of the connective tissues and from the decline in the capability for cell regeneration. This effect is expressed by the appearance of fine lines and marks over time. The microcirculation decreases in the superficial dermis. The macromolecules, such as collagen, elastin and glycosaminoglycans, of which hyaluronic acid is one of the constituents, are chemically modified. The actual thickness of the dermis regresses, the fibers deteriorate and the skin loses its biomechanical and elastic properties. The phenomena of chemical and enzymatic oxidation become more marked with age and result in an increase in the bridging reactions between the fibers, such as collagen fibers.

The detrimental changes associated with aging can be expressed in different ways, among which may be mentioned:

- a disorganization of the elastin fibers, resulting in a loss of firmness, of flexibility and of elasticity or the appearance of telangiectasia;
- the loss in radiance due to the reduction in the microcirculation and to a slowing down in cell replacement in the epidermis and the appearance of fine wrinkles or fine lines;
- the yellowing of the skin, which develops a parchment-like look accompanied by the appearance of pigmentary blemishes which are associated with a dysfunctioning in the synthesis of melanin (or melanogenesis);
- skin dryness resulting from a reduction in the barrier function of the horny layer and from a slowing down in epidermal replacement.

For this reason, there exists a need to provide a polyfunctional active agent capable of having an effect on a combination of causes of detrimental changes in the skin due to aging and/or to a modification in the physiological mechanisms related to aging or the like.

The plant *Magnolia champaca*, also known in the literature as *Michelia champaca*, is a shrub belonging to the family of the Magnoliaceae, originating from the wet and wooded regions of China. The essential oil from its flowers is commonly used in perfumery.

Application JP 07/061918 discloses a cosmetic composition comprising an extract of *Michelia champaca* obtained by extraction using a polar solvent and its use as antioxidant.

Compositions comprising an extract of *Michelia champaca* L., having a whitening activity on the skin or an activity of scavenging active oxygen or an antibacterial activity, are disclosed in application JP-A-2000/095663.

Application JP-A-2005/068075 relates to UV-inhibiting compositions which absorb UVA and UVB rays and which comprise an aqueous extract of a *Michelia champaca* plant.

The antiinflammatory and antipyretic activity of methanolic extracts of *Michelia champaca* L. (white variety) is described by R. Vimala et al., Indian J. Exp. Biol., 1997, 35, 1310-1314.

The authors of the present invention have now demonstrated, entirely surprisingly, that an oil extracted from flowers of at least one type of *Magnolia champaca* exhibited, via stimulation or inhibition of physiological mechanisms, activities capable of having an effect on the symptoms due to aging or to physiological mechanisms related to aging or to disorders connected with these mechanisms in the epidermis and/or dermis.

This observation has led to the development of novel cosmetic, pharmaceutical or dermatological compositions of use more particularly for all the applications in which it

is desired to have an effect on the symptoms due to aging or on the physiological mechanisms related to aging or on the disorders connected with these mechanisms in the epidermis and/or dermis.

5

The term "oil" is understood to mean a product which is obtained by extraction using a nonpolar solvent and which is very rich in water-insoluble compounds.

10

The invention thus relates, according to a first aspect, to an oil extracted from flowers of at least one type of *Magnolia champaca*, characterized in that it comprises:

15

- 20 to 70% of benzoic ester,
- 15 to 35% of saturated and/or unsaturated fatty acids,

20

said proportions being expressed as relative percentages with respect to the combined constituents separated by gas chromatography.

25

Preferably, the oil according to the invention originates from *Magnolia champaca*, variety gold, also known as "flower of gold".

30

The term "content expressed as relative percentages with respect to the combined constituents separated by gas chromatography" is understood to mean that the content of each of the constituents is determined with respect to the combined constituents separated by the chromatographic system. Only the compounds extracted by the solvent during the sample preparation and which can vaporize in the injector are present.

35

The sample has to be prepared according to standard NF T 60-233 of May 1977, "Préparation des esters méthyliques d'acides gras", (§ 5.2 - Méthode applicable aux corps gras

acides et acides gras) ["Preparation of the methyl esters of fatty acids" (§ 5.2 - Method applicable to acidic fatty substances and fatty acids)]. The chromatographic conditions are described in standard NF EN ISO 5508 of June 5 1995.

Briefly, the method consists in esterifying the fatty acids in an acidic methanolic medium, in then extracting them with heptane and in then injecting the heptane solution in 10 gas chromatography.

Preferably, the oil according to the invention comprises:

- 15 - from 10 to 40% of cinnamyl benzoate,
- from 5 to 30% of phenylethyl benzoate,
- from 5 to 30% of benzyl benzoate,
- from 5 to 30% of linoleic acid,
- from 2 to 20% of linolenic acid,

20 said proportions being expressed as relative percentages with respect to the combined constituents separated by gas chromatography.

25 The invention also relates, according to a subsequent aspect, to a process for the preparation of a Magnolia champaca oil as defined above comprising at least one molecular distillation stage.

30 The starting material employed consists, for example, of freshly picked flowers (fresh flowers) of at least one type of Magnolia champaca, preferably Magnolia champaca variety gold, which can be conventionally milled or reduced to pieces.

35 The flowers are subject to extraction by at least one nonpolar solvent, for example hexane, cyclohexane, heptane, isooctane, supercritical CO₂ or dichloromethane.

The extraction is generally carried out by immersing or gently agitating the flowers in one or more of the abovementioned solvents at temperatures ranging, for example, from ambient temperature to 100°C for a period of time from approximately 30 min to 12 h.

After filtration, the extraction can be repeated several times. The solutions are combined and filtered in order to remove the insoluble parts of the flowers. If appropriate, the solvent, if it is a volatile solvent, such as, for example, hexane or heptane or cyclohexane, is also removed.

This extraction stage is conventional in the field of plant extracts and a person skilled in the art is in a position to adjust the reaction parameters thereof on the basis of his general knowledge.

According to an advantageous aspect of the invention, a fractionation stage can be carried out in order to purify the product obtained on conclusion of the extraction.

Use will preferably be made of a solvent or a mixture of solvents chosen from C₁-C₄ alcohols, such as, for example, methanol, ethanol, isopropanol, and the like, polyols, such as, for example, propylene glycol, dipropylene glycol, and the like, or organic solvents, such as ethyl acetate, hexane, cyclohexane or any other solvent usual in the field.

Fractionation by a supercritical fluid, preferably by supercritical CO₂, can also be used.

As above, if one or more volatile solvents is (are) used, there will be grounds for removing it or them before passing to the following stage.

- 7 -

On conclusion of the extraction, and optionally of the fractionation stage mentioned above, a Magnolia champaca concrete is obtained. This type of extract is normally used as intermediate in the manufacture of absolutes intended for the perfumery industry.

Advantageously, said concrete is subjected to a molecular distillation stage carried out in a wiped-film and short-path distillation device.

According to a preferred aspect, the invention thus relates to a process for the preparation of a Magnolia champaca oil as defined above comprising the stages consisting in:

- extracting from flowers (preferably fresh flowers) of at least one type of Magnolia champaca using at least one nonpolar solvent,
- subjecting said extract to at least one molecular distillation stage, and
- recovering the distillate.

Wiped-film and short-path molecular stills are preferred in carrying out the molecular distillation stage. They comprise a distillation chamber provided with a rotating wiping device which makes it possible to continuously spread, over the evaporation surface (hot surface) product to be distilled. The product vapors are condensed using a cooled finger placed at the center of the distillation chamber. Recovery of the residues and distillate takes place by gravitational flow. The object of this technique is to separate the constituents of the complex mixtures by profiting from their different boiling points. Wiped-film and short-path molecular distillation has the advantage of reducing the distillation temperature, as the distillation is carried out under a high vacuum, and of also reducing the residence time of the mixture to be separated in the

still. The rate of decomposition of the products increases enormously as a function of the temperature and of the exposure time and, in a still of "alembic" type, for example, the mixtures may remain at high temperatures for
5 hours, which results in denaturation.

Until now, in the case of vegetable oils, such a process had been used only to isolate unsaponifiable fractions or to purify the same vegetable oils by removing the
10 unsaponifiable fractions or also, in the case of water-soluble or fat-soluble fractions, to decolor or deodorize the extracts.

In point of fact, it has now been found that, surprisingly,
15 the use of a molecular distillation stage made it possible to isolate an oily fraction from a fat-soluble extract in which this oily fraction is present in a minor amount.

Preferred conditions for implementation of the process are
20 given below:

Advantageously, before the distillation, a heavy solvent chosen from mineral or vegetable oils and polyols, such as, for example, polyethylene glycol, is added to the Magnolia
25 champaca concrete obtained after extraction and optionally fractionation, in order to facilitate the distillation or the flow along the column.

The mixture of the concrete obtained after extraction and
30 optionally fractionation and of the heavy solvent is introduced at a constant flow rate, at a temperature of between 20 and 120°C, preferably between 50 and 100°C, onto the hot wall of a cylindrical evaporator.

35 It is spread, by wiping using rotating annular wipers, as a thin film over the entire surface of the hot wall

maintained at a temperature between approximately 100 and 200°C and preferably between 110 and 170°C.

5 On contact with the latter, and under the very low pressure prevailing in the evaporator, of the order of 10 mbar to 0.001 mbar, the volatile product is then partially and gradually evaporated while the less volatile product flows along the wall.

10 The vapors given off are condensed on the cold wall concentric with the hot wall and placed a very short distance from the latter, preferably at a temperature of between 40 and 120°C, in particular between 60 and 100°C.

15 The products separated during operation flow by gravity along the hot and cold walls.

The distillate is recovered and is subjected, if appropriate, to an additional separation operation
20 (filtration or centrifuging, for example).

A Magnolia champaca oil according to the invention is thus obtained.

25 Advantageously, said oil is light in color. Furthermore, said oil is devoid of solvent or of any other chemical reactant which was involved during its extraction.

Also, said oil is provided in a sufficiently concentrated
30 form to be able to be used without causing the formulation problems normally related to the concentrations necessary in order to obtain an activity in the cosmetic, pharmaceutical or dermatological compositions in the emulsion form and without exhibiting a dark color, contrary
35 to the plant extracts obtained by standard processes, when they are in the concentrated form.

For this reason, the oil according to the invention can be used directly for the preparation of a cosmetic, pharmaceutical or dermatological composition.

5 The invention also relates to the Magnolia champaca oil capable of being obtained by the process described above.

According to a subsequent aspect, the invention relates to the use of a Magnolia champaca oil as described above as
10 polyfunctional active agent in a cosmetic, pharmaceutical or dermatological composition for the prevention and/or treatment of detrimental changes in the skin due to aging or to physiological mechanisms related to aging or to disorders connected with these mechanisms.

15 In particular, the invention relates to the use of a Magnolia champaca oil as described above in a cosmetic composition as agent which improves healing or cell repair and/or agent for activating the metabolism of the cells of
20 the epidermis and/or agent for scavenging free radicals and/or agent for detoxifying the epidermis.

The invention also relates to the use of a Magnolia champaca oil as described above as agent which improves
25 healing or cell repair and/or agent for activating the metabolism of the cells of the epidermis and/or agent for scavenging free radicals and/or agent for protecting nuclear DNA and/or agent for protecting mitochondrial DNA and/or agent for detoxifying the epidermis, for the
30 preparation of a pharmaceutical or dermatological composition.

This is because, advantageously, it has been found that the Magnolia champaca extract according to the invention had
35 several advantageous activities with regard to preventative or repairing physiological mechanisms related to the detrimental changes in the skin due in particular to aging.

The invention thus relates more particularly to the use of a *Magnolia champaca* oil as described above as agent which inhibits the synthesis of melanin, in particular as agent which inhibits the synthesis of endothelin, in a cosmetic, pharmaceutical or dermatological composition. Endothelin is a messenger protein which promotes the proliferation of the melanocytes and the increase in melanogenesis responsible for the pigmentation of the skin related to aging ("liver spots").

The invention relates in particular to the use of a *Magnolia champaca* oil as described above as agent which inhibits the transcription factor MITF (Microphthalmia-associated Transcription Factor), a factor for regulating and differentiating melanocytes, in a cosmetic or dermatological composition.

It has also been found that, advantageously, the *Magnolia champaca* oil according to the invention stimulates the synthesis of several families of growth factors by keratinocytes.

In particular, this activity is exerted with regard to the following growth factors:

- PDGF or platelet-derived growth factor, which exerts in particular a mitogenic activity on the majority of the cells derived from the mesenchyme (Lepisto J. et al., 1995, Biochem. Biophys. Res. Commun., 209(2), 393-9) and stimulates the synthesis of collagen and collagenase by these cells, thus playing a role in physiological processes, such as healing and tissue repair (Tan E. M. et al., Biochem. J., 1995, 310 (Pt 2), 585-8); it has also been shown that the level of induction of PDGFs and the replicative capacity of cells were related to age: senescent fibroblasts have their level of PDGF, which

decreases (Karlsson C. et al., J. Cell Physiol., 1994, 158(2), 256-62). Also, it has been shown that the amount and the type of the various growth factors could explain the differences in the ability of tissues to repair themselves with age (Ashcroft G.S. et al., J. Anat., 190, 1997 (Pt 3), 351-65).

- VEGF or vascular endothelial growth factor, which represents, in the skin, a major skin angiogenesis factor. The epidermis is an important source of VEGF, secreted in large amounts by proliferating keratinocytes. The mRNA of VEGF is expressed by normal keratinocytes, both in the tissue *in situ* and in cell culture. It has been shown that VEGF would maintain the homeostasis of endothelial cells and their ability to respond to an angiogenic stimulation, even in elderly subjects (Watanabe Y. et al., 1997, Oncogene, 14, 2025-2032).

Moreover, a decrease in VEGF has been observed following exposure to UV radiation (Mildner M. et al., Photochem. Photobiol., 1999, 70(4), 674-9).

- HB-EGF or heparin-binding epidermal growth factor, which plays an important role in the regulation and differentiation of keratinocytes (Iwamoto et al., Cytokine and Growth Factors Reviews, 2000, 11, 335-344) and in the senescence of young cells, the growth of which depends on this factor (JID Suppl., 24, S46-S50; Kanzaki Y. et al., Exp. Cell. Res., 2002, 279(2), 321-329).

The term "activator of the synthesis of several families of growth factors" is understood to mean, according to the invention, any molecule capable of stimulating the activity and/or the expression and/or the release of at least one of

these growth factors expressed and/or synthesized by and in keratinocytes.

5 The invention thus relates to the use of a Magnolia champaca oil as described above as agent which activates the synthesis of at least one cell growth factor by keratinocytes, in particular as agent which activates at least one growth factor chosen from PDGF, VEGF and HB-EGF, in a cosmetic, pharmaceutical or dermatological
10 composition.

The invention also relates to the use of a Magnolia champaca oil as described above as agent which inhibits the activity of the enzymes involved in the degradation of the
15 matrix, in particular matrix metalloproteinases (MMPs) and very particularly MMP3 (or stromelysin 1) and MMP9 (or gelatinase B).

20 Matrix metalloproteinases are enzymes (endoproteases) which degrade the extracellular matrix in the context of the physiological remodeling of the skin. Age and exposure to UV irradiation of A and/or B type have the consequence of increasing activity of these MMPs, in particular that of MMP3 (or stromelysin 1) and of MMP9 (or gelatinase B), and
25 this increase contributes, with the slowdown in cell growth, to chronological aging of the skin (WO 98/36742). For this reason, the extracellular matrix is degraded to an increased extent, with as a result the sagging of the tissues of the skin and the formation of wrinkles (Rittie
30 L. et al., Ageing Res. Rev., 2002, 1(4), 705-20; Chung J.H. et al., J. Invest. Dermatol., 2001, 117(5), 1218-24).

35 The term "metalloproteinase inhibitor" is understood to mean, according to the invention, any molecule capable of inhibiting the activity and/or the expression and/or the release of at least one of the metalloproteinases expressed and/or synthesized by and in the skin.

The invention also relates, according to preferred aspects, to the use, as antioxidant, of a Magnolia champaca oil as described above in a cosmetic composition or for the preparation of a pharmaceutical or dermatological composition.

The invention also relates, according to preferred aspects, to the use, as agent which stimulates the cell metabolism, of a Magnolia champaca oil as described above in a cosmetic composition or for the preparation of a pharmaceutical or dermatological composition.

The invention also relates, according to preferred aspects, to the use, as agent for detoxifying the epidermis as a result of oxidative stress, in particular by stimulating the synthesis of DT diaphorase (NQO1), which catalyzes the detoxification of quinones, and also by stimulating the synthesis of glutathione S-transferase, which catalyzes the detoxification of chemical metabolites, such as lipid peroxidation products, of a Magnolia champaca oil as described above in a cosmetic composition or for the preparation of a pharmaceutical or dermatological composition.

The invention also relates, according to another preferred aspect, to the use, as agent which stimulates cellular energy, in particular cytochrome C and AMP kinase, of a Magnolia champaca oil as described above in a cosmetic composition or for the preparation of a pharmaceutical or dermatological composition.

Cytochrome C oxidase, the final stage in the electron transport chain, is crucial for cellular respiration and also contributes to the synthesis of cellular ATP (Lalla A. et al., West Indian Med. J., 2001, June, 50(2), 111-6). The energy status of the cell is coordinated by the AMP-

activated protein kinase (AMPK) system and also contributes to the ATP content of the cell (Dagon Y. et al., J. Biol. Chem., 2005, 23, 280(51), 42142-8).

5 The invention also relates, according to a subsequent aspect, to a cosmetic composition or a pharmaceutical or dermatological composition comprising a Magnolia champaca oil as described above and a cosmetically or pharmaceutically acceptable vehicle.

10 Preferably, said extract is present in the cosmetic, pharmaceutical or dermatological composition in a proportion of 0.001 to 10% by total weight of the composition, in particular in a proportion of 0.01 to 5%,
15 preferably of 0.1 to 1%, by total weight of the composition.

Said cosmetic, pharmaceutical or dermatological composition can in particular be appropriate for application by the
20 topical route.

Advantageously, said cosmetic, pharmaceutical or dermatological composition can be provided in the form of a powder, of an emulsion, of a microemulsion, of a
25 nanoemulsion, of a suspension, of a solution, of a lotion, of a cream, of an aqueous or aqueous/alcoholic gel, of a foam, of a serum, of an aerosol solution or dispersion or of a dispersion of lipid vesicles.

30 In the case of an emulsion, it can be a water-in-oil or oil-in-water emulsion.

The cosmetic, pharmaceutical or dermatological composition according to the invention also comprises a solvent chosen
35 according to the various ingredients and the administration form.

Mention may be made, by way of examples, of water (preferably demineralized water), an alcohol, such as ethanol, or a diethylene glycol ether, such as ethoxydiglycol or diethylene glycol monomethyl ether.

5

Said cosmetic, pharmaceutical or dermatological composition can also comprise at least one additive conventional in the field, such as, for example, at least one compound chosen from an emollient or humectant, a gelling and/or thickening agent, a surface-active agent, an oil, an active agent, a dye, a preservative, an antioxidant, a chelating agent, an organic or inorganic powder, a pigment, a self-tanning agent, a sunscreen, an essential oil and a fragrance.

10

In particular, without limitation, said composition can comprise:

15

- one or more humectant(s) chosen, for example, from polyols, such as glycerol, propylene glycol, butylene glycol, polyethylene glycol, sugars or their derivatives, urea, glycolic acid or its salts, lactic acid or its salts, or hyaluronic acid.

20

Said humectant will be present in the composition at a content of the order of 0.01 to 20%, preferably 0.5 to 10%, by total weight of the composition.

25

- One or more emollient(s) chosen, for example, from volatile or nonvolatile silicones (dimethicone, cyclomethicone, dimethiconol, and the like), long-chain hydrocarbons, or esters of fatty acids or of fatty alcohols.

30

Said emollient will be present in the composition at a content of the order of 0.5 to 30%, preferably 0.5 to 15%, by total weight of the composition.

35

- One or more gelling and/or thickening agent(s), preferably one or more hydrophilic gelling agents, for example chosen from cellulose derivatives, gums of vegetable origin (guar, locust bean, alginates, carrageenans, pectin), gums of microbial origin (xanthan), clays (laponite), carboxyvinyl polymers (carbomer), acrylic copolymers, such as acrylate/alkyl-arylate copolymers, polyacrylamides, ammonium acryloyldimethyltaurate copolymers, such as ammonium acryloyldimethyltaurate/vinylpyrrolidone (VP) copolymer and ammonium acryloyldimethyltaurate/behene-25 methacrylate copolymer (such as, for example, those sold under the names Aristoflex AVC and HMB by Clariant).

Non-film-forming gelling agents can, for example, be chosen from clays (laponite), ammonium acryloyldimethyltaurate/VP copolymer and ammonium acryloyldimethyltaurate/behene-25 methacrylate copolymer (such as, for example, those sold under the names Aristoflex AVC and HMB by Clariant).

Said gelling and/or thickening agent will be present in the composition at a content of the order of 0 to 10% by total weight of the composition, preferably 0.1 to 5% by total weight of the composition.

- One or more surface-active agent(s) or cosurfactant(s), preferably nonionic, present in a content of the order of 0.01 to 10%, preferably 0.1 to 5%, by total weight of the composition.

- One or more fatty substances which is (are) liquid or solid at ambient temperature, commonly referred to as oil(s), which may be volatile or nonvolatile, which may be hydrocarbon- or silicone-based and which may be linear, cyclic or branched, or butter(s), for example isododecane, cyclopentadimethylsiloxane, dimethicone, isononyl isononanoate, pentaerythrityl tetraisostearate,

triglycerides of caprylic and capric acid, shea butter, and the like, preferably in a proportion of 0.01 to approximately 15%, preferably 0.1 to 10%, by total weight of the composition.

5

- One or more active agent(s) of natural, biotechnological or synthetic origin having a biological activity and having an effectiveness on the skin via biological sites, for example chosen from vitamins, trace elements, allantoin, plant proteins, plant extracts, and the like. In particular, said active agent can be an algal extract.

10

- One or more water-soluble dye(s), such as, for example, the disodium salt of ponceau, the disodium salt of alizarin green, quinoline yellow, the trisodium salt of amaranth, the disodium salt of tartrazine, the monosodium salt of rhodamine, the disodium salt of fuchsin, or xanthophyll, preferably in a proportion of 0 to approximately 2% by total weight of the composition.

15

20

Other additives normally used in the cosmetics, pharmaceutical or dermatological fields can also be present in the composition according to the invention, in particular preservatives, chelating agents, antioxidants, essential oils or fragrances well known in the technical field.

25

A person skilled in the art is in a position to choose, among all these possible additives, both the composition and the amount of those which will be added to the composition so that the latter retains all of its properties.

30

The invention is illustrated without implied limitation by the following examples.

35

Example 1: Process for the preparation of a Magnolia champaca oil according to the invention

1) Hexane extraction

200 kg of fresh Magnolia champaca flowers are charged to a 1000 l reactor.

800 l of hexane are added and heating is carried out at 35°C for 40 min.

The reactor is emptied of the hexane solution. The charged solvent is retained.

600 l of hexane are again charged to the reactor. Heating is carried out at 35°C for 40 min.

The hexane solution is again emptied. The two filtrates are combined.

The hexane is evaporated.

0.56 kg of Magnolia champaca concrete is thus recovered.

Yield: 0.28%

2) Molecular distillation

303 g of the concrete are mixed with 130 g of polyethylene glycol 600 (INCI name: PEG 12):

Two passes through a distillation apparatus of KDL4 type (UIC GmH) are carried out according to the following distillation parameters:

Distillation parameters	1st pass	2nd pass
Insertion flow rate (ml/h)	400	400
Evaporator temperature (°C)	135	145
Condenser temperature (°C)	70	70
Temperature for introduction of the product (°C)	75	75
Stirring (revolutions/min)	180	180
Vacuum pressure (mbar)	10	7×10^{-2}

The yields of the distillation are as follows, expressed with regard to the weight of starting material:

- 5 Distillate, 1st pass = 25.7%
Distillate, 2nd pass = 31.34%

3) Mixing

- 10 After combining and homogenizing the two distillates, a mixture is produced with propylene glycol: 90% by weight of propylene glycol with 10% by weight of the distillate. The mixture is homogenized and filtered through a 25 μm filter. The filtrate is recovered.

- 15 1640 g of Magnolia champaca oil are obtained.

Example 2: Analysis of the composition of a Magnolia champaca oil according to the invention

- 20 100 mg of extract obtained during stage 3 of the process described in Example 1 are dissolved in 2 ml of a 1N methanolic hydrochloric acid solution. The solution is placed, after stirring, in a waterbath at 80°C for 10 min.

- 25 The sample thus esterified is recovered by liquid/liquid extraction with 2 ml of heptane and injected in gas chromatography.

Chromatography is carried out under the following conditions:

Gas chromatograph (Agilent series 6890).

5 Injector, with or without division at 250°C.

Injection of 0.5 µl of sample prepared with a division of 1/100th.

10 Separation on a 100% grafted polydimethylsiloxane capillary column, length 30 m, internal diameter 0.25 mm, film thickness: 0.25 µm (Agilent series DB-1).

Carrier gas: helium at 1 ml/min.

Initial temperature of the column oven: 70°C.

15 Temperature gradient from 70°C to 250°C at 2°C/minute and isotherm at 250°C for 60 min.

Total time: 120 min.

Detection: flame ionization detector (auxiliary gas nitrogen).

20

The percentages given in table 1 below are expressed as relative percentages obtained by the integrator of the chromatograph. Only the compounds which can vaporize in the injector are present in these results. The propylene glycol
25 has not been integrated and is thus not listed in the table below.

The constituents were identified by mass spectrometry.

30 The results are given in table 1 below.

Table 1

RT (min)	Constituents	Relative % GC
8.8	Benzyl alcohol	0.28
10.9	Linalool oxide	2.87
11.3	Methyl benzoate	5.51
15.2	Epoxylinanol	2.09
25.1	Eugenol	4.37
33	Benzyl tiglate	0.46
46.7	Benzyl benzoate	12.19
51.1	Phenylethyl benzoate	12.28
56.4	Methyl palmitate	7.43
61.3	Cinnamyl benzoate	21.65
63.7	Methyl linoleate	11.41
63.8	Methyl linolenate	5.91
64.4	Methyl oleate	1.41
	TOTAL	87.86

Example 3: Study of the activity of Magnolia champaca oil
according to the invention with regard to the growth factor
HB-EGF

A sample of Magnolia champaca oil obtained in example 1,
diluted beforehand to 10% in propylene glycol, was tested
at different concentrations.

1) Preparation of keratinocyte cultures

This protocol is common to all the biological activity
assays.

Keratinocytes derived from neonatal foreskins (Clonetics,
San Diego, USA) were seeded into 6-well plates and cultured
in culture medium for keratinocyte growth (KBM, Clonetics),
namely a modified culture medium supplemented with

recombinant human EGF, insulin, hydrocortisone, bovine pituitary extract, gentamycin and amphotericin B.

After culturing for 24 h in an incubator at 37°C, 5% CO₂ and with saturated humidity, the cells are washed with PBS buffer pH 7.4 (Gibco) and incubated with specific basic medium (KBM, Clonetics) comprising the products to be tested, for 6 h or 24 h according to the tests, at different concentrations.

Each concentration was tested in triplicate on two donors for the "ELISA" and "Western Blot" tests and in duplicate on two donors for the molecular biology tests.

A control without product to be tested ("untreated") is also carried out by keeping the cells in the same medium without treatment.

A positive control is optionally carried out with a reference product for the activity tested.

2) Measurement of the HB-EGF messenger RNA (mRNA) expression

Principle of the assay

The real-time polymerase chain reaction (RT-PCR) is used to quantify the expression of the HB-EGF messenger RNA in a treated sample in comparison with an untreated sample. The results are normalized with respect to the expression of housekeeping genes in these samples and corrected as regards the differences in PCR efficiency.

The results are expressed as number of times the target gene (HB-EGF) expression is increased or decreased in the treated sample, and not as absolute number of copies.

The sequences of the cDNAs/mRNAs of the genes investigated were obtained from GenBank.

Target gene: HB-EGF

5 Housekeeping gene: PBDG

All the PCR primers were obtained using the PRIMER3 software from the Whitehead Institute for Biomedical Research.

10

Assay protocol:

The mRNA was isolated using the Trizol reagent (Invitrogen) according to the manufacturer's recommendations. The reverse transcription was carried out using the GeneAmp RNA PCR kit (Applied Biosystems) according to the manufacturer's recommendations.

15

The real-time PCR measurement was carried out using the LightCycler technology (Roche Applied Science) with SYBR Green I detection. In all the assays, the cDNA was amplified using a standardized program. Each LightCycler capillary was charged with 1.5 μ l of DNA Master mix, 1.8 μ l of $MgCl_2$ (25 mM), 10.1 μ l of water and 0.5 μ l of each primer (10 μ M stock). The final amount of cDNA per reaction corresponded to 25 ng of total RNA used for the reverse transcription.

20

25

The specificity of the PCR was tested by agarose gel electrophoresis and sequencing, and was evaluated for each sample using a melting point analysis included in the PCR program.

30

The relative quantification of the target gene expression was carried out using the Pfaffl mathematical model (Pfaffl, M.W., Nucleic Acids, Res., 29(9), p. E45, 2001).

35

The results are given in table 2 below.

Use was made, as positive control, of tumor necrosis factor α (TNF α), which is an antiinflammatory cytokine known to stimulate HB-EGF.

Table 2

Concentration (%)	HB-EGF activity
0 (untreated control)	1
Positive control, TNF α (100 ng/ml)	4.2
0.01%	14.2
0.005%	8

The results show that the Magnolia champaca oil according to the invention has a stimulatory activity with respect to the synthesis of HB-EGF mRNA.

Example 4: Study of the activity of Magnolia champaca oil according to the invention with regard to the growth factor VEGF

The measurement was carried out by RT-PCR in the same way as in example 3. The sequences of the cDNAs/mRNAs of the genes investigated were obtained from GenBank.

Target gene: VEGF

Housekeeping gene: β_2 -microglobulin

The keratinocyte culture conditions are as described in example 3.

The results are reported in table 3 below:

Table 3

Concentration (%)	VEGF activity
0 (untreated control)	1
0.01%	2.2

The results show that the Magnolia champaca oil according to the invention has a stimulatory activity with respect to the synthesis of VEGF mRNA.

Example 5: Study of the activity of Magnolia champaca oil according to the invention with regard to the growth factor PDGF-AA

The quantitative evaluation of the concentrations of human PDGF-AA growth factor in the cell cultures was carried out using the ELISA method by employing the Quantikine® immunological assay kit (No. DAA00, R&D Systems).

The keratinocyte culture conditions and the samples tested are as described in example 3.

The results are reported in Table 4 below;

Table 4

Concentration (%)	% PDGF-AA activity
0 (untreated control)	100
0.01%	230.15
0.005%	307.2

The results show that the Magnolia champaca oil according to the invention has a stimulatory activity with respect to the synthesis of PDGF-AA.

Example 6: Study of the activity of Magnolia champaca oil according to the invention with regard to endothelin-1

The quantitative evaluation of the concentrations of human endothelin-1 in the cell cultures was carried out using the ELISA method by employing the Quantikine® immunological assay kit (No. BBE5, R&D Systems).

The keratinocyte culture conditions and the samples tested are as described in example 3.

The results are reported in table 5 below:

Table 5

Concentration (%)	% Endothelin-1 activity
0 (untreated control)	100
0.01%	65.6
0.005%	39.5

The results show that the Magnolia champaca oil according to the invention has an inhibitory activity with respect to the synthesis of endothelin-1.

Example 7: Study of the activity of Magnolia champaca oil according to the invention with regard to MITF

The quantitative evaluation of the concentrations of MITF mRNA in the cell cultures was carried out according to the protocol described in example 3.

Target gene: MITF

Housekeeping gene: β_2 -microglobulin

Kojic acid was used as positive control for the inhibition.

The results are reported in table 6 below.

Table 6

Concentration (%)	MITF activity
0 (untreated control)	1
Positive control, kojic acid (500 ng/ml)	0.55
0.01%	0.21

5 The results show that the Magnolia champaca oil according to the invention has an inhibitory activity with respect to the expression of MITF mRNA.

10 Example 8: Study of the activity of Magnolia champaca oil according to the invention with regard to matrix metalloproteinases (MMPs)

1/ Principle of the assay

15 The products to be tested are incubated with the activated MMPs. The enzymatic activity is controlled by the addition of a fluorescent enzymatic substrate specific for each MMP.

2/ Assay protocol

20 Pro-MMP3 or pro-MMP9 are incubated in plates with a 1 mM APMA (p-aminophenylmercuric acetate) solution at ambient temperature, with gentle stirring, for 1 h.

25 Various concentrations of the various potential inhibitors are added. The mixture is subsequently incubated at ambient temperature with gentle stirring. The enzymatic reaction is initiated by adding the fluorescent substrate (SIGMA) dissolved in DMSO.

30 The enzymatic reaction is monitored for 1 h using a spectrofluorimeter and the fluorescence is measured at an excitation wavelength of 360 nm and an emission wavelength

of 460 nm for MMP3 (or stromelysin 1) and at an excitation wavelength of 320 nm and an emission wavelength of 405 nm for MMP9 (or gelatinase B).

5 The results are expressed in units of fluorescence emitted (RFU), which represents the amount of substrate hydrolyzed per min.

10 The Microwin 2000 spectrofluorimeter calculates the variation in absorbance Δ , which represents the initial rate (V_i) of the enzymatic reaction. In each assay, the mean of the 3 values of V_i obtained for each concentration of potential inhibitor is calculated. The results of 10 experiments were expressed as mean $\pm$ SD and then presented
15 as percentage of residual activity.

The results are reported in tables 7 (MMP3 or stromelysin 1) and 8 (MMP9 or gelatinase B) below.

20 Use was made, as positive control, of ethylenediamine-tetraacetic acid (EDTA), which has a well known inhibitory activity with respect to the class of the metalloproteinases.

25 Table 7

Concentration (%)	% MMP3 activity
0 (untreated control)	100
Positive control, EDTA 5 mM	0
0.01%	75

Table 8

Concentration (%)	% MMP9 activity
0 (untreated control)	100
Positive control, EDTA 5 mM	0
0.01%	65

The results show that the Magnolia champaca oil according to the invention inhibits the activity of the matrix metalloproteinases MMP3 and MMP9.

5

Example 9: Study of the activity of Magnolia champaca oil according to the invention with regard to the synthesis of DT diaphorase

10 After having prepared the cells according to the protocol of example 3, the cells are lyzed for their analysis by Western blotting. After the quantification of the proteins according to the kit (Pierce Chemical Co., NY), the proteins are fractionated on a gel gradient. The
15 polyvinylidene difluoride (PVDF) membranes resulting from the transfer from the gels are incubated in the presence of an anti-NQO1 polyclonal antibody (Genetex, San Antonio, TX). After rinsing, the membranes are developed by a "Supersignal West Dura" detection kit (Pierce Chemical Co.,
20 NY) and the bands are quantified by image analysis.

The results are reported in table 9 below:

Table 9

25

Concentration (%)	% DT diaphorase activity
0 (untreated control)	100
0.02%	176
0.04%	213

The results show that the Magnolia champaca oil according to the invention stimulates the activity of DT diaphorase.

30

Example 10: Study of the activity of Magnolia champaca oil according to the invention with regard to the synthesis of glutathione S-transferase (GST)

After having prepared the cells according to the protocol of example 3, the cells are lyzed and the supernatants recovered. The activity of GST is evaluated by the use of the "GST Activity Assay Kit" (Biodivision, Mountain View, CA) according to the protocol described by the supplier of the kit.

The results are reported in table 10 below:

Table 10

Concentration (%)	% GST activity
0 (untreated control)	100
0.02%	131%
0.04%	120%

The results show that the Magnolia champaca oil according to the invention stimulates the synthesis of glutathione S-transferase.

Example 11: Study of the activity of Magnolia champaca oil according to the invention with regard to the synthesis of cellular cytochrome C

The amount of cytochrome C in the lysates of the keratinocytes prepared according to the protocol of example 3 is quantified with the "Cytochrome C ELISA Kit" (Zymed®).

The results are reported in table 11 below:

Table 11

Concentration (%)	% Cytochrome C activity
0 (untreated control)	100
0.01%	132%
0.02%	147%

The results show that the Magnolia champaca oil according to the invention stimulates the synthesis of cellular cytochrome C.

5 Example 12: Study of the activity of Magnolia champaca oil according to the invention with regard to the synthesis of AMP kinase

10 After having prepared the cells according to the protocol of example 3, the cells are lyzed for their analysis by Western blotting. After the quantification of proteins according to the kit (Pierce Chemical Co., NY), the proteins are fractionated on a gel gradient. The membranes resulting from the transfer from the gels to the membrane
15 (PVDF) are incubated in the presence of an anti-AMPK or anti-phospho-AMPK α monoclonal antibody (Cell Signaling Technology, Beverly, MA). After rinsing, the membranes are developed by the "Supersignal West Dura" detection kit (Pierce Chemical Co., NY) and the bands are quantified by
20 image analysis.

The results are reported in table 12 below:

Table 12

25

Concentration (%)	% AMP kinase activity
0 (untreated control)	100
0.01%	231%

The results show that the Magnolia champaca oil according to the invention has a stimulatory activity with respect to the synthesis of AMP kinase.

30

Example 13: Study of the antioxidant activity of Magnolia champaca oil according to the invention

Principle of the three protocols

The various Abel[®] 1 antioxidant test kits (Knight Scientific Limited) make it possible to measure the ability of a sample to block free radicals. In each experiment, a particular type of radical or oxidant is generated: hydroxyl radical, halogenated oxidants or superoxide radical. These chemoluminescent tests comprise a special Pholasin[®] photoprotein which emits light in the presence of free radicals and of certain oxidants. The antioxidant capacity of the sample is expressed by the percentage of reduction in the luminescent peak of the Pholasin[®] observed during the time of the various tests in the presence or in the absence of the sample or of the controls.

A positive control was employed for each of the studies a, b and c below.

a/ Study of the activity of Magnolia champaca oil according to the invention with regard to inhibition of the hydroxyl radical

Use was made, as positive control, of mannitol, which exhibits known effects in combating free radicals with regard to the hydroxyl radical.

Table 13

Concentration (%)	% inhibition of hydroxyl radical
0 (untreated control)	0
Positive control, mannitol, 400 mM	90
0.1%	99
0.01%	88

The results show that the Magnolia champaca oil according to the invention has an antioxidant activity with regard to the hydroxyl radical.

b/ Study of the activity of Magnolia champaca oil according to the invention with regard to the inhibition of halogenated oxidants

5

Use was made, as positive control, of bovine serum albumin (BSA), which exhibits a known inhibitory activity with regard to halogenated oxidants.

10

Table 14

Concentration (%)	% inhibition of halogenated oxidants
0 (untreated control)	0
Positive control, BSA 1 mg/ml	88
0.1%	87
0.01%	43

15

The results show that the Magnolia champaca oil according to the invention has an antioxidant activity with regard to halogenated oxidants.

c/ Study of the activity of Magnolia champaca oil according to the invention with regard to the inhibition of the superoxide radical

20

Use was made, as positive control, of vitamin C (ascorbic acid). Ascorbic acid is well known for its role in the formation of superoxide radicals.

Table 15

Concentration (%)	% inhibition of superoxide radical
0 (untreated control)	0
Positive control, ascorbate 80 μ M	74
0.1%	82

The results show that the Magnolia champaca oil according to the invention has an antioxidant activity with regard to the superoxide radical.

Example 14: Eye contour cream comprising a Magnolia champaca oil according to the invention

The various ingredients mentioned in the following tables 16 and 17 are designated by their normal chemical name or according to the INCI international nomenclature (International Cosmetic Ingredient Dictionary and Handbook published by The Cosmetic, Toiletry and Fragrance Association, 9th Edition, 2002).

Table 16

Ingredients	Percentage by weight
Demineralized water	q.s. for 100
Fatty phase	
Cetyl phosphate	0.25
Steareth-21	0.81
Glyceryl stearate	3.53
Stearyl alcohol & cetyl alcohol	1
Oleyl alcohol	2
Isostearyl palmitate	2.82

Shea butter	7.5
Dicaprylate/caprate	3.25
Aqueous phase	
Pentylene glycol	2
Propylene glycol	5
Glycerin	7
Glycerin & PEG-8 & caprylyl glycol	7
Sodium hyaluronate	1
Polyacrylamide	2
Sodium Acryloyldimethyl Taurate Copolymer	1
Carbomer	0.35
Xanthan gum	0.10
Active ingredients	
Magnolia champaca oil obtained according to example 1	0.10
Nanoelespher FRE	5.5
Biopeptide (gly-his-lys) + Rigin (gly-gln-pro-arg)	3
Scenedesmus extract	1
Ronacare Bisabolol	0.25
Licorice PT40	0.4
Trihydroxypalmitamidohydroxypropyl myristyl ether	0.02
Rhodiola extract	1
Phospholipids & Beta-sitosterol	0.5
Hamamelis	5
Prunus amygdalus dulcis (sweet almond) seed extract	4

Example 15: Face cream comprising a Magnolia champaca oil according to the invention

5

Table 17

Ingredients	Percentage by weight
Demineralized water	q.s. for 100
Fatty phase	
Cetyl phosphate	2
Steareth-21	0.40
Glyceryl stearate	3.33
Cetyl alcohol	0.6
Oleyl alcohol	3
Isostearyl palmitate	7
Caprylic/capric acid triglycerides	5
Dimethicone	3
Aqueous phase	
Propylene glycol	7.5
Sodium hyaluronate	1
Carbomer	0.35
Active ingredients	
Magnolia champaca oil obtained according to example 1	0.10
Nanoelespher FRE	10
Biopeptide (gly-his-lys) + Rigin (gly-gln-pro-arg)	3
Scenedesmus extract	1
Ronacare Bisabolol	0.25
Licorice PT40	0.4
Trihydroxypalmitamidohydroxypropyl myristyl ether	0.02

CLAIMS

1. Oil extracted from flowers of at least one type of
Magnolia champaca, characterized in that it comprises:

- 20 to 70% of benzoic ester,
- 15 to 35% of saturated and/or unsaturated fatty acids,

said proportions being expressed as relative percentages with respect to the combined constituents separated by gas chromatography.

2. Oil according to Claim 1, characterized in that it originates from Magnolia champaca, variety gold.

3. Oil according to Claim 1 or 2, characterized in that it comprises:

- from 10 to 40% of cinnamyl benzoate,
- from 5 to 30% of phenylethyl benzoate,
- from 5 to 30% of benzyl benzoate,
- from 5 to 30% of linoleic acid,
- from 2 to 20% of linolenic acid,

said proportions being expressed as relative percentages with respect to the combined constituents separated by gas chromatography.

4. Oil according to any one of Claims 1 to 3, characterized in that it is devoid of solvent.

5. Oil according to any one of Claims 1 to 4, characterized in that it is devoid of chemical reactant which was involved during its extraction.

6. Process for the preparation of a Magnolia champaca oil according to any one of Claims 1 to 5, characterized in that it comprises at least one molecular distillation stage.

5

7. Process for the preparation of a Magnolia champaca oil according to any one of Claims 1 to 5, characterized in that it comprises the stages consisting in:

- 10 - extracting from a milled product produced from fresh flowers of at least one type of Magnolia champaca using at least one nonpolar solvent,
- subjecting said extract to at least one molecular
15 distillation stage, and
- recovering the distillate.

8. Process according to Claim 7, characterized in that
20 said nonpolar solvent is chosen from hexane, cyclohexane, heptane, isooctane, supercritical CO₂ or dichloromethane.

9. Process according to any one of Claims 6 to 8,
25 characterized in that the molecular distillation stage is carried out at a temperature of between approximately 100 and 200°C and at a pressure of between approximately 10 and 0.001 mbar.

10. Process according to any one of Claims 7 to 9,
30 characterized in that, on conclusion of the extraction, the fractionation is carried out using at least one solvent chosen from C₁-C₄ alcohols, polyols, ethyl acetate, hexane, cyclohexane and supercritical CO₂.

35 11. Process according to any one of Claims 6 to 10, characterized in that, prior to the molecular distillation,

a solvent chosen from mineral or vegetable oils and polyols is added.

12. Process according to any one of Claims 6 to 11, characterized in that the temperature for introducing into the distillation column is between 20 and 120°C, preferably between 50 and 100°C.

13. Process according to any one of Claims 6 to 12, characterized in that the condensation temperature is between 40 and 120°C, preferably between 60 and 100°C.

14. Magnolia champaca oil capable of being obtained by the process according to any one of Claims 6 to 13.

15. Use of a Magnolia champaca oil according to any one of Claims 1 to 5 or 14 as polyfunctional active agent in a pharmaceutical, cosmetic or dermatological composition for the prevention and/or treatment of detrimental changes in the skin due to aging or to physiological mechanisms related to aging or to disorders connected with these mechanisms.

16. Use according to Claim 15 of a Magnolia champaca oil according to any one of Claims 1 to 5 or 14 in a cosmetic composition as agent which improves healing or cell repair and/or agent for activating the metabolism of the cells of the epidermis and/or agent for scavenging free radicals and/or agent for regenerating the epidermis and/or agent for detoxifying the epidermis.

17. Use according to Claim 15 of a Magnolia champaca oil according to any one of Claims 1 to 5 or 14 as agent which improves healing or cell repair and/or agent for activating the metabolism of the cells of the epidermis and/or agent for scavenging free radicals and/or agent for protecting nuclear DNA and/or agent for protecting mitochondrial DNA

and/or agent for regenerating the epidermis and/or agent for detoxifying the epidermis, for the preparation of a pharmaceutical composition.

- 5 18. Use according to Claim 15 of a Magnolia champaca oil according to any one of Claims 1 to 5 or 14 as agent which improves healing or cell repair and/or agent for activating the metabolism of the cells of the epidermis and/or agent for scavenging free radicals and/or agent for protecting
10 nuclear DNA and/or agent for protecting mitochondrial DNA and/or agent for regenerating the epidermis and/or agent for detoxifying the epidermis, for the preparation of a dermatological composition.
- 15 19. Use according to any one of Claims 15 to 18 of a Magnolia champaca oil as agent which inhibits the synthesis of melanin.
- 20 20. Use according to any one of Claims 15 to 19 of a Magnolia champaca oil as agent which inhibits the synthesis of endothelin or agent which inhibits the transcription factor MITF.
- 25 21. Use according to any one of Claims 15 to 19 of a Magnolia champaca oil as agent which activates the synthesis of at least one cell growth factor by keratinocytes.
- 30 22. Use according to Claim 21, characterized in that said growth factor is chosen from PDGF, VEGF and HB-EGF.
- 35 23. Use according to any one of Claims 15 to 18 of a Magnolia champaca oil as agent which inhibits the activity of the matrix metalloproteinases MMP3 (or stromelysin 1) and MMP9 (or gelatinase-elastase B).

24. Use according to any one of Claims 15 to 18 of a Magnolia champaca oil as an agent which stimulates the cell metabolism.

5 25. Use according to Claim 24, characterized in that said factor for stimulating the cell metabolism is chosen from cytochrome C or AMP kinase.

10 26. Use according to any one of Claims 15 to 18 of a Magnolia champaca oil as antioxidant.

15 27. Use according to any one of Claims 15 to 18 of a Magnolia champaca oil as agent for detoxifying the epidermis by stimulating the synthesis of DT diaphorase.

20 28. Cosmetic, pharmaceutical or dermatological composition, characterized in that it comprises a Magnolia champaca oil according to any one of Claims 1 to 5 or 14 and a cosmetically or pharmaceutically acceptable vehicle.

25 29. Cosmetic, pharmaceutical or dermatological composition according to Claim 28, characterized in that said oil is present in the pharmaceutical, cosmetic or dermatological composition in a proportion of 0.001 to 10% by total weight of the composition.

30 30. Cosmetic, pharmaceutical or dermatological composition according to Claim 29, characterized in that said oil is present in the pharmaceutical, cosmetic or dermatological composition in a proportion of 0.01 to 5%, preferably of 0.1 to 1%, by total weight of the composition.

35 31. Cosmetic, pharmaceutical or dermatological composition according to any one of Claims 28 to 30, characterized in that it is appropriate for application by the topical route.

32. Cosmetic, pharmaceutical or dermatological composition according to any one of Claims 28 to 31, characterized in that it also comprises at least one compound chosen from an emollient or humectant, a gelling and/or thickening agent, a surface-active agent, an oil, an active agent, a dye, a preservative, an antioxidant, a chelating agent, an organic or inorganic powder, a pigment, a self-tanning agent, a sunscreen, an essential oil and a fragrance.

33. Cosmetic, pharmaceutical or dermatological composition according to Claim 32, characterized in that it comprises an active agent of natural, biotechnological or synthetic origin having a biological activity and having an effectiveness on the skin via biological sites.

34. Cosmetic, pharmaceutical or dermatological composition according to either of Claims 32 and 33, characterized in that said active agent is chosen from vitamins, trace elements, allantoin, plant proteins, plant extracts and their mixtures.

35. Cosmetic, pharmaceutical or dermatological composition according to one of Claims 32 to 34, characterized in that said active agent is an algal extract.

36. Cosmetic, pharmaceutical or dermatological composition according to any one of Claims 28 to 35, characterized in that it is provided in the form of a powder, of an emulsion, of a microemulsion, of a nanoemulsion, of a suspension, of a solution, of a lotion, of a cream, of an aqueous or aqueous/alcoholic gel, of a foam, of a serum, of an aerosol solution or dispersion or of a dispersion of lipid vesicles.

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2007/000697

A. CLASSIFICATION OF SUBJECT MATTER INV. C11B9/02 C11B9/00 A61K8/97 A61Q19/08		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) C11B A61K A61Q A23K A23F		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, BIOSIS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE WPI Section Ch, Week 200222 Derwent Publications Ltd., London, GB; Class B04, AN 1995-136786 XP002395847 & JP 03 268695 B2 (MIKIMOTO SEIYAKU KK) 25 March 2002 (2002-03-25) cited in the application abstract	1-7, 14-36
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 07, 29 September 2000 (2000-09-29) & JP 2000 095663 A (KOSE CORP), 4 April 2000 (2000-04-04) cited in the application abstract	1-7, 14-36
-/--		
☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
20 July 2007		31/07/2007
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Saunders, Thomas

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2007/000697

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 09, 31 October 1995 (1995-10-31) & JP 07 157420 A (MIKIMOTO PHARMACEUT CO LTD), 20 June 1995 (1995-06-20) abstract -----	1-7, 14-36
A	DATABASE WPI Section Ch, Week 200612 Derwent Publications Ltd., London, GB; Class B04, AN 2003-248918 XP002395848 & CN 1 157 353 C (GUANGZHOU MEICHEN PHARM IND CO LTD) 14 July 2004 (2004-07-14) abstract -----	1-7,9, 12-15,28
A	DATABASE WPI Section Ch, Week 200569 Derwent Publications Ltd., London, GB; Class D23, AN 2005-665802 XP002395849 & CN 1 624 094 A (LI H) 8 June 2005 (2005-06-08) abstract -----	1-7,14, 15,28

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2007/000697

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 3268695	B2	25-03-2002	JP 7061918 A	07-03-1995
JP 2000095663	A	04-04-2000	NONE	
JP 07157420	A	20-06-1995	NONE	
CN 1157353	C	14-07-2004	CN 1362395 A	07-08-2002
CN 1624094	A	08-06-2005	NONE	