



6^{eme}
Édition

PC Journées
& Réunionnaises
Plaies et Cicatrisations

La passion des plaies...

Aromathérapie: Indication et utilisation des Huiles Essentielles.

LEFEVRE Nadine, Praticienne en aromathérapie, CHU Réunion sud

CEDELLE Mathieu, IDE CHU Réunion Sud

28 & 29 avril 2023 - Stella Matutina



Déclaration de lien d'intérêt

Je ne déclare pas de lien d'intérêt en rapport avec cette présentation.



Présentation

- Du latin *aroma* (Aromate) et du grec *therapia* (traitement, soin).
- Utilisée depuis plus de 10 ans en milieu hospitalier et médico-social.
- La base scientifique des Huiles essentielles s'agrandit au fil du temps.
- Leur pratique est régulé par des professionnels formés



UNIVERSITE DE STRASBOURG
FACULTE DE MEDECINE DE STRASBOURG

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THESE
PRESENTEE POUR LE DIPLOME DE
DOCTEUR EN MEDECINE
Diplôme d'Etat
Mention Médecine Générale
PAR
SCHIRO Samuel
Né le 23 Mai 1991, à Tarbes (65)

Plaies d'escarre et cicatrisation : une place pour
l'aromathérapie ?

Etude auprès des médecins généralistes et médecins
prescripteurs en EHPAD



podcast séries

4 voices in clinical aromatherapy

AROMATHÉRAPIE CLINIQUE, CANCÉROLOGIE

Une nouvelle série de 4 podcasts en anglais sur les pratiques internationales

La Fondation donne la parole à quatre experts de son jury international : Wendy Maddocks, Denise Joswiak, Jacqui Stringer et Rhannon Lewis. Elles nous expliquent comment se pratique l'aromathérapie clinique dans leurs pays.

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Plaidoyer pour une amélioration de la qualité des études cliniques en Aromathérapie

AROMATHÉRAPIE CLINIQUE

INFECTIOLOGIE

Tribune libre du conseil scientifique

Ce plaidoyer vient rappeler les points essentiels à considérer pour lire et reconnaître les publications de bonne qualité ainsi que les paramètres importants à intégrer pour mener une étude clinique en aromathérapie.

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podcast

Paroles d'experts sur l'aromathérapie clinique

AROMATHÉRAPIE CLINIQUE, INFECTIOLOGIE

'Paroles d'experts sur l'aromathérapie clinique' : une série de 5 podcasts

La Fondation donne la parole à trois experts de son conseil scientifique : Dr Françoise Couic Marinier, Dr Sabrina Boutefnouchet et Dr Philippe Colla. Ils nous expliquent ce qu'est l'aromathérapie clinique en France et son intérêt pour les médecins en infectiologie.

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FONDATION GATTEFOSSÉ

En 2008, le groupe Gattefossé créait une fondation d'intérêt général. Cette fondation rend hommage à l'un des dirigeants de l'entreprise, René-Maurice Gattefossé, qui fut le pionnier de l'aromathérapie scientifique moderne au début du XX^{ème} siècle. Son usage des huiles essentielles pour des applications médicales l'amena à découvrir les vertus antiseptiques de la lavande. Il sut convaincre ensuite le corps médical des hôpitaux lyonnais d'utiliser cette huile essentielle dans des formulations servant à lutter contre certaines infections de l'époque.

René-Maurice est l'auteur de nombreuses publications et est à l'origine du néologisme « aromathérapie », devenu un mot courant après la publication de son ouvrage du même nom en 1937.

Aujourd'hui, sur les pas de son grand-père, Sophie Gattefossé-Moyrand, Présidente de la Fondation Gattefossé, lui rend hommage en contribuant à faire valoir l'intérêt des huiles essentielles comme thérapie complémentaire à la médecine allopathique.

Au cœur de la médecine intégrative, la Fondation Gattefossé s'engage à développer l'aromathérapie clinique comme thérapie complémentaire au service du mieux-être des patients.

La Fondation agit en encourageant la recherche clinique, en favorisant la pratique en milieu hospitalier en France ainsi qu'en valorisant les praticiens de l'aromathérapie et leurs expériences cliniques.

Elle s'associe à l'écosystème de la santé intégrative et aux réseaux internationaux des associations professionnelles de l'aromathérapie clinique.



AR

AROMATHÉRAPIE CLINIQUE

L'histoire inédite de René-Maurice Gattefossé

Enregistrement de la présentation faite à Botànica 2020 par Sophie Gattefossé-Moyrand et Séguinière Moyrand-Gros, la petite et carrière-petite fille de René-Maurice Gattefossé.

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AR

AROMATHÉRAPIE CLINIQUE

Aromathérapie scientifique : précisions pour la pratique clinique, l'enseignement et la recherche

Argumentaire destiné aux professionnels de santé pour l'utilisation de l'aromathérapie en soin complémentaire - réédition par un consensus d'experts français

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AR

INFECTIOLOGIE

À l'Hôpital Marin de Hendaye, les huiles essentielles soignent les plaies infectées.

La Fondation raconte les histoires d'aromathérapie de ses porteurs de projets avec des témoignages de patients. Venez découvrir l'histoire d'aromathérapie #2 de Andoni Ali, Bourse 2018.

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SOINS PALLIATIFS

Mise en place de l'aromathérapie à la maison

Jeanne Garnier
Expérience d'aromathérapie #1 avec le témoignage de Dr Laurent Taillade et de Sophie Billard à la maison médicalisée Jeanne Garnier de Rennes, Bourse 2019.



AR

SOINS PALLIATIFS

L'aromathérapie en soins palliatifs au CHU d'Angers

Expérience d'aromathérapie #2 avec le témoignage de Dr Hanane Besselièvre, Isabelle Martin, pharmacien, prix 2014 à l'hôpital St Nicolas d'Angers et de Rebecca



AR

CANCÉROLOGIE

Aux Hôpitaux Civils de Colmar, l'aromathérapie soulage les patients des nausées.

La Fondation raconte les histoires d'aromathérapie de ses porteurs de projets avec des témoignages de patients. Venez découvrir



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Présenté et soutenu par : Blandine BARROIS

L'USAGE DE L'AROMATHÉRAPIE DANS LES SOINS HOSPITALIERS

Mémoire de fin d'études présenté en vue de la validation de l'UE 5.6. S6 « Analyse de la qualité et traitement des données scientifiques et professionnelles »

Préparé sous la direction de : Madame Carine SENE

Promotion 2017-2020

Revue le 04 mai 2020





Précautions d'utilisation

- La mauvaise utilisation de certaines huiles peut être mortel.
- Des interactions peuvent exister (médicaments, autres Huiles Essentielles), des effets neurotoxique, hépatotoxique ...peuvent exister.
- Une préparation spécifique est souvent requise, en fonction de ce qui est recherché.
- La posologie est importante car comme pour les médicaments, le dosage peut changer les effets.
- Par précaution, la majorité des Huiles sont déconseillés aux femmes enceintes et allaitante et aux jeunes enfants.



Le ciste Ladanifere (*cistus labdaniferus*)



Propriétés	Indications	Contre-indications
<ul style="list-style-type: none">- Hémostatique- Cicatrisante- Anti-virale- Anti-bactérienne- Anti-fongique- Anti-inflammatoire- Immuno-modulante- Calmante	<ul style="list-style-type: none">- Petite plaie hémorragique- Ulcères- Escarres- Épistaxis	<ul style="list-style-type: none">- Enfants- Femmes enceintes- Femmes allaitante- Épileptogène à forte dose



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Thymus mastichina (L.) L. and *Cistus ladanifer* L. for skin application: chemical characterization and *in vitro* bioactivity assessment

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2023

ARTICLE INFO

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Thymus mastichina (L.) L.

ABSTRACT

Ethnopharmacological relevance: *Thymus mastichina* (L.) L. (TM) and *Cistus ladanifer* L. (CL) are two Portuguese autochthonous species with traditional skin application in folk medicine. TM is mainly known for its antiseptic and wound healing properties, as an external anti-inflammatory agent and for its application in folk cosmetics and hygiene products. Its use in acne vulgaris has also been reported. CL is traditionally used in remedies for wounds, ulcers and other skin ailments such as psoriasis and eczema. Its application has been found useful due to its anti-inflammatory, astringent, wound healing and antiseptic properties.

Aim of the study: With this work, we aimed to investigate relevant bioactivities related with the traditional applications of TM and CL essential oils (EOs) and hydrolates (by-products of EO production) in skin ailments. Specifically their *in vitro* antioxidant, anti-inflammatory, cytotoxic, wound healing and antimicrobial properties were evaluated. The chemical composition of both EOs and respective hydrolates was also characterized.

Materials and methods: Chemical characterization of EOs and hydrolates was performed by GC-FID and GC-MS. Cellular biocompatibility was evaluated using the MTT assay in macrophages (RAW 264.7) and fibroblasts (L929) cell lines. Anti-inflammatory activity was investigated by studying nitric oxide (NO) production by macrophages with Griess reagent. Wound healing potential was evaluated with the scratch-wound assay. The antioxidant potential was studied by the DPPH scavenging method. Antimicrobial activity was evaluated by broth microdilution assay against relevant microbial strains and skin pathogens, namely *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Candida albicans*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Candida albicans* and *Aspergillus brasiliensis*.

Results: The major compounds present in TM and CL EOs were 1,β-cineole and a pinene, respectively. 1,β-cineole and *E*-pinocarvone were the major compounds in the correspondent hydrolates. CL EO presented the highest anti-inflammatory potential (IC₅₀ = 0.002% (v/v)), still with significant cytotoxicity (IC₅₀ = 0.012% (v/v)). TM preparations presented anti-inflammatory potential, also presenting higher biocompatibility. The same profile was present on fibroblasts regarding biocompatibility of the tested preparations. CL EO and hydrolate increased fibroblasts' migration by 155.7% and 148.4%, respectively. TM hydrolate presented a milder activity than CL hydrolate, but wound healing potential was still present, increasing cell migration by 125.1%. All preparations presented poor antioxidant capacity. CL EO presented higher antimicrobial activity, with MICs ranging from 0.06% (v/v) to 2% (v/v), against different microorganisms.

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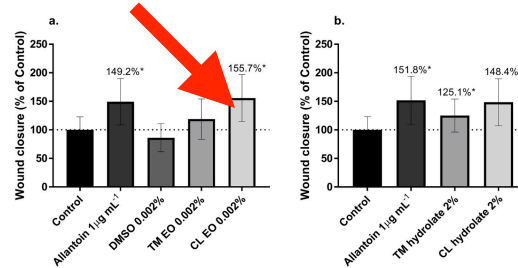


Fig. 5. Effect of EOs (a) and hydrolates (b) from TM and CL on cellular migration of an artificial wound created by scratching a cellular monolayer of L929 fibroblasts. After the mechanical injury, cells were exposed to biocompatible concentrations of the plant preparations (prepared in a low serum culture medium) and to controls for 12 h. The results express the percentage of wound closure after the experiment course, normalized to the control (low serum culture medium only). Allantoin at 1 µg mL⁻¹ was used as a positive control for wound healing. *p < 0.05 was considered a statistically significant result when compared with control, as determined by student t-test.

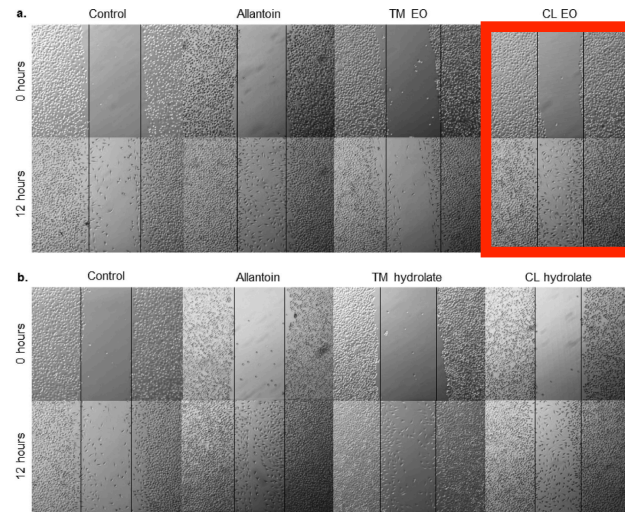


Fig. 6. Representative images of increased migration of fibroblasts when exposed to EOs (a) and hydrolates (b) from TM and CL. Allantoin (1 µg mL⁻¹) was included as a positive control for wound healing. Images were acquired at the beginning of the experiment (0 h) and after 12 h of exposure to different plant preparations and controls. Photographs were taken using an inverted microscope (Olympus Model IX51) with a 5 × 10 amplification.



La myrrhe parfumée (*commiphora guidottii*)



Propriétés	Indications	Contre-indications
<ul style="list-style-type: none">- Désclérosante- Immunostimulante- Cicatrisante	<ul style="list-style-type: none">- Plaies atone- Ulcères- Cicatrice- Escarres	<ul style="list-style-type: none">- Pas de toxicité connu aux doses physiologique.



2015

Gebehawet et al. BMC Complementary and Alternative Medicine (2015) 15:282
DOI 10.1186/s12906-015-0813-2

BMC Complementary & Alternative Medicine

RESEARCH ARTICLE

Open Access

Evaluation of the wound healing property of *Commiphora guidottii* Chiov. ex. Guid.

Michael Gebehawet¹, Kaleab Asres^{1*}, Daniel Bisrat¹, Awjit Mazumder², Peter Lindemann³ and Franz Bucar⁴

Abstract
Background: The traditional use of the oleo-gum-resin of *Commiphora guidottii* Chiov. ex. Guid., which is commonly called scented myrrh, for topical treatment of wound is well documented. The major objective of the present study was to investigate the essential oil and resin obtained from *C. guidottii* for their potential wound healing properties. Due to their influence on the wound healing process, the anti-inflammatory and antimicrobial activities of scented myrrh have also been investigated.
Methods: Powdered oleo-gum-resin of *C. guidottii* was steam-distilled to obtain essential oil, and the resin was extracted from the marc with MeOH and filtered. The TLC fingerprint profile of the resin has been recorded by using silica gel GF₂₅₄ as stationary phase. The essential oil components were identified and quantified by GC-MS. Ointments prepared from the essential oil (4 % v/w) and the resin (5 % w/w) were used for wound healing activity tests. Toxicity of the formulated ointments was investigated according to Draize skin irritation test. Acute anti-inflammatory effect in mice was evaluated using carrageenan induced mouse hind paw oedema model. Antimicrobial activity tests were carried out using disk diffusion and broth dilution techniques against 21 pathogenic bacterial and 4 fungal strains.
Results: Ointment formulations of both the oil and resin were found to be non-irritant at the concentrations used and showed significant ($p < 0.05$ - 0.001) increase in wound contraction rate, shorter epithelization time and higher skin breaking strength as compared to the negative control. Overall, the antibacterial and antifungal activities of the oil and resin were comparable with the standard antibiotics cyclofloxacin and griseofulvin, respectively.
Conclusion: The results confirm that scented myrrh possesses genuine wound healing activity supporting the traditional use of the plant.
Keywords: *Commiphora guidottii*, Essential oil, Resin, Wound healing, Anti-inflammatory, Antimicrobial

Background
 The skin being a protective barrier against the outside world, any break to it must be rapidly and efficiently mended [1]. When acute wound healing does not progress in an orderly and timely manner, complications can occur: incisions can dehiscence; hernias can form; anastomoses can leak; and fistulae can develop [2]. Many of the available drugs for wound management are not only expensive but also pose problems such as allergy and drug resistance [3, 4]. By and large, phyto-medicines for wound healing are not only cheap and affordable, but are also safe. Thus, one third of all traditional medicines in use are for the treatment of wounds and skin disorders, which is a very high figure as compared to only 1–3 % of modern drugs [5].

Commiphora guidottii Chiov. ex. Guid. (Burseraceae) is a shrub or tree growing up to 5 m tall; has greenish or brownish peeling bark and is native to Ethiopia and Somalia. It is fairly widespread in Somalia and in adjacent parts of Ogaden in Ethiopia. Its vernacular name is "hadi" (sometimes spelled "hedi" or "bethi" by collectors) in all areas where it is distributed. However, in Central Somalia it is also known as "dankari". The oleo-gum-resin of *C. guidottii*, which is otherwise known as scented myrrh, is commonly called "habakkhadi" in Somalia and "abekei" (Amharic) in Ethiopia [6], where it is added to cattle feed to improve milk production. The Somali

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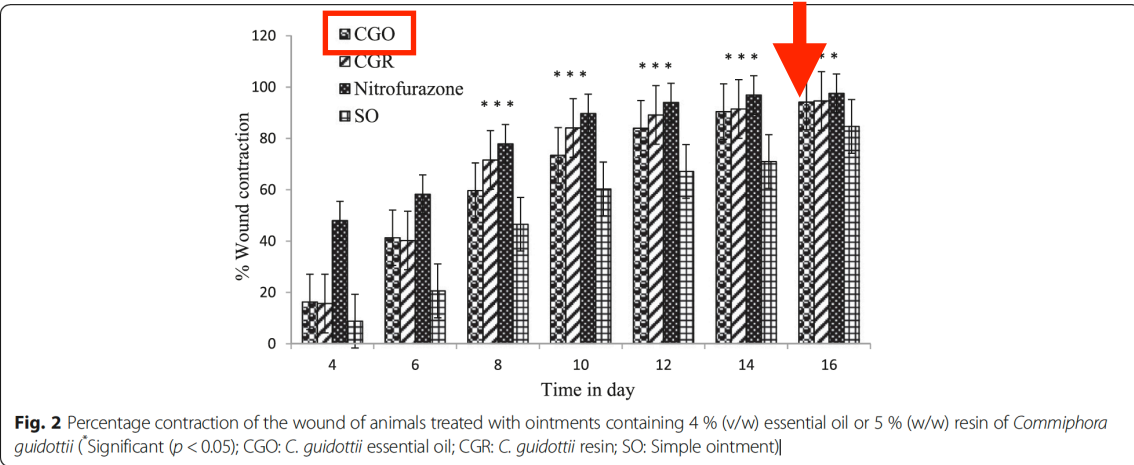


Fig. 2 Percentage contraction of the wound of animals treated with ointments containing 4 % (v/w) essential oil or 5 % (w/w) resin of *Commiphora guidottii* (*Significant ($p < 0.05$); CGO: *C. guidottii* essential oil; CGR: *C. guidottii* resin; SO: Simple ointment)

Table 3 Effect of topical application of ointments containing 4 % (v/w) essential oil or 5 % (w/w) resin of *Commiphora guidottii* on wound epithelization period of excision wound model in comparison with nitrofurazone and simple ointments

Group	Period of epithelization (day)
Essential oil	22.42 ± 0.61*
Resin	23.50 ± 0.72*
Nitrofurazone	20.67 ± 0.33**
Simple ointment	25.67 ± 0.42

*The mean value is significant ($p < 0.01$) and (** $p < 0.001$) when compared with simple ointment treated group; N = 6; Results are expressed as mean ± SEM



La Lavande aspic (*Lavendula latifolia*)

Propriétés	Indications	Contre-indications
<ul style="list-style-type: none">- Cicatrisante- Antalgique- Anti-infectieuse- Anti-fongique- Anti-inflammatoire	<ul style="list-style-type: none">- Brûlure (coup de soleil)- Mycose- Psoriasis- Ulcères- Escarres- Piqures d'insectes	<ul style="list-style-type: none">- Femmes enceintes- Femmes allaitante- Enfants de moins de 6 ans



RESEARCH ARTICLE

Open Access



Wound healing potential of lavender oil by acceleration of granulation and wound contraction through induction of TGF- β in a rat model

Hiroko-Miyuki Mori^{1,2}, Hiroshi Kawanami¹, Hirohisa Kawahata¹ and Motokuni Aoki^{1*}

Abstract

Background: Although previous studies have suggested that lavender oil promote wound healing, no study has examined the molecular mechanisms of its effect. In this study, we investigated the effect of lavender oil on various steps of wound healing and its molecular mechanism, focusing on transforming growth factor- β (TGF- β).

Methods: Circular full-thickness skin wounds were produced on rats. Control solution or lavender oil was topically applied to the wounds on alternating days for 14 days.

Results: The area of wounds topically treated with lavender oil was significantly decreased as compared to that of wounds of control rats at 4, 6, 8, and 10 days after wounding. Topical application of lavender oil induced expression of type I and II collagen at 4 days after wounding, accompanied by an increased number of fibroblasts, which synthesize collagen. Induced expression of type III collagen by topical application of lavender oil was reduced to control level at 7 days after wounding although increased expression of type I collagen still continued even at 7 days, suggesting rapid collagen replacement from type III to type I in wounds treated with lavender oil. Importantly, expression of TGF- β in wounds treated with lavender oil was significantly increased as compared to control. Moreover, an increased number of myofibroblasts was observed in wounds treated with lavender oil at 4 days after wounding, suggesting promotion of differentiation of fibroblasts through induction of TGF- β , which is needed for wound contraction.

Conclusion: This study demonstrated that topical application of lavender oil promoted collagen synthesis and differentiation of fibroblasts, accompanied by up-regulation of TGF- β . These data suggest that lavender oil has the potential to promote wound healing in the early phase by acceleration of formation of granulation tissue, tissue remodeling by collagen replacement and wound contraction through up-regulation of TGF- β . The beneficial effect of lavender oil on wound healing may raise the possibility of new approaches as complementary treatment besides conventional therapy.

Keywords: Complementary and alternative medicine, Lavender oil, Wound healing, TGF- β , Collagen

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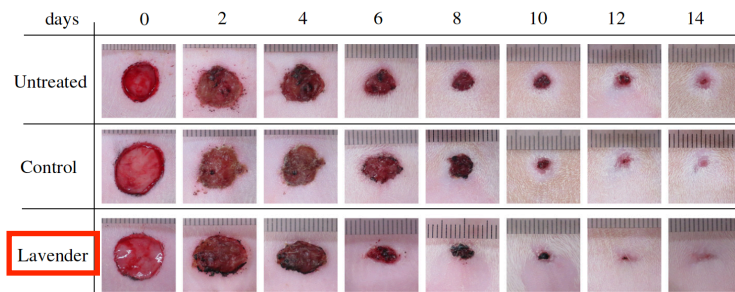


Fig. 1 Representative photographs of transition of wound closure in rat model. Untreated; wound surgery only, Control; wound topically treated with control solution containing 0.1 % DMSO and Tween 20, Lavender; wound topically treated with 1 % lavender oil dissolved in control solution

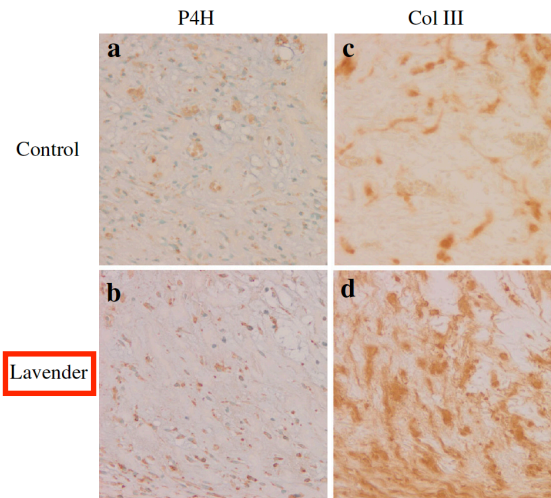


Fig. 3 Representative photomicrographs of immunohistochemical studies. **a, b** Immunohistochemical staining for type III collagen at 4 days after wounding. **c, d** Immunohistochemical staining for type III collagen at 4 days after wounding. Magnification; $\times 100$. Control; wound topically treated with control solution containing 0.1 % DMSO and Tween 20, Lavender; wound topically treated with 1 % lavender oil dissolved in control solution



Quelques Huiles Essentielles Cicatrisantes

Huiles Essentielles	Nom latin
Beaume du Pérou	<i>Myroxylon balsamum</i>
Carotte	<i>Daucus carota</i>
Elemi de manille	<i>Canarium luzonicum</i>
Encens	<i>Boswellia carterii</i>
Géranium Bourbon	<i>Pelargonium asperum</i>
Lavande fine	<i>Lavandula angustifolia</i>
Ledon du Groenland	<i>Ledum groenlandicum</i>
Myrrhe amère	<i>Commiphora myrrha</i>
Sang du dragon	<i>Croton lechleri</i>



Formation en aromathérapie



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6^{ème} Edition

Merci pour votre attention

