

[SS 20] oxysporum and silver

Results in EPODOC 4

[SS 21] ..li



1/4 © EPODOC / EPO

PN - [IN557CHE2013](#) A 20150807

PR - IN2013CHE557 20130211

AP - IN2013CHE557 20130211

DT - I

PA - THOOMATTI SUDHARSAN ANITHA [IN]; PERAMACHI PALANIVELU DR [IN]

TI - KERATINASE BASED NANOFORMULATION FOR THE TREATMENT OF PSORIASIS

AB - This invention describes a treatment for psoriasis (a skin disorder) with the keratinase enzyme based nanoformulation. Keratinase enzyme (EC 3.4.99.11) from the fungus *Aspergillus parasiticus* was purified to homogeneity by conventional techniques and used for making nanoformulation with the **silver** nanoparticles. The **silver** nanoparticles were biologically synthesized from the fungus *Fusarium oxysporum*. The keratinase nanoformulation was made by mixing the purified enzyme with **silver** nanoparticles and this nanoformulation is named as 'Nanozyme-K'. It was found that the **silver** nanoparticles did not have any inhibitory effect on the purified keratinase activity and in fact it improved the storage stability of the nanoformulation. Psoriatic samples were collected from patients and the psoriatic proteins were examined by SDS polyacrylamide gel electrophoresis. It was confirmed by MALDI-MS analysis that all the psoriatic proteins belong to keratins of various types. The Nanozyme-K effectively digested the keratins of psoriatic scales which were confirmed by SDS-PAGE analysis. It was found that the keratinase nanoformulation degraded the psoriatic keratins completely and keratin bands were not observed after digestion in SDS-PAGE analysis. The efficacy of the Nanozyme-K was tested out on dermatitis induced BALB/c mice. About 36% reduction in ear swelling was observed after Nanozyme-K treatment. Thus, it confirms the Nanozyme-K possesses good antipsoriatic activity. As it is a gentle, non invasive technique it can be recommended for psoriatic patients even on long term basis without any possible side effects. Moreover, as it is a topical application, it will not have any possible adverse effect(s) like most of the drugs recommended.

2/4 © EPODOC / EPO

PN - [TW200902722](#) A 20090116

PR - TW20070125134 20070710

AP - TW20070125134 20070710

DT - I

PA - YAO GUO-SHAN [TW]

TI - Method for utilizing microorganisms for biosynthesizing antibacterial agent having **silver** nanoparticles

AB - This invention discloses a method for utilizing microorganisms for biosynthesizing antibacterial agent having **silver** nanoparticles, particularly mixing a fungi (fusarium **oxysporum** f.sp.lycopersici) with **silver** nitrate solution at a certain ratio to directly perform an in-vitro biosynthesis reaction, thereby producing **silver** nanoparticles. The method has advantages of simple manipulation, convenience, environment friendly and without producing polluted compositions and waste disposals.

3/4 © EPODOC / EPO

PN - [US6327812](#) B1 20011211

PR - US19990321915 19990528

AP - US19990321915 19990528

DT - *

CT - [US4817329](#) A []; [US4953320](#) A [];
[US4958456](#) A []; [US4989363](#) A [];
[US5058313](#) A []; [US5349778](#) A [];
[US5442876](#) A []; [US5768907](#) A [];
[US6141901](#) A []

CCI - [A01M1/2094](#) ; [A01M1/24](#) ; [A01M19/00](#) ; [A01M21/04](#)

CCA - [A01M2200/011](#) ; [A01M2200/012](#)

TI - Method of killing organisms and removal of toxins in enclosures

AB - A method and kit of components for destroying organisms and toxins in from an enclosure such as a building. Temperature sensing probes are installed in the enclosure to indicate structure temperature and a recorder is used to record the temperature of said sensing probes in real time. Hot air is introduced into the enclosure through one or more ducts to raise the structure temperature to at least about 120 DEG F., as monitored by the temperature sensing probes. This is sufficient to kill essentially all insects, bacteria, virus, dust mites, spiders, **silver** fish, fungi and toxic molds such as aspergillus oryzae, aspergillus terreus, aspergills versicolor, cladosporium hergbarum, stachybotrys chartarum, penicillium aurantiogriseum, pencillium chrsogenum, pencillium glabrum and fusarium **oxysporum**, and the like. The air can exit through open doors and windows or through ducts to a filter assembly that captures the remains of the organisms. Ozone may be added to the heated air to improve efficiency. Preferably, air when extracted from an egress duct downstream of the filters improves air flow through the enclosure and filters. A typical building can be treated in six to eight hours.

4/4 © EPODOC / EPO

PN - [US2002066223](#) A1 20020606

PNFP - US8499489 B2 20130806

PR - US20010014727
20011210; US19990321915
19990528

AP - US20010014727 20011210

DT - **

CT - || STSE (B2)
[US4817329](#) A 19890404 [] (FORBES CHARLES [US])
[US4953320](#) A 19900904 [] (NELSON LAWRENCE L [US])
[US4958456](#) A 19900925 [] (CHAUDOIN JAMES J [US], et al)
[US4989363](#) A 19910205 [] (DOERNEMANN MANFRED [DE])
[US5058313](#) A 19911022 [] (TALLON JOSEPH C [US])
[US5349778](#) A 19940927 [] (CHU CHENG [US])
[US5442876](#) A 19950822 [] (PEDERSEN IB O [DK])
[US5768907](#) A 19980623 [] (LEE FRANK R [US])
[US5806238](#) A 19980915 [] (BRENNER RICHARD J [US], et al)
[US6141901](#) A 20001107 [] (JOHNSON ROGER D [US], et al)
[US6327812](#) B1 20011211 [] (HEDMAN DAVID [US], et al)

- || R141 (A1)
[US5663561](#) A [];
[US5806238](#) A [];
[US5577239](#) A []

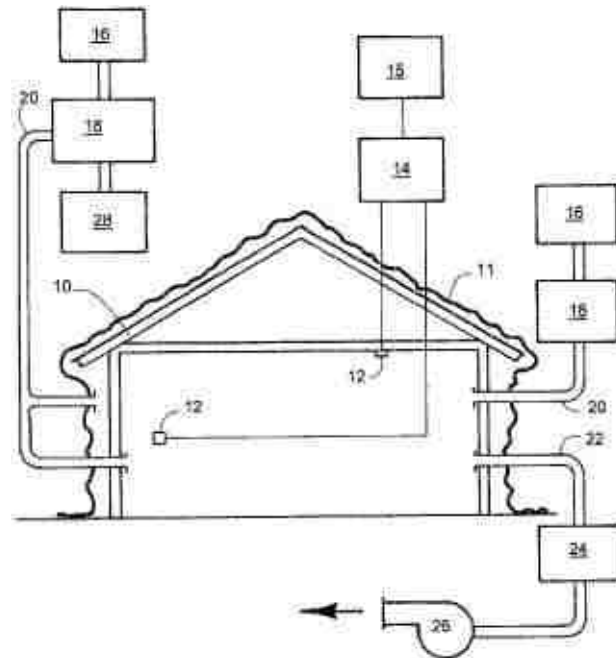
CCI - [A01M19/00](#) ; [A01M21/04](#) ;
[A01M1/2094](#) ; [A01M1/24](#)

CCA - [A01M2200/011](#) ;
[A01M2200/012](#)

PA - (B2)
HEDMAN DAVID [US]; SEARS TROY [US]; TPE ASSOCIATES LLC [US]

TI - (A1 B2)
Method of killing organisms and removal of toxins in enclosures

AB - (A1 B2)
A method and kit of components for destroying organisms and



toxins in from an enclosure such as a building. Temperature sensing probes are installed in the enclosure to indicate structure temperature and a recorder is used to record the temperature of said sensing probes in real time. Hot air is introduced into the enclosure through one or more ducts to raise the structure temperature to at least about 120 DEG F., as monitored by the temperature sensing probes. This is sufficient to kill essentially all insects, bacteria, virus, dust mites, spiders, **silver** fish, fungi and toxic molds such as aspergillus oryzae, aspergillus terreus, aspergillus versicolor, cladosporium herbarum, stachybotrys chartarum, penicillium aurantiogriseum, penicillium chrysogenum, penicillium glabrum and fusarium **oxysporum**. and the like. The air can exit through open doors and windows or through ducts to a filter assembly that captures the remains of the organisms. Ozone may be added to the heated air to improve efficiency. Preferably, air when extracted from an egress duct downstream of the filters improves air flow through the enclosure and filters. A typical building can be treated in six to eight hours.

[SS 21] oxysporum and silver and nanoparticle

Results in EPODOC 0

[SS 22] silver and nanoparticles and oxysporum

Results in EPODOC 2

**1/2** © EPODOC / EPO

PN - [IN557CHE2013](#) A 20150807

PR - IN2013CHE557 20130211

AP - IN2013CHE557 20130211

DT - I

PA - THOOMATTI SUDHARSAN ANITHA [IN]; PERAMACHI PALANIVELU DR [IN]

TI - KERATINASE BASED NANOFORMULATION FOR THE TREATMENT OF PSORIASIS

AB - This invention describes a treatment for psoriasis (a skin disorder) with the keratinase enzyme based nanoformulation. Keratinase enzyme (EC 3.4.99.11) from the fungus *Aspergillus parasiticus* was purified to homogeneity by conventional techniques and used for making nanoformulation with the **silver nanoparticles**. The **silver nanoparticles** were biologically synthesized from the fungus *Fusarium oxysporum*. The keratinase nanoformulation was made by mixing the purified enzyme with **silver nanoparticles** and this nanoformulation is named as 'Nanozyme-K'. It was found that the **silver nanoparticles** did not have any inhibitory effect on the purified keratinase activity and in fact it improved the storage stability of the nanoformulation. Psoriatic samples were collected from patients and the psoriatic proteins were examined by SDS polyacrylamide gel electrophoresis. It was confirmed by MALDI-MS analysis that all the psoriatic proteins belong to keratins of various types. The Nanozyme-K effectively digested the keratins of psoriatic scales which were confirmed by SDS-PAGE analysis. It was found that the keratinase nanoformulation degraded the psoriatic keratins completely and keratin bands were not observed after digestion in SDS-PAGE analysis. The efficacy of the Nanozyme-K was tested out on dermatitis induced BALB/c mice. About 36% reduction in ear swelling was observed after Nanozyme-K treatment. Thus, it confirms the Nanozyme-K possesses good antipsoriatic activity. As it is a gentle, non invasive technique it can be recommended for psoriatic patients even on long term basis without any possible side effects. Moreover, as it is a topical application, it will not have any possible adverse effect(s) like most of the drugs recommended.

2/2 © EPODOC / EPO

PN - [TW200902722](#) A 20090116

PR - TW20070125134 20070710

AP - TW20070125134 20070710

DT - I

PA - YAO GUO-SHAN [TW]

TI - Method for utilizing microorganisms for biosynthesizing antibacterial agent having **silver nanoparticles**

AB - This invention discloses a method for utilizing microorganisms for biosynthesizing antibacterial agent having **silver nanoparticles**, particularly mixing a fungi (*fusarium oxysporum* f.sp.lycopersici) with **silver** nitrate solution at a certain ratio to directly perform an in-vitro biosynthesis reaction, thereby producing **silver** nanoparticles. The method has advantages of simple manipulation, convenience, environment friendly and without producing polluted compositions and waste

disposals.

[SS 23]