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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

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Michelle K. Lee

Director of the United States Patent and Trademark Office



US009198418B2

(12) **United States Patent**
Romano

(10) **Patent No.:** **US 9,198,418 B2**
(45) **Date of Patent:** **Dec. 1, 2015**

(54) **HIGH ACTIVITY ANTIPARASITIC COMPOSITION AGAINST *RHYNCHOPHORUS FERRUGINEUS***

FOREIGN PATENT DOCUMENTS

WO WO2010/101659 * 9/2010

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OTHER PUBLICATIONS

(73) Assignee: **ROMANO NATUR GMBH**, Ehrendingen (CH)

Kaakeh, W., "Toxicity of imidacloprid to developmental stages of *Rhynchophorus ferrugineus* (Curculionidae: Coleoptera): Laboratory and field tests;" Crop Protection, 2006, vol. 25, pp. 432-439.

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Dembilio, Oscar, et al., "Field efficacy in imidacloprid and *Steinernema carpocapsae* in chitosan formulation against the red palm weevil *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae) in Phoenix canariensis," Pest Management Science, 2010, vol. 66, pp. 365-370.

(21) Appl. No.: **14/240,078**

Al-Shawaf, Abdul-Monem, A., "Toxicity of Certain Insecticides to *Rhynchophorus ferrugineus* in Relation to Acetylcholinesterase (AChE) and Monooxygenases (MFOs) Activities," Kingdom of Saudi Arabia, King Saud University, College of Food Sciences and Agriculture, 2004.

(22) PCT Filed: **Aug. 14, 2012**

Llacer, E., et al., "Evaluation of the Efficacy of an Insecticidal Paint Based on Chlorpyrifos and Pyriproxyfen in a Microencapsulated Formulation Against *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae)," Journal of Economic Entomology, 2010, vol. 103(2), pp. 402-408.

(86) PCT No.: **PCT/IB2012/054135**

§ 371 (c)(1),
(2), (4) Date: **Feb. 21, 2014**

Hernandez-Marante, D., et al., "Control of red palm weevil (*Rhynchophorus ferrugineus* Olivier) using trunk injections and foliar sprays," Boletín de Sanidad Vegetal, 2003, vol. 29, No. 4, pp. 563-573.

(87) PCT Pub. No.: **WO2013/027154**

PCT Pub. Date: **Feb. 28, 2013**

* cited by examiner

(65) **Prior Publication Data**

US 2014/0220137 A1 Aug. 7, 2014

(30) **Foreign Application Priority Data**

Aug. 22, 2011 (WO) PCT/IB2011/053680

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(51) **Int. Cl.**

A01N 57/16 (2006.01)
A01N 51/00 (2006.01)
A01N 43/30 (2006.01)
A01N 53/00 (2006.01)
A01N 43/80 (2006.01)

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(52) **U.S. Cl.**

CPC **A01N 43/30** (2013.01); **A01N 43/80** (2013.01); **A01N 51/00** (2013.01); **A01N 53/00** (2013.01); **A01N 57/16** (2013.01)

(57) **ABSTRACT**

Synergistic composition able to rapidly and efficiently terminate *Rhynchophorus ferrugineus* infestation, in palms or other species suffering from this parasite. The composition comprises one or more among permethrin, cypermethrin, lambda-cyhalothrin; one or more among chlorpyrifos methyl, and chlorpyrifos ethyl; furthermore, benzisothiazolin-3-one, piperonyl butoxide, imidacloprid. The parasite dies shortly after contact with the product, infestation is terminated, and the palm remains protected against new attacks for a long time; the product is not toxic to the palm, on the contrary the plant recovers a level of health even higher than the initial one.

(58) **Field of Classification Search**

CPC **A01N 25/00**
See application file for complete search history.

(56) **References Cited**

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10 Claims, No Drawings

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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY.DOCKET.NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/954,610, 11/30/2015, 1629, 0.00, T7781-00502, 17, 1

CONFIRMATION NO. 4972

FILING RECEIPT



11753
DUANE MORRIS LLP (prev. Boca Raton)
IP DEPARTMENT
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103-4196

Date Mailed: 12/11/2015

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Assignment For Published Patent Application Romano Natur GmbH, Ehrendingen, SWITZERLAND

Power of Attorney: None

Domestic Priority data as claimed by applicant
This application is a CON of 14/240,078 02/21/2014 PAT 9198418
which is a 371 of PCT/IB12/54135 08/14/2012

Foreign Applications (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.)
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Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

HIGH ACTIVITY ANTIPARASITIC COMPOSITION AGAINST RHYNCHOPHORUS FERRUGINEUS

Preliminary Class

514

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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