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(12) **United States Patent**
Calderari et al.

(10) **Patent No.:** **US 8,598,219 B2**
(45) **Date of Patent:** ***Dec. 3, 2013**

- (54) **LIQUID PHARMACEUTICAL FORMULATIONS OF PALONOSETRON**
- (71) Applicants: **Helsinn Healthcare S.A.**, Lugano (CH); **Roche Palo Alto LLC**, Palo Alto, CA (US); **Simone Macciocchi**, Melide (CH); **Giulio Macciocchi**, Breganzona (CH)
- (72) Inventors: **Giorgio Calderari**, Rancate (CH); **Daniele Bonadeo**, Casalzuigno (IT); **Roberta Cannella**, Varese (IT); **Alberto Macciocchi**, Melide (CH); **Andrew Miksztal**, Palo Alto, CA (US); **Thomas Malefyt**, Carmel Valley, CA (US); **Kathleen M Lee**, Palo Alto, CA (US); **Carmine Panuccio**, Casnate con Bernat (IT)
- (73) Assignees: **Helsinn Healthcare SA**, Lugano/Pazzallo (CH); **Roche Palo Alto LLC**, Palo Alto, CA (US)

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

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(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation-in-part of application No. 13/087,012, filed on Apr. 14, 2011, now Pat. No. 8,518,981, which is a continuation of application No. 11/186,311, filed on Jul. 21, 2005, now Pat. No. 7,947,724, which is a continuation of application No. PCT/EP2004/000888, filed on Jan. 30, 2004.

(60) Provisional application No. 60/444,351, filed on Jan. 30, 2003.

(51) **Int. Cl.**
A01N 43/52 (2006.01)

(52) **U.S. Cl.**
USPC **514/397**

(58) **Field of Classification Search**
USPC 514/397
See application file for complete search history.

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(74) Attorney, Agent, or Firm — Clark G. Sullivan; Troutman Sanders LLP

(57) **ABSTRACT**

The present invention relates to shelf-stable liquid formulations of palonosetron for reducing chemotherapy and radiotherapy induced emesis with palonosetron. The formulations are particularly useful for oral liquid medication.

Dr. Reddy's Laboratories, Ltd., et al.
v.



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(57) **ABSTRACT**

The present invention relates to shelf-stable liquid formulations of palonosetron for reducing chemotherapy and radiotherapy induced emesis with palonosetron. The formulations are particularly useful in the preparation of intravenous and oral liquid medicaments.

8 Claims, No Drawings

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