



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

(10) **Patent No.:** **US 9,066,980 B2**
(45) **Date of Patent:** ***Jun. 30, 2015**

(54) **LIQUID PHARMACEUTICAL FORMULATIONS OF PALONOSETRON**
(71) Applicants: **Helsinn Healthcare SA**, 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 Malefy**, Carmel Valley, CA (US); **Kathleen M Lee**, 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.

(21) Appl. No.: **13/902,299**

(22) Filed: **May 24, 2013**

(65) **Prior Publication Data**
US 2013/0289065 A1 Oct. 31, 2013

Related U.S. Application Data
(63) Continuation of application No. 13/901,437, filed on May 23, 2013, now Pat. No. 8,598,219, which is a 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.**
A61K 31/47 (2006.01)
A61K 47/26 (2006.01)
A61K 31/473 (2006.01)
A61K 47/18 (2006.01)
A61K 47/12 (2006.01)
A61K 47/00 (2006.01)
A61K 47/02 (2006.01)
A61K 9/00 (2006.01)

(52) **U.S. Cl.**
CPC **A61K 47/26** (2013.01); **A61K 47/183** (2013.01); **A61K 47/12** (2013.01); **A61K 47/00** (2013.01); **A61K 31/473** (2013.01); **A61K 47/02** (2013.01); **A61K 9/0019** (2013.01); **A61K 9/0095** (2013.01)

(58) **Field of Classification Search**

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



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