



US011400101B2

**(12) United States Patent**  
**Khairatkar-Joshi et al.****(10) Patent No.: US 11,400,101 B2****(45) Date of Patent: \*Aug. 2, 2022****(54) TREATMENT OF ALLERGIC RHINITIS  
USING A COMBINATION OF MOMETASONE  
AND OLOPATADINE****(71) Applicant: GLENMARK SPECIALTY S.A., La  
Chaux-de-Fonds (CH)****(72) Inventors: Neelima Khairatkar-Joshi, Thane (IN);  
Abhay Kulkarni, Navi Mumbai (IN);  
Dinesh Pradeep Wale, Maharashtra  
(IN); Vikram M. Bhosale, Mumbai  
(IN); Piyush Agarwal, Mumbai (IN);  
Patrick Keohane, London (GB);  
Sudeesh K. Tantry, Jamison, PA (US);  
Chad Oh, San Francisco, CA (US)****(73) Assignee: GLENMARK SPECIALTY S.A., La  
Chaux-de-Fonds (CH)****(\*) 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 dis-  
claimer.**(21) Appl. No.: 17/003,584****(22) Filed: Aug. 26, 2020****(65) Prior Publication Data**

US 2021/0077506 A1 Mar. 18, 2021

**Related U.S. Application Data****(63)** Continuation of application No. 15/903,597, filed on  
Feb. 23, 2018, now Pat. No. 10,758,550, which is a  
continuation-in-part of application No. 15/842,063,  
filed on Dec. 14, 2017, now Pat. No. 10,653,661,  
which is a continuation-in-part of application No.  
15/716,661, filed on Sep. 27, 2017, now abandoned,  
which is a continuation-in-part of application No.  
15/691,500, filed on Aug. 30, 2017, now abandoned,  
which is a continuation-in-part of application No.  
15/636,120, filed on Jun. 28, 2017, now Pat. No.  
10,016,443, which is a continuation-in-part of  
application No. 14/682,001, filed on Apr. 8, 2015,  
now Pat. No. 10,548,907, which is a  
continuation-in-part of application No. 14/506,122,  
filed on Oct. 3, 2014, now Pat. No. 10,646,500.**(30) Foreign Application Priority Data**

Oct. 4, 2013 (IN) ..... 3174/MUM/2013

**(51) Int. Cl.****A61K 31/58** (2006.01)  
**A61K 31/335** (2006.01)  
**A61P 11/02** (2006.01)  
**A61P 27/14** (2006.01)  
**A61K 9/00** (2006.01)  
**A61P 37/08** (2006.01)  
**A61K 31/573** (2006.01)  
**A61M 11/00** (2006.01)  
**A61M 15/08** (2006.01)**(52) U.S. Cl.**CPC ..... **A61K 31/58** (2013.01); **A61K 9/0043**  
(2013.01); **A61K 31/335** (2013.01); **A61K**  
**31/573** (2013.01); **A61P 11/02** (2018.01);  
**A61P 27/14** (2018.01); **A61P 37/08** (2018.01);  
**A61M 11/007** (2014.02); **A61M 15/08**  
(2013.01)**(58) Field of Classification Search**CPC .... **A61K 31/335**; **A61K 31/573**; **A61K 31/58**;  
**A61K 9/0043**; **A61M 11/007**; **A61M**  
**15/08**; **A61P 11/02**; **A61P 27/14**; **A61P**  
**37/08**

See application file for complete search history.

**(56) References Cited****U.S. PATENT DOCUMENTS**4,871,865 A 10/1989 Lever, Jr. et al.  
4,923,892 A 5/1990 Lever, Jr. et al.  
5,837,699 A 11/1998 Segueira et al.  
6,127,353 A 10/2000 Yuen et al.  
6,841,146 B2 1/2005 Haslwanter et al.  
7,977,376 B2 7/2011 Singh et al.  
8,399,508 B2 3/2013 Singh et al.  
9,078,923 B2 7/2015 Dhuppad et al.  
2004/0097474 A1 5/2004 Cagle et al.  
2006/0110328 A1 5/2006 Cagle et al.  
2008/0058296 A1 3/2008 Chaudry  
2011/0257115 A1 10/2011 Leighton  
2012/0121653 A1 5/2012 Jenkins et al.  
2015/0099725 A1 4/2015 Khairatkar-Joshi et al.  
2015/0250718 A1 9/2015 Dhuppad et al.

(Continued)

**FOREIGN PATENT DOCUMENTS**EP 2014305 A1 1/2009  
KR 101304341 B1 9/2013  
WO WO-1995020393 A1 8/1995

(Continued)

**OTHER PUBLICATIONS**Amrol, et al., Intranasal Steroids for Ocular Symptoms in Allergic  
Rhinitis, [http://www.jwatch.org/jw201006100000003/2010/06/10/](http://www.jwatch.org/jw201006100000003/2010/06/10/intranasal-steroids-ocular-symptoms-allergic)  
intranasal-steroids-ocular-symptoms-allergic.

(Continued)

*Primary Examiner* — Umamaheswari Ramachandran**(74) Attorney, Agent, or Firm** — Blank Rome LLP**(57) ABSTRACT**The present invention relates to a method of treating allergic  
rhinitis in a subject (e.g., a pediatric human subject) in need  
thereof comprising nasally administering to the subject an  
effective amount of a fixed-dose pharmaceutical composi-  
tion comprising mometasone or its salt and olopatadine or its  
salt.**26 Claims, 3 Drawing Sheets**