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RESEARCH**

APPLICATION NUMBER:
203168Orig1s000

SUMMARY REVIEW

NDA 203168 Prolensa (bromfenac ophthalmic solution) 0.07%

Indication: For the treatment of postoperative inflammation and reduction of ocular pain in patients who have undergone cataract surgery

Summary Review for Regulatory Action

| | |
|---|---|
| Date | See electronic stamp date |
| From | Renata Albrecht, MD Division of Transplant and Ophthalmology Products |
| Subject | Division Director Summary Review |
| BLA Number | NDA 203168 |
| Related IND | IND 60295 |
| Related NDA | NDA 21664, NDA 20535 |
| Review type | Standard |
| Applicant Name | Bausch & Lomb, previously ISTA |
| Date of Submission | June 5, 2012 |
| Date of Receipt | June 7, 2012 |
| PDUFA Goal Date | April 7, 2013 |
| Proprietary Name / Established (USAN) Name | Prolensa bromfenac |
| Formulation Concentration Dosing Regimen | Topical ophthalmic solution 0.07% One drop in the affected eye one time daily beginning 1 day prior to cataract surgery, continued on the day of surgery, and through the first 14 days of the post-operative period. |
| Therapeutic Class Proposed Indication | Nonsteroidal anti-inflammatory agent For the treatment of postoperative inflammation and reduction of ocular pain in patients who have undergone cataract surgery |
| Action for NME | <i>Approval</i> |

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| Material Reviewed/Consulted | Names of discipline reviewers |
|---|---|
| OND Action Package, including: | |
| Medical Officer Review | Bill Boyd 3/20/2013 |
| CDTL Review | Bill Boyd 4/5/2013 |
| Deputy Director Review | Wiley Chambers 4/5/2013 |
| Statistical Review | Abel Eshete, Yan Wang 3/4/2013 |
| Team Leader Review | Yan Wang, Daphne Lin 4/4/2013 |
| Pharmacology/Toxicology Review | Robeena Aziz, Lori Kotch 3/4/2013 |
| Clinical Pharmacology Review | Yoriko Hayigaya, Philip Colangelo 2/19/2013 |
| ONDQA CMC Review | Rao Kambhampati, Rapti Madurawe 2/26/2013, 4/4/2013 Rapti Madurawe 4/5/2013 |
| Quality Microbiology Review | Stephen Langille, Bryan Riley 1/22/2013 |
| OSI/DGCPC | Kassa Ayalew, Susan Leibenhaut, Susan Thompson 2/4/2013, 2/20/2013 |
| OSE/DMEPA Proprietary Name Letter | Jung Lee, Zachary Oleszczuk, Carol Holquist 11/7/2012 Carol Holquist 11/9/2012 |
| Final Review | Jung Lee, Jamie Wilkins Parker 3/4/2013 |
| OSE/DMEPA Label, Labeling and Packaging Review | Jung Lee, Jamie Wilkins Parker, Carol Holquist 2/8/2013 |
| OPDP/DPDP Review | Christine Corser 3/20/2013 |
| Pediatric Review Committee | This application did not trigger PREA |

OND=Office of New Drugs

CDTL=Cross-Discipline Team Leader

ONDQA=Office of New Drug Quality Assessment

OSI/DGCPC=Office of Scientific Investigations/Division of Good Clinical Practice Compliance
(formerly Division of Scientific Investigation (DSI))

OSE=Office of Surveillance and Epidemiology

OMEARM=Office of Medication Error Prevention and Risk Management

DMEPA=Division of Medication Error Prevention and Analysis

OPDP/DPDP=Office of Prescription Drug Promotion/Division of Professional Drug Promotion;
formerly, DDMAC=Division of Drug Marketing, Advertising and Communication

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1. Summary and Recommendations

Bromfenac ophthalmic solution, 0.07% has been shown to be effective and safe for the treatment of pain and inflammation associated with cataract surgery based on two Phase 3 trials showing superiority of the product to vehicle. The treatment regimen evaluated in these trials and recommended for approval is one drop in the affected eye one time daily beginning 1 day prior to cataract surgery, continued on the day of surgery, and through the first 14 days of the post-operative period.

Key Efficacy Results of Phase 3 Studies in Prolensa NDA (ITT Population) Proportion of Subjects with Cleared Ocular Inflammation (0 cell and no flare)

| Study | Visit | Bromfenac 0.07% | Vehicle | Difference (%) (Asymptotic 95% CI) |
|---|--------|-----------------|----------------|---------------------------------------|
| Study 1 | Day 8 | 27/112 (24.1%) | 7/108 (6.5%) | 17.6 (8.4, 26.8) |
| | Day 15 | 51/112 (45.5%) | 14/108 (13.0%) | 32.5 (21.4, 43.8) |
| Study 2 | Day 8 | 33/110 (30.0%) | 14/110 (12.7%) | 17.3 (6.7, 27.9) |
| | Day 15 | 50/110 (45.4%) | 30/110 (27.3%) | 18.2 (5.7, 30.7) |
| Proportion of Subjects Who Were Pain Free | | | | |
| Study 1 | Day 1 | 91/112 (81.3%) | 47/108 (43.5%) | 37.7 (25.9, 49.6) |
| Study 2 | Day 1 | 84/110 (76.4%) | 61/110 (55.5%) | 20.9 (8.7, 33.1) |

The safety of the 0.07% bromfenac formulation was evaluated in 222 patients treated with this product and compared to 218 patients who received vehicle. This represents a new concentration of bromfenac. The safety of bromfenac 0.09% given twice daily (Xibrom) and once daily (Bromday) was evaluated in NDA 21-664 for the same indication(s).

The labeling will include information on adverse reactions in these trials, and other safety information. The Warnings and Precautions includes information that the product contains sodium sulfite and may cause allergic reactions in susceptible people, NSAIDs may slow or delay healing, there is a potential cross-sensitivity with aspirin, increase bleeding time, and potential for keratitis and corneal erosion, ulceration and perforation. Common adverse reactions after cataract surgery associated with Prolensa use included anterior chamber inflammation, foreign body sensation, eye pain, photophobia, and blurred vision. These adverse reactions were reported in 3 to 8% of patients.

All reviewers recommend approval. OSI recommends that clinical site data are considered reliable. As summarized in the CMC review, OC recommends that manufacturing facilities are

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