pretreatment is the reduction of Cyclosporine stinging in chronic dry eye disease (62). *Lotemax* ophthalmic suspension, 0.5% completed Phase II studies (ClinicalTrials.gov Identifier: NCT00560638) in July 2011. From the results it was confirmed its ability to reduce the eye inflammation rapidly, causing limited side effects. Additionally in 2012 Wan and colleagues performed a study on 34 patients, confirming the efficacy of topical 0.5% loteprednoletabonate ophthalmic suspension for the treatment of moderate dry eye (63).

ECABET-SODIUM

Bausch & Lomb Inc. is developing a prescription eye drop for the treatment of dry eye syndrome called *Ecabet* (Accession Number: DB05265). Sulfodehydroabietic acid monosodium salt pentahydrate or ecabet sodium, represents a new class of small diffusible molecules capable of increasing the quantity and quality of mucin produced by conjunctival goblet cells and corneal epithelia (Figure 8) (64). This ability makes the compound quite interesting as a treatment for muco-deficient dry eye. *Ecabet* possible mechanism of action is through the targeting of the prostaglandin E2 pathway, inhibiting the pepsin formation, increasing blood flow and downregulating the reactive oxygen species on the ocular surface. (65). It is marketed in Japan by Senju Pharmaceutical as an oral agent for gastric ulcers and gastritis treatment (66). Bausch & Lomb organized from April 2008 to January 2013 Phase II efficacy and safety studies for *Ecabet* ophthalmic solution with the purpose of treating the dry eye syndrome (ClinicalTrials.gov Identifier: NCT00667004) in 183 patients. Bausch & Lomb Inc. did not yet distribute results information.

BOL-303242-X

Pharmaceutical R&D, Bausch & Lomb Inc., presented the drug BOL-303242-X (mapracorat) (Figure 9) a selective glucocorticoid receptor agonist, as a possible treatment for inflammatory skin and eye diseases. This agonist is binding to the glucocorticoid receptor with an affinity similar to dexamethasone. Zhang and colleagues demonstrated during *in vitro* and *in vivo* studies that BOL-303242-X inhibited interleukin-1β (IL-1β) and induced decreases of inflammation in human corneal epithelial cells. It is possible that BOL-303242-X is acting as an anti-inflammatory agent in various primary human ocular cells with similar activity to classical steroids. As mechanism of action it is suggested its interference in human ocular cells MAPK (p38 and JNK) and NFκB signaling pathways (67). Vollmer T.R.