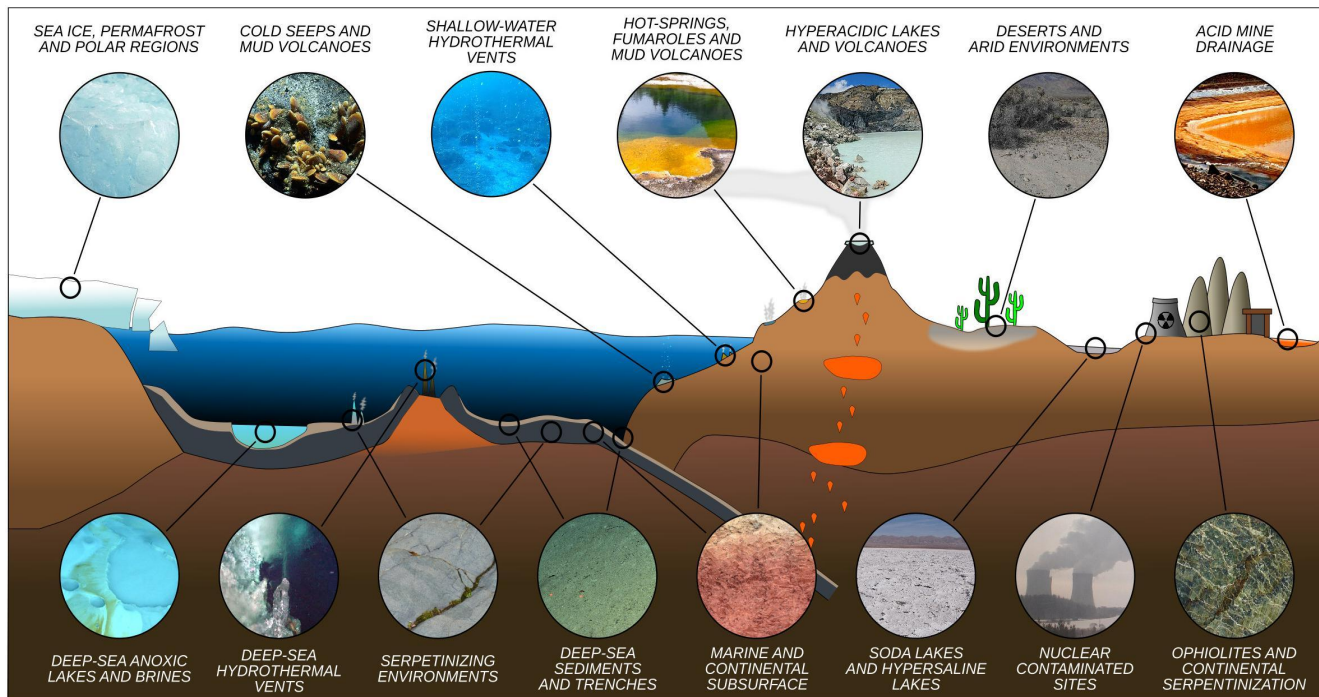




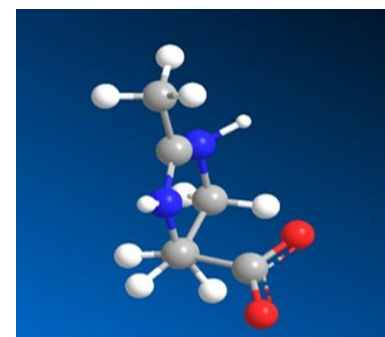
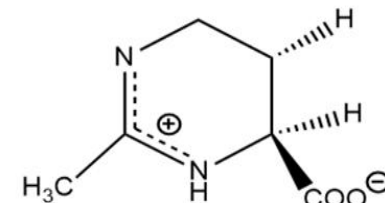
# Ectoine

Cell protection & Protein stabilization

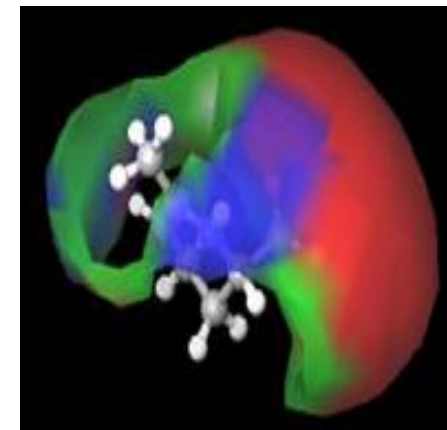
# Ectoine



Ectoine structure formula



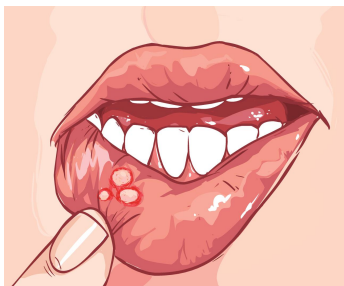
Ectoine balls model



Ectoine electron distribution diagram

Ectoine-MD is a highly pure Ectoine developed by Bloomage professional fermentation platform technology, with high stability and safety profile. As a compatible solute within extremophiles survived under extreme conditions, ectoine can protect cells from external agents such as allergic stimuli and stabilize macromolecules such as functional enzymes.

# Applications of Ectoine



Aphthous ulcer



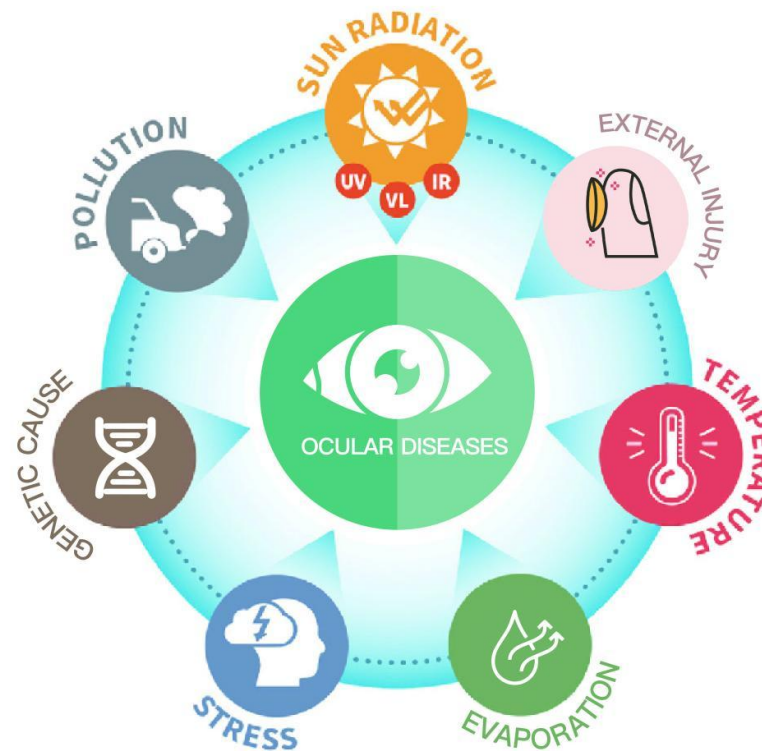
Sore Throat



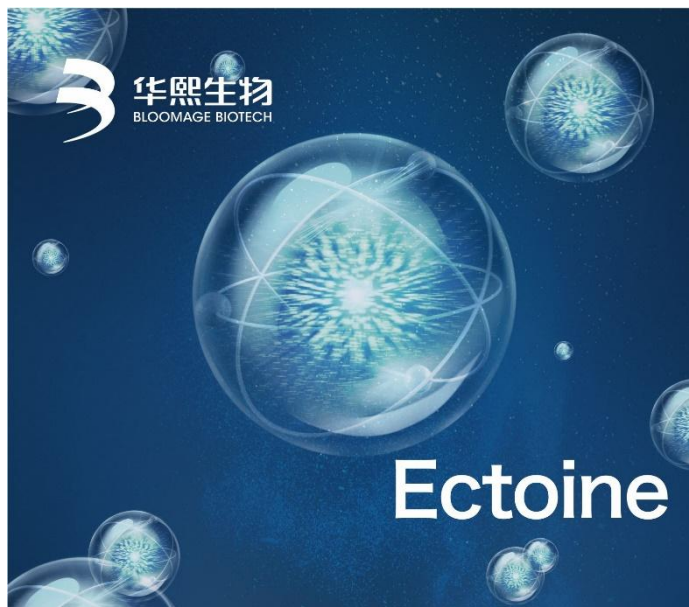
Atopic dermatitis  
(eczema)



Cradle cap



- Eye drops
- Contact lens solutions
- Oral care and skin care
- Private care



## Bloomecto™ Ectoine

Cell Protection & Protein Stabilization

### Application

- Eye Drops
- Contact Lens Solutions
- Nasal and Oral Care
- Skin Care
- Private Care



## Bloomage Ectoine

- HA and Ectoine can both stabilize the tear film. Ectoine stabilizes the lipid layer and HA's moisturizing property stabilizes the tear film by extending tear film Break-up time(BUT).
- Due to high viscous and lubricating property of HA, it can make Ectoine last longer at the mucous membrane, increasing ectoine efficiency.

# Safety Evaluations

Bloomecto™  
is NOT  
cytotoxic

There were **NO significant cytotoxic** reaction at concentration 0.05%-2.0% (w/v) of ectoine on human corneal epithelial cells.

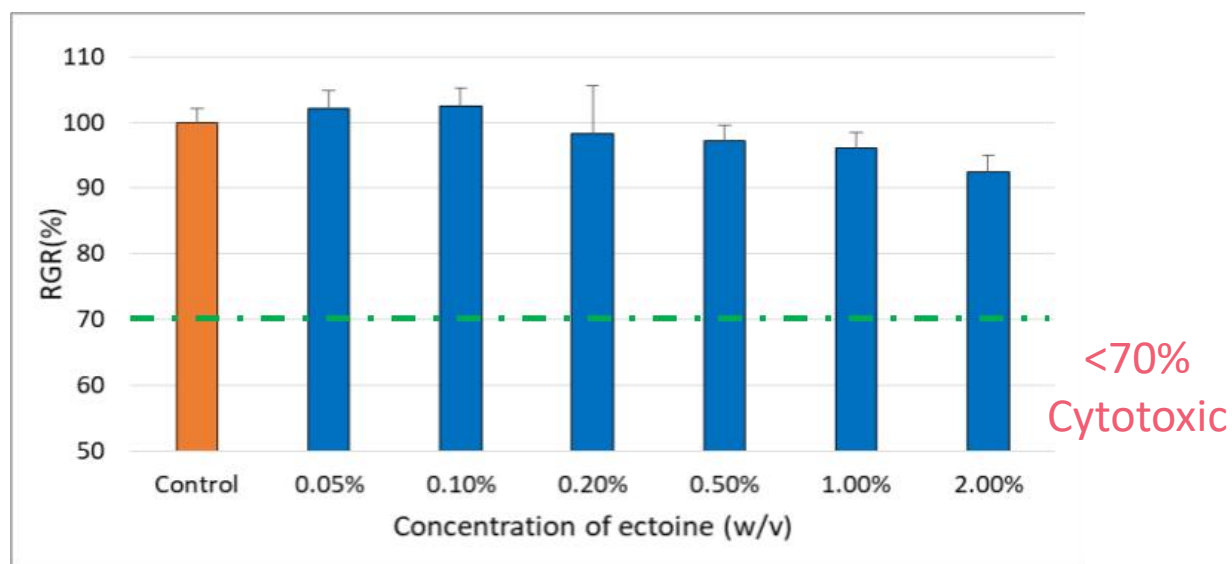


Fig.1 Relative growth rate (RGR) of HCEC treated with ectoine

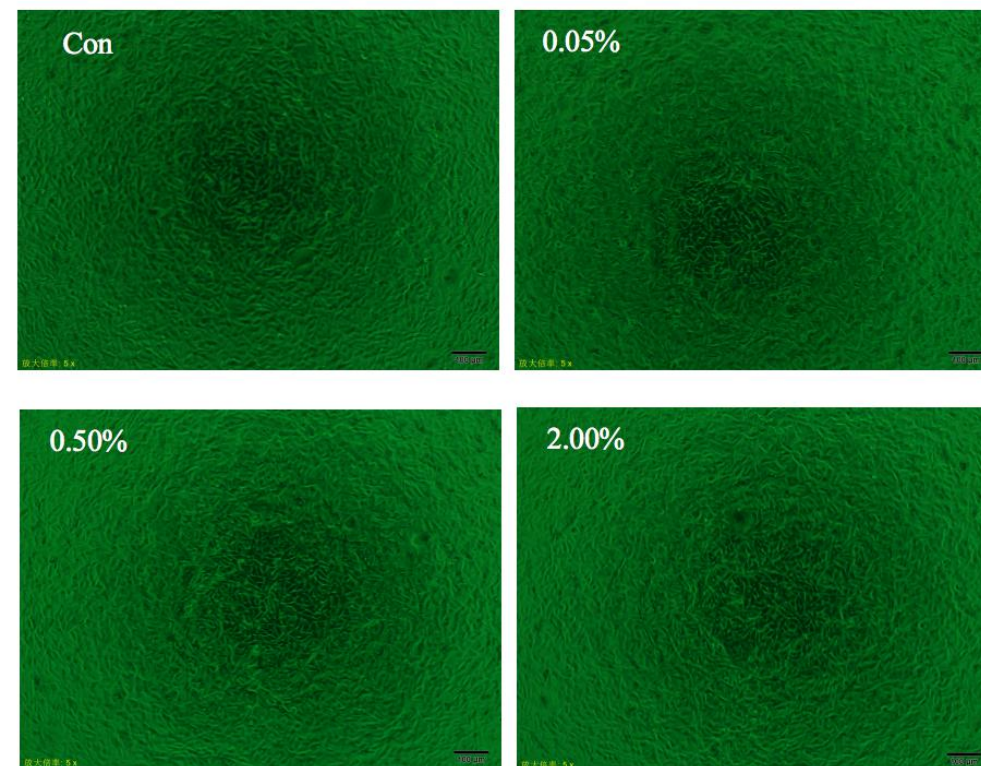
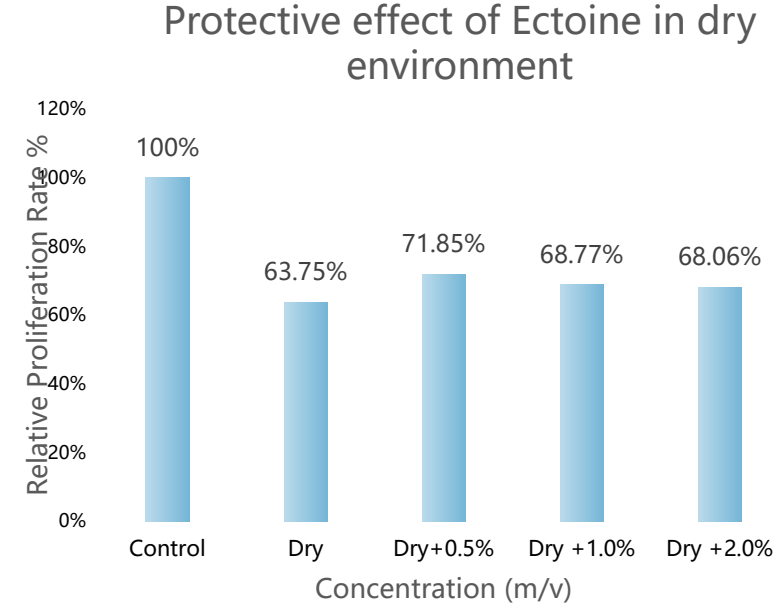
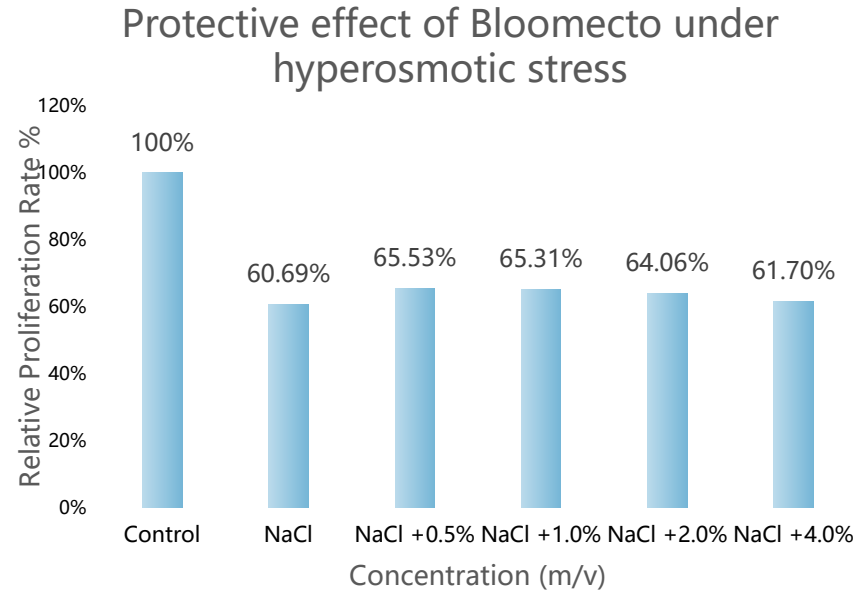


Fig.2 RGR image of HCEC treated with ectoine

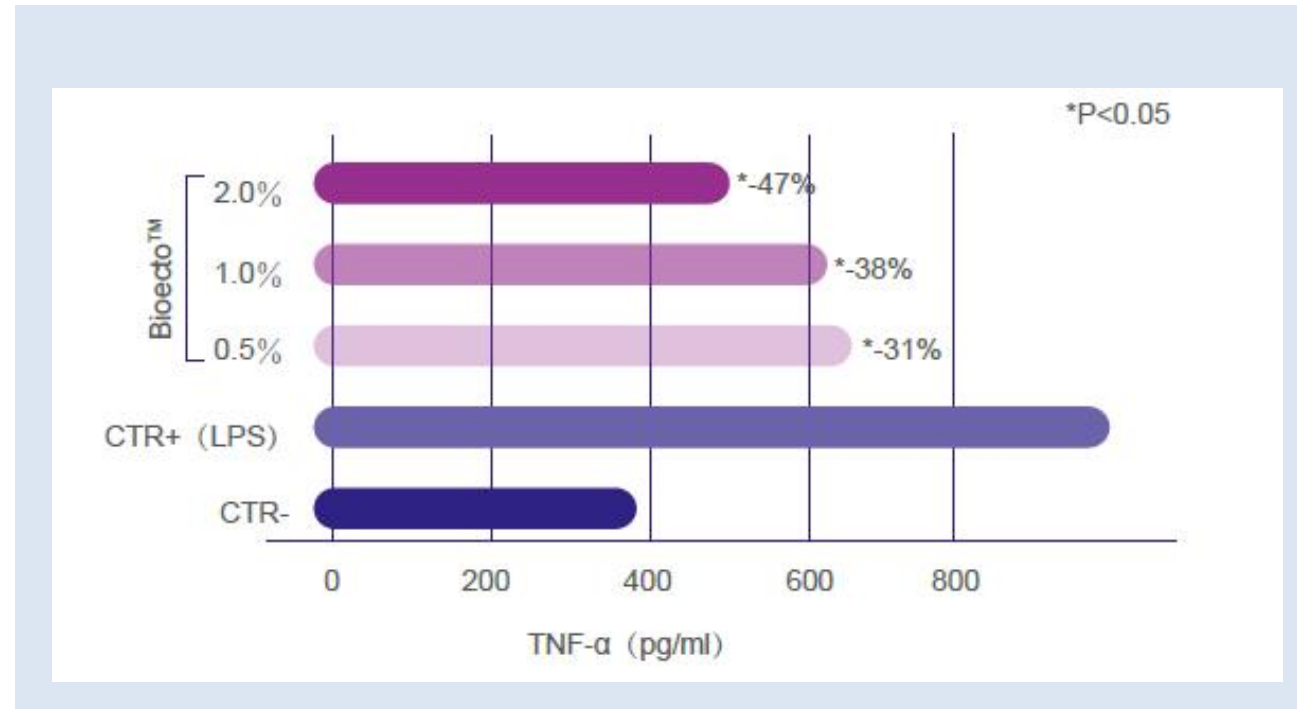
# Bloomecto™ protects corneal epithelial Cells



- The addition of different concentrations of Ectoine increased the cell activity.

- The proliferation rate of corneal epithelial cells decreased by 36.25% after dry injury, and the proliferation rate increased by adding different concentrations of Ectoine.

# Ectoine inhibits the release of inflammatory factor



*LPS(Lipopolysaccharide), test model: "Mice macrophages Raw 264.7"*

The test showed that, Ectoine in the range of concentration 0.5%-2.0% had a good inhibiting effect on TNF- $\alpha$  which indicates its anti-inflammatory property.