

MUCO-LAST paste

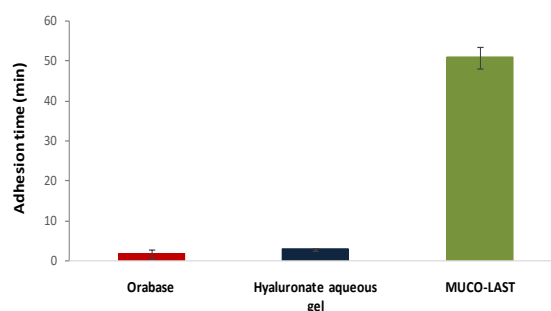
Towards the revolution in pharmaceutical development of oral mucoadhesive technologies
New hydrophilic mucoadhesive vehicle for maintaining topically applied drugs on mucosal surfaces

Background

There is an unmet need to increase the local mucosal bioavailability of drugs by improving the mucoadhesion at the delivery site while providing pleasant organoleptic properties and good spreadability when in the buccal cavity. One of the big **challenges** of the pharmaceutical industry has been to overcome the problems derived from the lack of stability, viscosity changes and consequently loss of mucoadhesion of many adhesive pastes (based on a combination of adhesive gums resuspended in anhydrous hydrophilic water miscible solvents (i.e., glycerol, PEG, PG, etc.))
Bionanoplus, has designed a new oral drug delivery paste that solves all these problems.

Innovation

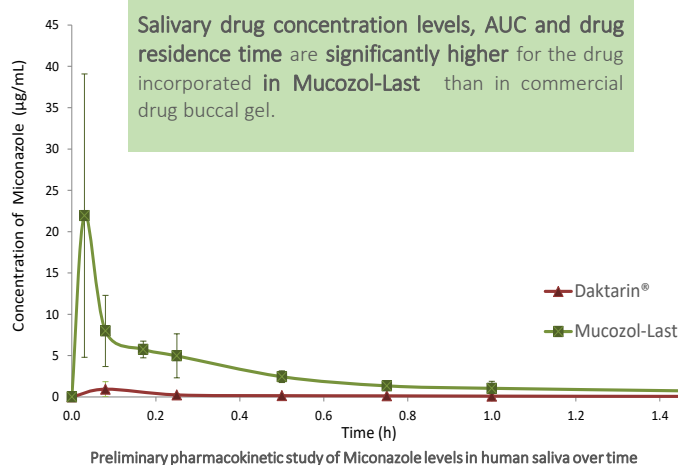
MUCO-LAST is a new drug delivery system. A **stable, adhesive and anhydrous** hydrophilic paste composed by anhydrous hydrophilic water miscible solvents and adhesive gums that are combined to obtain a new paste that presents **better adhesion and better organoleptic characteristics** compared with Orabase® and other oral aqueous gels (hyaluronate).



Fields of application

MUCO-LAST paste: can be used to incorporate i) drugs, ii) natural actives or iii) as base for galenical formulations. These formulations are suitable for buccal, oral, vaginal and rectal applications. Bionanoplus has designed a new formulation based in MUCO-LAST paste containing natural actives for treatment of Recurrent Aphthous Stomatitis (RAS). In addition, two formulations with different drugs were designed.

- **CAX-Last:** carbenoxolone (hydrophilic anti-inflammatory drug) paste for local buccal treatment of RAS.
- **Mucozol-Last:** miconazole (hydrophobic, anti-fungal drug) paste for treatment of buccal and oral fungal infections.



Advantages

- ✓ Anhydrous, hydrophilic and non-oily adhesive paste with excellent organoleptic properties.
- ✓ Higher mucoadhesive properties and longer mucosal residence time compared with market gold standards.
- ✓ All excipients are cheap, GRAS listed and approved for both pharmaceutical and food use.
- ✓ Suitable for hydrophobic and hydrophilic drugs.

IP: Intellectual property rights until 2036. (Patent application number EP16382136)

BIONANOPLUS

Bionanoplus is a company specialized in providing solutions to drug delivery problems. Bionanoplus has developed different technology platforms and products based on different mucoadhesive polymeric systems that allow tackling delivery, processing, and efficacy issues of molecules with cheap and easy to scale-up technologies that fit market needs and regulatory requirements.

Bionanoplus is seeking for partner for out-licensing and/or product co-development