

ABSTRACT

Sublingual and buccal routes of represent alternative approaches of system drug administration. After a brief summary of essential information about the ways of drug penetration into the body the theoretical part of the work possess information on oromucosal barriers, particularly in relation to possible problems related to the physical properties of saliva and mucus.

The experiment was to verify the release and subsequent permeation albumin (BSA) through sublingual membrane in vitro was performed. Sublingual porcine (*Sus scrofa*, var. domestica) mucosa stored at - 20 ° C was used as biological membrane.

The content of the in vitro experiments was release and permeation using 16-fold and 32-fold layered nanomembrane carriers containing polyvinyl alcohol, polyethylene oxide and 30 percent of a mixture (1: 1) albumin BSA and fluorescently labelled bovine serum albumin (FITC-BSA). The liquid medium for the release was citrate-phosphate buffer pH 6.8, respectively its mixture with human saliva (1: 1) and the acceptor medium was HEPES buffer pH 7.4.

Multiple layered nanofibrous membrane was perfectly wetted immediately after the first contact with a small amount of buffer pH 6.8, resp., with saliva diluted by buffer. Release FICT-BSA was macroscopically observable due to yellow color arisen.

Sublingual membranes prepared by rapid freezing in liquid nitrogen, based on the permeation results of an in vitro experiment, seemed reliably intact for at least 6 hours permeation experiment.

BSA permeates through the sublingual membrane from all layered nanofiber bodies and solutions at total albumin level fluxes J about 10-20 micrograms/cm² .h⁻¹

No permeation reduction of BSA from the donor medium citrate-phosphate buffer pH 6.8 containing saliva (1: 1) was observed.