1. **ANION TRANSPORT STUDIES**
   1. **Preparation of Vesicles**

Using a rotary evaporator a chloroform solution of 1-palmitoyl-2-oleoyl-sn-glycero-3- phosphocholine (POPC) was evaporated in vacuo and the lipid film obtained was dried under high vacuum for at least 4 hours. POPC (1-palmitoyl-2-oleoyl-sn-glycero-3- phosphocholine) was supplied by Sigma-Aldrich or Genzyme and it was stored at –20°C as a solution in chloroform (500 mg POPC in 20 mL chloroform or 1 g POPC in 35 mL chloroform). The lipid film was rehydrated by careful vortexing with a sodium chloride solution (489 mM NaCl and 5 mM phosphate buffer, pH 7.2, ionic strength 500 mM). The lipid suspension was subjected to nine freeze-thaw cycles, where the suspension was alternatively allowed to freeze in a liquid nitrogen bath, followed by thawing in a mild water bath. Finally twenty nine extrusions were carried out through a 200 nm polycarbonate Nucleopore membrane using a LiposoFast Basic extruder (Aves tin, Inc.). The resulting unilamellar vesicles were dialyzed against NaNO3 solution (489 mM NaNO3 and 5 mM phosphate buffer, pH 7.2, ionic strength 500 mM) to remove the unencapsulated chloride.

* 1. **Chloride/nitrate transport assays**

Unilamellar POPC vesicles containing NaCl (prepared as described above) were suspended in a 489 mM NaNO3 solution buffered to pH 7.2 with sodium phosphate salts (5 mM buffer). The final lipid concentration per sample was 0.5 mM and the total volume 5 mL. A DMSO solution of the carrier molecule, typically 5 or 10 µL to avoid the influence of the solvent molecule in the assay, was added and the chloride release out of vesicles was monitored using a chloride selective electrode for 5 minutes. Then, the vesicles were lysed by adding 20 μl of polyoxyethylene(8)lauryl ether (0.232 mM in 7:1 water:DMSO v/v) or Triton-X (10% dispersion in water) and a total chloride reading was taken at t = 6 min. The initial value was set at 0 % chloride efflux and the final one was set as 100 % chloride efflux. All other data were calibrated to these points.