Berger et al. 1998, has described how fluoride (F−) can stimulate the CFTR channel. Forskolin is an activator of the CFTR channel. Forskolin works via activation of adenylate cyclase that results in the generation of cAMP, which in turn activates the protein kinase A (PKA) that phosphorylates both the R-domain and ATP binding and phosphorylation at the nucleotide-binding site (Carrano et al. 1995).

Here we demonstrate how QPatch HTX can be used for evaluation of pharmacological effects. QPatch is a useful tool in characterizing CFTR functionality. It is used in hit detection and compound validation in drug screening. As demonstrated by Turner et al. 2016, automated patch clamp platforms have become an indispensable tool for increasing throughput for CFTR study.

**Materials and methods**

The experiments described here were performed on CHO cells that have been exposed to reagents activating the adenylate cyclase pathway. After obtaining good membrane seals, forskolin was added to activate the CFTR channel. The ability of blocking the CFTR channel is very useful to treat secretory diarrhea.

**Discussion**

The Thiazolidinone CFTR inh-172 is an intracellular blocker and is moderately potent, but highly selective for CFTR channels. The compound works by occupying the ATP binding site on the intracellular face of the channel. As demonstrated by Taddei et al. 2004, the structures of the CFTR channel aligned well with the ATP binding site.

Furthermore, the success rate in these experiments was satisfactory considering the complexity of the target.

**References**


**Conclusion**

These experiments demonstrate that reliable recording with the inside-out patch-clamp technique can be performed on QPatch. We have shown that the overall success in obtaining stable seals and completed experiments was satisfactory. A number of parameters identified for the CHO cell line were studied and with high-quality results on QPatch.