Ion-Channel Library

ASINEX

The discovery of compounds that modulate the activity of ion channels remains a substantial challenge for the pharmaceutical industry. The target class is large, with wide-ranging interest for a host of different disease indications. However, the channels are somewhat heterogeneous in nature, with only fairly modest amounts of structural data available detailing ligand binding. Furthermore, it can be quite challenging to configure assays for high-throughput screening of the targets, limiting our ability to identify novel chemotypes through diversity screening and enhancing the need for focused screening sets.

Pharmacophore analyses of known blockers have revealed that these molecules have relatively low molecular weight, are rather hydrophobic, and generally have one polar group: basic nitrogen, primary amide group. Analyses also indicate that the synthesis of molecules capable of making multiple out-of-plane interactions can result in greater selectivity.

Based on these design principals and leveraging our expertise in Natural product chemistry, ASINEX has developed an Ion Channel library which exhibits broad target applicability in modulating various ion channels including voltage-gated potassium, sodium channels and T-type calcium channels.