Potassium channels: a big family, many different targets, great pharmacological opportunities

Aims & Scope:

The potassium channels family represents the most widely distributed among ion channels families. Thanks to this feature and to their ability of inducing hyperpolarization, potassium channels are involved in many physiologic processes such as tune of musculature, release of neurotransmitters, regulation of diuresis or glycemia and so on, and these properties make potassium channels suitable targets for many pharmacological approaches to different pathologies in several districts. The purpose of this issue is to offer a broad overview on the most important pharmacological tools, novel and well-known molecules, having potassium channels as therapeutic target in order to highlight promising drugs with exciting perspectives for the treatment of cardiovascular, neurological and metabolic diseases.

Keywords: KATP potassium channels, BKCa potassium channels, ROMK potassium channels, Kv potassium channels, Mito-K+ potassium channels.

Sub topics:

- Pharmacological and chemical aspects of drugs or new molecules targeting: ATP-sensitive (KATP) potassium channels.
- Large conductance Ca2+-activated (BKCa) potassium channels.
- Renal Outer Medullary (ROMK) potassium channels.
- Voltage-gated (Kv) potassium channels and mitochondrial potassium (Mito-K+) channels.

Tentative Publication Date: April 2017