PRESS RELEASE

Beactica scientists publish strategies for discovery of allosteric modulators

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Beactica, the Swedish fragment-based drug discovery company, today announced the publication of a key paper in Proceedings of the National Academy of Sciences*. The paper describes important work towards the discovery of novel drugs targeting ligand-gated ion channels, a significant family of drug targets involved in various neurological diseases. The study showcases the ability of Beactica's drug discovery platform to successfully identify and utilize novel binding sites on proteins of therapeutic relevance.

The publication outlines work of importance for the α7 nicotinic acetylcholine receptor which plays a crucial role in fast synaptic signalling in the central and peripheral nervous system. Specifically, the Beactica scientists applied an efficient and innovative SPR biosensor-based screening approach to identify novel allosteric modulators to this challenging drug target. Allosteric modulators are structurally different to native ligands of a receptor, and bind to other sites, resulting in alternative modes of action with different functional effects. The interaction characteristics of the identified allosteric modulators, as well as the structural details of their binding to the target, and their functional effects on signalling, have been analysed in detail by Beactica researchers and their collaborators. The study paves the way for development of novel allosteric modulators with therapeutic potential in a diverse range of inherited neurological disorders, including epilepsy. Beactica's approach for the identification of allosteric modulators can be applied also to other types of proteins, such as enzymes.

The research was performed in collaboration between Beactica and scientists at Janssen Research & Development, a division of Janssen Pharmaceutica NV (Belgium), Katholieke Universiteit Leuven (Belgium) and HiQScreen Sàrl (Switzerland).

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*** Publication reference**

Spurny *et al*. Molecular blueprint of novel allosteric binding sites in the agonist-binding domain of the α7 nicotinic acetylcholine receptor, PNAS, 2015, 112(19):E2543–E2552 (DOI:10.1073/pnas.1418289112).

About Beactica

Beactica AB is a specialist drug discovery company, utilising its proprietary methodologies to evaluate the interactions of molecules in order to generate novel therapeutics. As well as progressing its own drug discovery programmes, Beactica offers expertise and services in the area of SPR biosensor-based small molecule interaction analysis and partnerships for fragment-based lead generation using its proprietary discovery platform. Founded in 2006 based on research carried out at Uppsala University and first-hand experience from the drug discovery industry, Beactica has established a robust reputation as the leader in SPR biosensor-based small molecule drug discovery.

For more information, please visit www.beactica.com.