Pharm Anal Acta 2019, Volume:10
DOI: 10.4172/2153-2435-C2-049

Structure based drug discovery on membrane protein targets

Nicolas Bocquet, Sandra Markovic-Mueller, Robert Cheng, Mathieu Botte, Wassim AbdulRahman, Sophie Huber, Eric Pflichta, Denis Bucher and **Michael Hennig**
LeadXpro AG- PARK innovAARE, Switzerland

Today, soluble proteins are managed routinely within the project timelines and scope with the rapid portfolio changes in pharmaceutical industry. Establishment of biophysical and structure-based methods for transmembrane proteins still represents a significant challenge to have an impact on drug discovery. LeadXpro combines membrane protein expression, purification and structure determination coupled to premium access to the synchrotron Swiss Light Source (SLS), the free electron laser (SwissFEL) and single particle cryo-electron microscopy (cryo-EM) at the University of Basel. LeadXpro also confronts structural data to different biophysical measurements like thermal shift assays, radiobinding assay and wave guide interferometry in order to generate better lead molecules with appropriate features. The talk/poster will show advancements in projects and technologies with examples for serial crystallography performed at synchrotron and free electron laser enabling structure determination of challenging drug targets. Moreover, recent efforts and implementation of wave-guide interferometry method for analysis of small (fragment-like molecules)/large ligand binding kinetics on membrane proteins will be discussed in the context of; lead discovery and optimization; biologics targeting membrane proteins. Finally, recent progress in cryo-EM will also be discussed.

nicolas.bocquet@leadxpro.com

Notes: