

QUANTITATIVE PROTEOMICS FOR TARGET DECONVOLUTION AND SELECTIVITY PROFILING

- ▶ Pioneered chemical proteomic applications supporting target deconvolution of bioactive compounds emerging from phenotypic screens
 - ▶ Target selectivity profiling enabling further drug optimisation and development
 - ▶ Evotec Cellular Target Profiling™ – unbiased, proteome-wide target deconvolution and selectivity profiling to identify and quantify compound interactions with cellular on- and off-targets
 - ▶ Photoaffinity labelling coupled to MS – covalent target capture in live cells to identify target proteins and visualise compound-target interactions
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AREAS OF EXPERTISE

Chemical proteomics
for target deconvolution,
drug selectivity and
activity profiling

Global proteome
expression and
PTM analysis

Biomarker discovery
and validation

Metabolomics

Statistics and
bioinformatics analysis

- ▶ Evotec's chemical proteomic approach uses high-end quantitative mass spectrometry to reveal and verify specific cellular targets
- ▶ Unbiased target ID by proteome-wide profiling of native, endogenously expressed, post-translationally modified proteins in the presence of cellular co-factors and native complex partners
- ▶ Evotec Cellular Target Profiling™ identifies drug targets and determines target-specific dissociation constants for the compound studied, ranking targets according to their likely physiological relevance
- ▶ Drug photoaffinity labelling allows identification of target proteins, localisation of drug-target interaction in cells using fluorescence microscopy and binding site identification in protein targets and complexes
- ▶ Complementary chemical proteomic approaches can be performed in an integrated fashion
- ▶ Extensive, non-target class restricted track record in successful profiling of diverse small molecule compounds
- ▶ Activity-Based Protein Profile (ABPP) of a wide range of enzyme classes including serine hydrolases, metalloproteases, oxidoreductases, histone deacetylases, and glutathione S-transferases
- ▶ KinAffinity® as Evotec's hit-to-lead compatible approach for rapid target profiling of kinase inhibitors in cell and tissue samples. Unlike transitional biochemical kinase panel screenings, the inhibitors' target affinities are determined simultaneously for a large number of native kinases within their physiological cellular environment. KinAffinity® is applicable for type I and II kinase inhibitors

