

## **From *in silico* to *in vivo*: Changing faces from a hit to a lead structure**

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Kinases play a critical role in cell proliferation and signal transduction and altered kinase activity has been linked to various stages of tumor genesis and progression. In the process of finding small molecules with an inhibition profile targeting selected kinases, 4SC's virtual high-throughput screening (vHTS) technology – 4SCan<sup>®</sup> – was used. Several different scaffolds were identified, which were selected for a hit-to-lead optimization program. In the course of the optimization process, *in silico* experiments using 4SC's ProPose docking program, QM calculations and ADME property prediction with 4SCan/vADME were carried out alongside, supporting the laboratory efforts to adjust properties of the future lead compound. Cellular assay results finally revealed EC<sub>50</sub> values in the sub-micromolar range for several compounds, which showed interesting kinase inhibition profiles.