Opening up New Opportunities by Combining High Throughput Electrophysiology with Optical Tools

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High Throughput Electrophysiology has not only found its way into screening facilities and safety pharmacology departments, but also into research labs in academic settings. A non-exhaustive list of planar patch clamp' applications include target identification, clone selection, lead optimization, pharmacological screening, safety test on overexpressing cell lines and iPS-derived cells. Recent publications also show its use in the functional evaluation of ion channel variants (Jon M. Tuveng et al. 2018) and personalized medicine (Kirstine Calloe et al. 2018).

The latest developments show a combination of high throughput electrophysiology and optical tools. With Optogenetics, Caged and photo.switchable compounds there is indeed a wide range of tools available. This presentation will show examples of all three types. It opens up new alleys in research, safety pharmacology and also screening.