



theraTRACE®: A Drug Discovery Tool For Profiling Active Compounds OR Repositioning Discontinued Compounds

theraTRACE® Platform

Uniquely powerful approach to Indications Discovery

- not "hypothesis driven"
- highly predictive *functional* animal models
- "systematic serendipity"
- multiplexing know-how makes this possible

OVERVIEW

The *theraTRACE*® platform is a multiplexed *in vivo* pharmacology platform designed to uncover new pharmacological activity for compounds ranging in stage from preclinical development through to approved drugs. The platform encompasses 40 clinically relevant animal models representing 12 therapeutic areas. In a truly "non-hypothesis" driven fashion, Melior's *theraTRACE*® platform comprehensively evaluates compounds across all 40 models without particular bias to any indication. Melior's *in vivo* multiplexing know-how allows it to perform this complex task cost-effectively and with high quality experimental design. This "phenotypic screening" approach has proven to quickly and directly uncover otherwise unpredicted therapeutic indication associations for drug candidates. About 30% of compounds tested reveal otherwise unpredicted pharmacology that may be useful for augmenting existing discovery and development programs or providing drug repositioning opportunities.

DOSING OPTIMIZATION:

In order to effectively evaluate a compound *in vivo* it is essential to fully understand relevant dosing parameters. Accordingly, before compounds enter into the *theraTRACE*® platform, Melior conducts full PK studies. Dose finding studies are then conducted in order to optimize experimental design. Compounds are evaluated in the *theraTRACE*® platform in a dose-response fashion within the safe dose-level range with all pharmacological activity related to drug concentration in the plasma.

IN VIVO DISEASE MODELS

Melior routinely performs, and has validated, over 60 different *in vivo* models. The core *theraTRACE*® platform is comprised of 40 different models representing the following broad therapeutic areas:

Psychotherapeutic and Neurology	Neurodegeneration
Cardiovascular	Renal and Bladder Function
Dermatology	Pain
Gastrointestinal	Immunology
Inflammation	Obesity
Allergy and Respiration	Diabetes

In a typical collaboration, compounds are indiscriminately screened across all models in a truly "non-hypothesis" driven manner. Typical process time to evaluate full PK, dose finding studies and evaluation across 40 models is 8 weeks.

CUSTOMIZED COLLABORATIONS

Melior works with clients to establish collaborations and partnerships that address specific stages of their drug discovery and development needs. Melior has customized the *theraTRACE*® platform with designs that range from full PK and dose finding evaluation with all models run at 3 dose points, to configurations that omit PK and/or dose finding with only a few models in the platform evaluated at a single dose. Equally, Melior has evaluated all stages of compounds from late stage discovery compounds, active clinical stage compounds, discontinued clinical stage compounds and approved drugs.

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