



Melior Discovery has pioneered an efficient and systematic approach to find new uses for existing drugs and drug candidates. By applying the unique multiplexed *theraTRACE*® indications discovery platform, Melior can quickly evaluate a compound in multiple, high quality *in vivo* models in order to test the molecule's potential use in a variety of therapeutic areas. In response to growing demands, we are now able to offer this same expertise applied to the design and execution of *in vivo* studies utilizing individual efficacy models.

## *theraTRACE*® Platform

Uniquely powerful approach  
to Indications Discovery

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

### ARTHRITIS

*Collagen Induced Arthritis to Model Rheumatoid Arthritis*

- » Validated with anti-inflammatory drugs
- » Autoimmune response induced by collagen challenge
- » Animals dosed prophylactically and/or therapeutically
- » Paw arthritis measured visually and mechanically over five week period

### ASTHMA

- » *Ovalbumin model*- representing the secondary inflammatory component of allergic asthma
- » *Intranasal LPS model*- representing bacterial infection-mediated inflammation
- » Models characterized by inflammatory response, i.e. cytokine/chemokine production, and influx of leukocytes
- » Lungs and/or BALF removed at end of study and analyzed for inflammatory markers

### SEPSIS – SYSTEMIC INFLAMMATION

*LPS-Induced Inflammation*

- » First-line general model to determine anti-inflammatory potential
- » Serum analyzed for various cytokines

### DERMATOLOGY

- » *Contact hypersensitivity*- induction of dermatitis with oxazolone or dinitrofluorobenzene (DNFB)
- » *Delayed-type hypersensitivity*- induction of inflammation with sheep red blood cell sensitization

### NEUROINFLAMMATION – MULTIPLE SCLEROSIS

*Experimental Autoimmune encephalomyelitis (EAE)*

- » Mouse and rat models available
- » Validated with drugs known to attenuate autoimmune demyelinating response
- » Animals administered myelin fragment antigen to induce autoimmunity then dosed chronically with drug or vehicle over duration of the study
- » Evaluated for multiple locomotor behaviors by automated Open-Field Monitor and for multiple clinically relevant indicators of multiple sclerosis
- » May be used with Von Frey pain assessment

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*Customized models available on request*