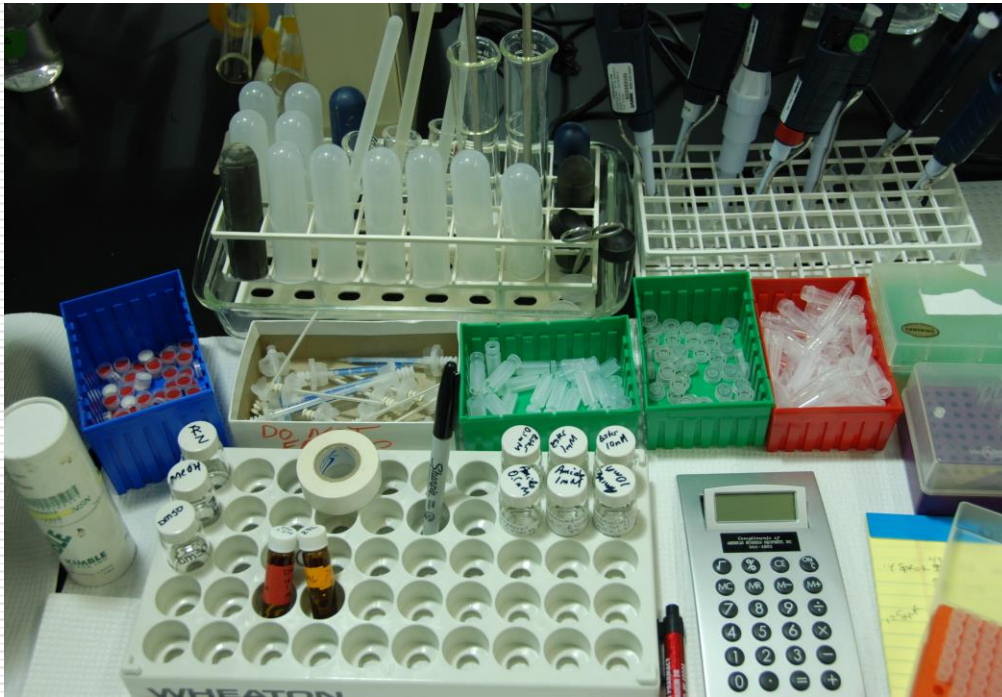


PharmOptima LLC

Value-Driven Research Services



General
Capabilities

About PharmOptima LLC

- PharmOptima's proven approach to drug discovery and optimization focuses on our ability to maximize your program's success by developing customized solutions for your intellectual property problems and providing the highest quality data in a rapid timeframe to move your compound up the value chain
- Founded by scientists with broad expertise and years of pharmaceutical experience, we truly understand the value of solving the complex problems associated with drug development. Our multidisciplinary scientific team consults with you to provide research strategies to optimize your success

Company Overview

- 12,000 + square feet of laboratory space including a 7,000 square foot vivarium
- A leading CRO conducting preclinical Ocular Research
- Premier provider of Spinal Muscular Atrophy research
- *In vivo* research services
- *In vitro* research services
- Immunosorbent assays
- Biomarker Research

Assays

- Elisa Technologies
 - Traditional
 - HRP, AP
 - MesoScale Discovery
 - ECL
- Development of multiplex immunoassays using MesoScale Discovery technology
- Cell-based assays
- Ligand Binding assays
- Proprietary SMN protein in whole blood
- Inhibitor mechanism and validation
- Alzheimer's Disease
 - A β 38, A β 40, A β 42
 - Tau, Total Tau

Molecular Biology and Biochemistry

- Cell Culture
- Protein Expression
 - Mammalian cell
 - Prokaryotic (E. coli)
 - Insect cell
 - Eukaryotic (baculovirus)
- Protein Purification and Characterization
 - Affinity
 - Traditional method
- Antibody Purification and Labeling
 - HRP
 - Sulfo-tag Ruthenium for ECL applications
- Stable mammalian cell line generation and characterization

In Vivo Techniques

- Vivarium
 - Dosing studies
 - Tissue distribution
 - Mass balance
 - Intact spinal cord collection
 - CSF collection
- Transgenic mouse colony
- Specialized ocular dissection and tissue collection
- 14 day Rat Nephrotoxicity with Kidney Injury Biomarker Panel

Bioanalytical

- Mass spectrometry
- Methods development
- Methods validation following Crystal City and OECD guidelines
- Metabolic profiling and identification
- Characterization of phase I and phase II metabolites
- Sample analysis

Pharmacokinetic and Metabolism

- *In vitro* metabolism utilizing microsomes and hepatocytes
- CYP inhibition assays including inhibition kinetics
- *In vivo* pharmacokinetics and metabolism
- Pharmacokinetic/Toxicokinetic analysis

Ophthalmic Services

- High level of technical expertise
- Specialized dosing
- Precise dissection of ocular tissues
- Sample processing and bioanalysis
- Extraction and homogenization of ocular fluids and tissues
- LC-MS/MS methods developed for hundreds of compounds

Ocular Matrices Collected

- Conjunctiva
 - Palpebral
 - Bulbar
- Cornea
- Aqueous Humor
- Iris-ciliary Body
- Vitreous Humor
- Retina
- Choroid
- Sclera
- Optic Nerve
- Lens
- Trabecular Meshwork

Ophthalmic Studies

- Dosing Routes – Topical, Intravitreal, Subtenon, Systemic
 - Uptake in ocular tissues at selected times after topical dose
 - Formulation comparison with analysis of anterior and posterior ocular fluids and tissues
 - Prodrug ocular pharmacokinetics
 - Efficacy versus VEGF induced retinal leakage
 - Ocular allergic response efficacy
 - Bioanalytical assays established for batches of compounds sent monthly for screening
 - Hundreds of compounds screened
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Ocular Efficacy Models

- VEGF induced retinal vascular leakage (Wet AMD), rabbit and dog
- Blue Light Damage (Dry AMD and geographic atrophy), rat
- STZ induced Diabetes (Diabetic Retinopathy), rodent
- Sodium Iodate induced RPE degeneration (geographic atrophy), rat
- LPS induced Uveitis, (Inflammatory response), rabbit
- Scopolamine induced Dry Eye, (Dry Eye) rodent
- Glaucoma Model
- Allergic Response

Why PharmOptima?

- Project team of scientists find optimal experimental approaches
- Experts who understand the data required to move IP up the value chain
- Consultation on best approaches to solve difficult challenges
- Scientists with broad expertise to execute your studies
- Years of experience developing, validating and executing GLP studies
- Full attention of a small company allowing rapid study start and completion and competitive pricing

Contact Us



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