

# Corporate Fact Sheet

Applied BioMath is a model informed drug discovery and development (MID3) services, software, and R&D company

### **Systems Modeling**

Mechanistic PK/PD

Quantitative Systems
Pharmacology

Quantitative Systems
Toxicology

### **Standard PK and Pmx**

PK/PD
Preclinical & Clinical
Pharmacology
PopPK
Pharmacometrics

### **Data Analytics**

Artificial Intelligence

Machine Learning

Bioinformatics

#### Software as a Service

Applied BioMath Assess™
\*Patent Pending

>74%

>320

> 140

\$4.75M

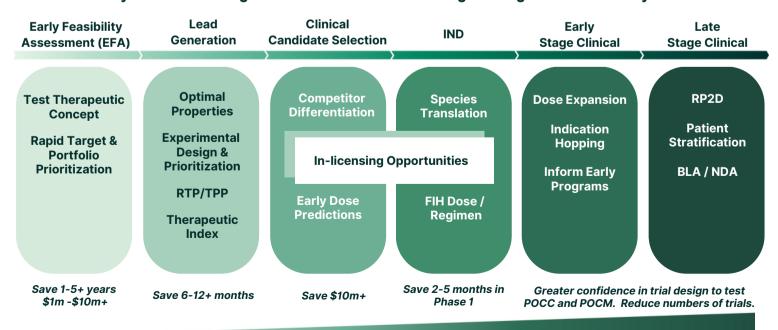
Repeat Business Rate

**Projects** 

**Clients** 

NIH & FDA Grant Funding

## Systems Modeling for Critical Decision Making Through the R&D lifecycle



Increasing Model Confidence and Complexity.
The Right Model at the Right Time

# Breadth of Experience

Our interdisciplinary team has a breadth of pharma and biotech experience

Applied Mathematics • Biochemistry • Biomedical Engineering • Biology Biological Engineering • Chemical Engineering • Computational Biology Electrical Engineering • Physics • Pharmacokinetics



170+

Years combined pharma & biotech experience



96%

Team members in the services group hold a scientific doctorate



40+

**Posters & Papers** 



**50** 

**Employees** 

Our expertise spans many therapeutic areas and modalities

### **Therapeutic Areas**

- Oncology
- Immuno-oncology
- Inflammation & Immunology
- Infectious Disease
- Respiratory/ Cardiovascular
- · CNS/ Alzheimer's Disease
- Metabolic
- Pain
- · Rare and Orphan
- Ocular Disease

### **Modalities**

## **Protein Therapies**

- Traditional mAbs
- Antibody-drug Conjugates
- Bispecific Antibodies
- Multi-targeting Biologics
- Peptides
- Fusion Proteins
- Conditionally Active Biologics
- NK Cell Engagers
- T Cell Engagers
- Immunocytokines
- Other Protein Therapies

### **Small Molecules**

- Irreversible binders
- Prodrugs
- Protein Degraders
- Kinase Inhibitor
- Other Small Molecules

#### **Cell & Gene Therapies**

- RNAi
- CRISPR/Cas9
- Engineered Message
- CAR-T
- Sickle Cell Disease
- Delivery Mechanisms
  - Lipid Nanoparticles
  - Oncolytic Viruses
  - AAV
- Other Cell Therapies
- Other Gene Therapies
- Other Delivery Mechanisms

# Services

# Our services span throughout the entire drug R&D continuum

Modeling & Simulation

- Mechanistic/Translational PK/PD
- Quantitative Systems Pharmacology
- Quantitative Systems Toxicology
- Platform/Disease Models
- PK/PD

- PBPK
- PopPK
- Exposure Response Modeling
- Clinical Trial Simulations
- · Model-based Meta Analysis

Clinical Pharmacology

- Non-compartmental Analyses
- Regulatory Support
- · Clinical Trial Design
- Pediatric Development Plans
- Clinical Pharmacology Plans and Gap Analysis

Network & Data-Driven Approaches

- Bioinformatics
- Artifical Intelligence/Machine Learning
- Biomarker Analysis
- Pathway Analysis
- Target Identification

# We support cutting-edge therapies with a variety of clients\*

- AbbVie
- Alexion Pharmaceuticals
- Antengene
- Asher Biotherapeutics
- Astellas
- Biogen
- BYOMass
- Celsius Therapeutics
- Centivax
- Checkpoint Therapeutics

- Codiak BioSciences
- Compass Therapeutics
- CSL Behring
- Cullinan Oncology
- CytomX Therapeutics
- Flame Biosciences
- Genmab
- Gritstone Oncology
- Ichnos Sciences
- Immunitas Therapeutics

- Ironwood Pharmaceuticals
- KSQ Therapeutics
- Monte Rosa Therapeutics
- Northern Biologics
- Novartis
- Obsidian Therapeutics
- OncoMyx Therapeutics
- Pfizer
- Revitope Oncology
- Sanofi

- Shire
- Syntimmune
- Takeda
- Tusk
- Verseau Therapeutics
- Xencor
- Xilio Therapeutics
- Zymeworks

<sup>\*</sup>This is a partial list. Not all of our clients are in the public domain.

# Value of Applied BioMath Technology

### **Increased quality:**

- Libraries of verified and validated models and workflows provide high quality starting points
- Verification and validation processes enable end-to-end testing
- Built in QC processes add an additional layer of quality
- All assets are text based and version tracked for full traceability
- ISO-27009, SOC2, GDPR compliance for security and reliability





### **Faster turnaround time:**

- Libraries of verified and validated models and workflows accelerate project starts and timelines
- Low latency HPC saves human time with faster implement, test, and debug cycles
- Fast algorithms optimized for QSP models speed analysis (stiff, optimization, GSA, VPoP, etc.)

## Interrogate the science more deeply:

- Fast algorithms optimized for QSP models to try more variations and cases to delve deeper into the problem
- Proprietary Full Text Search Algorithms allow us to dig deeper into the literature to find data and parameters





## Increased transparency and knowledge transfer:

- Human readable models and workflows with integrated documentation, and visualizations support better collaboration
- Models can be deployed into Applied BioMath Assess™ for later use
- Opportunities for close collaborators to access Applied QSP Notebook directly and access full compute environment
- Models easily exported into other languages (eg \*.m ode-files, \*.sbml simbiology-files)

### **Product Portfolio:**

### Applied BioMath Assess™

Assess efficacy, safety, and therapeutic index for early stage biotherapeutics.

**QSPedia**™ (Beta release)

Scientifically designed NLP query tool to automate QSP model parameter identification.

**QSP Notebook** (Select customers only)

Python-based, HPC-backed QSP Modeling platform.