

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%**

Repeat Business Rate

> **345**

Projects

> **150**

Clients

\$6.9M

NIH & FDA Grant Funding

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

Early Feasibility Assessment (EFA)

Lead Generation

Clinical Candidate Selection

IND

Early Stage Clinical

Late Stage Clinical

Test Therapeutic Concept

Rapid Target & Portfolio Prioritization

Save 1-5+ years
\$1m - \$10m+

Optimal Properties

Experimental Design & Prioritization

RTP/TPP

Therapeutic Index

Save 6-12+ months

Competitor Differentiation

Early Dose Predictions

Save \$10m+

Species Translation

FIH Dose / Regimen

Save 2-5 months in Phase 1

In-licensing Opportunities

Dose Expansion

Indication Hopping

Inform Early Programs

Greater confidence in trial design to test POCC and POCM. Reduce numbers of trials.

RP2D

Patient Stratification

BLA / NDA

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



55+

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
- Artificial 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

**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



7x-400x faster



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

**100x or more
increase sampling**



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.