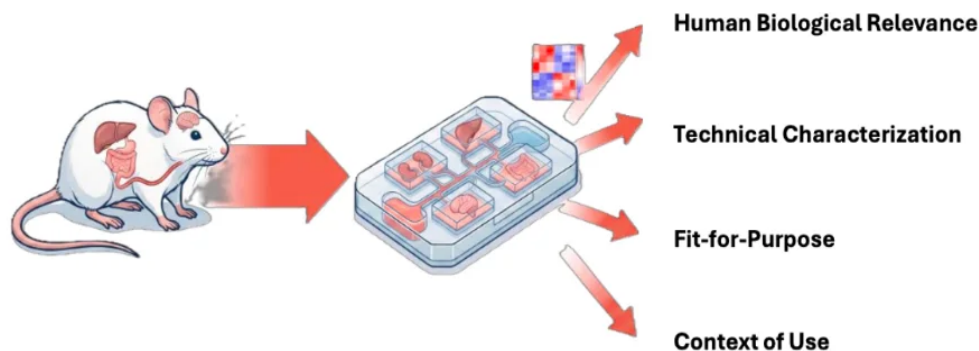


TRANSCRIPTOMIC VALIDATION PLATFORM • 2026

RNA-seq evidence for **Organoids** and **MPS** models

RNA-seq library preparation purpose-built for organoid and MPS analysis, backed by a full transcriptomic service platform — from a team with deep single-cell multiomics expertise, focused on the human biological relevance of your NAMs models.



Single-Cell Multiomics Expertise

Low-input RNA

Single-Organoid Compatible

Full Service from RNA to Insight

The transcriptomic evidence to substantiate human relevance

To replace conventional animal testing in IND and BLA submissions, the decisive question from regulators is a single one. ATG Lifetech provides the RNA-seq-based evidence to answer it — benchmarking your model against human tissues and demonstrating reproducible, fit-for-purpose performance.

"Does this model truly mimic human biology?"

— The question every NAMs submission must answer

Validation principles for NAMs models



Human Biological Relevance

Benchmarked to human tissues for predictive, human-relevant outcomes.



Technical Characterization

Robust, reliable and reproducible platform performance, including batch consistency.



Fit-for-Purpose

Demonstrated to assist specific regulatory decision-making.



Context of Use

Defined intended use addressing specific drug-development decisions.

PRODUCTS

RNA-seq library preparation, built for NAMs

A library-prep workflow optimized for NAMs samples, supported by matched high-performance reverse transcription and amplification reagents.



FLAGSHIP

LP-T0030

RTAG mRNA Library Prep Kit

An mRNA-seq library prep kit developed in-house on our single-cell multiomics expertise, building stable libraries from the ultra-low RNA inputs of organoid, organ-chip and single-cell samples.

- ✓ Detects low-abundance transcripts from ultra-low input — applicable to single organoids, organ-chips and single cells
- ✓ Reproducible library prep even from low-RIN RNA
- ✓ Reaction chemistry that maintains performance even with ECM-containing organoid and organ-chip samples

RNA INPUT

10 pg – 1 µg

REACTIONS

48 / kit

INPUT TYPE

Bulk → single-cell

APPLICATIONS

Organoid·MPS·CGT

LP-T0012

S2+ Reverse Transcriptase

A high-performance reverse transcriptase — high-yield, full-length cDNA from ultra-low input and even degraded or fragmented RNA.

LP-T0013

K1 HIFI PCR Master Mix

A high-fidelity DNA polymerase master mix dedicated to NGS library amplification — minimizes amplification bias and synthesis errors for accurately and evenly represented libraries.

SERVICES

Full service, from RNA to insight

We serve two kinds of teams — those developing NAMs models and those developing drugs with them. Adding an RNA-seq readout layer to conventional morphology and functional assays, we deliver regulatory-aligned transcriptomic datasets across batch-reproducibility QC, mechanism, toxicity and efficacy.

FOR CRO

Mechanism-of-Action validation

MoA, efficacy and toxicity transcriptomic endpoints.

FOR CDMO

Batch & lot comparability

Lot consistency, identity and release-support analytics.

REGULATORY

Submission support

Datasets aligned with the IND / BLA evidence expectations of the FDA and other regulators.

Analysis services



Lot Consistency QC

Batch-to-batch reproducibility for organoids, organ-chips and cell therapies.



Drug Toxicity Assessment

Toxicity evaluation built on the Key Characteristics framework.



Drug MoA Analysis

Mechanism-of-action decoding from transcriptomic data.



Pathway-Based Similarity Measurement

PBSM analysis quantifying pathway-level similarity between conditions.

STANDARD ANALYTICS INCLUDED

PCA

DEG analysis

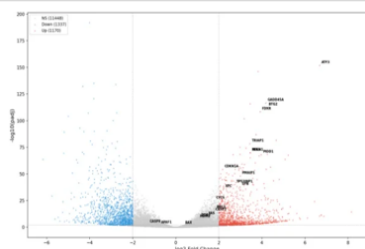
Protein-protein interaction

KEGG pathway

GO enrichment

Transcriptomic validation across NAMs platforms

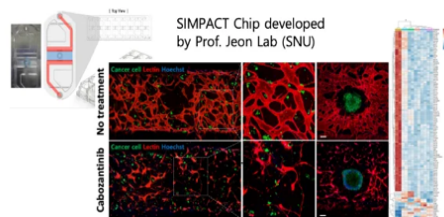
Selected collaborations demonstrating transcriptomic validation across diverse NAMs platforms.



Transcriptomic nephrotoxicity assessment on kidney-on-a-chip

RNA-seq profiling of toxicity mechanism, kidney-function loss, biomarkers and toxicity progression (drug: Cisplatin).

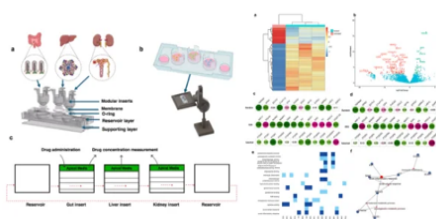
In collaboration with Prof. Sejoong Kim (SNUBH)



Beyond phenotype: transcriptomic MoA decoding on tumor-on-chip

Adding RNA-seq-based drug MoA profiling of Cabozantinib to phenotypic drug-response readouts on a tumor microenvironment chip.

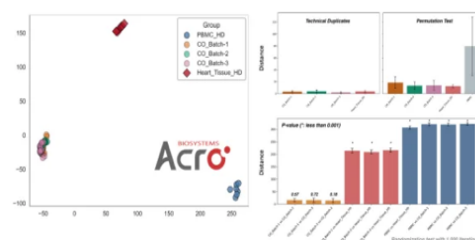
With Prof. Noo Li Jeon's group (SNU)



Beyond PBPK: organ-specific drug response on a multi-organ chip

RNA-seq in a multi-organ PBPK chip (gut–liver–kidney) verifying organ-specific responses to diclofenac against reported human clinical outcomes.

Choi et al., BioChip Journal (2025) — ATG as co-author



Transcriptomic QC for batch-consistent organoids at manufacturing scale-up

Validating cardiac organoid reproducibility within and between three independent production batches.

International collaboration with ACROBiosystems

GET IN TOUCH

Let's build the evidence behind your NAMs model, together.

Request a quote, a protocol, or a scoping call for your organoid, organ-chip or cell-therapy program.

CONTACT

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WEB

www.atglifetech.com
ATG Lifetech Inc.



Request a quote

Pricing for kits or an analysis project, scoped to your model, sample count, study design and analysis needs.



Request a protocol

Detailed guidance on preparing and prepping NAMs samples for library construction.



Book a scoping call

Talk through study design, endpoints and regulatory alignment with our team.

