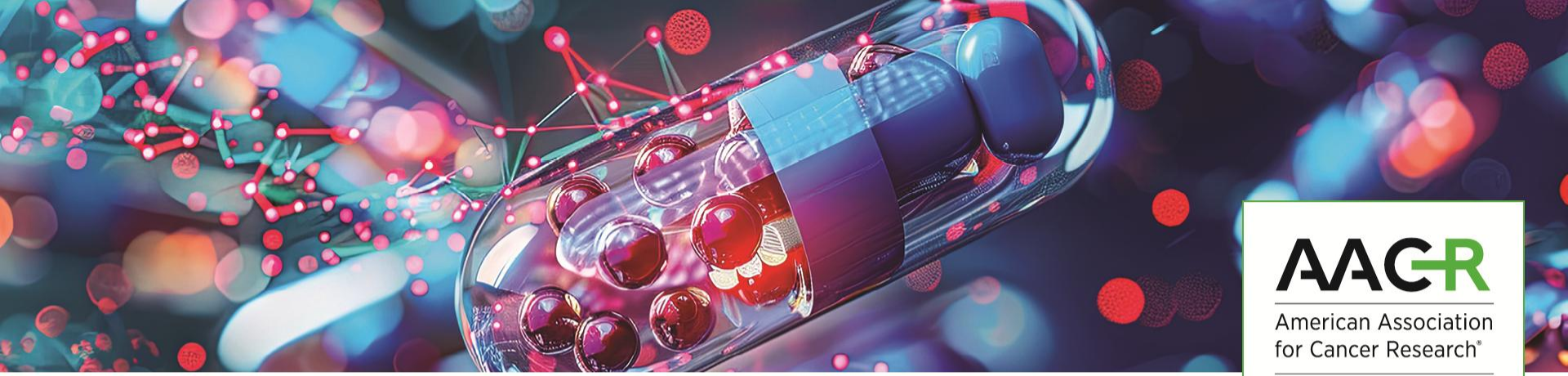


ACRIVON PREDICTIVE PRECISION PROTEOMICS (AP3)
NEXT GENERATION PRECISION MEDICINE FOR PHOSPHOPROTEOMICS-GUIDED DRUG DISCOVERY

Lei Shi, PhD

Acrivon Therapeutics Inc. Watertown, MA

AACR DRUG DISCOVERY AND DEVELOPMENT (AACR D3)

July 21-24, 2026 | Sheraton Boston Hotel | Boston, MA

Disclosure Information

Lei Shi

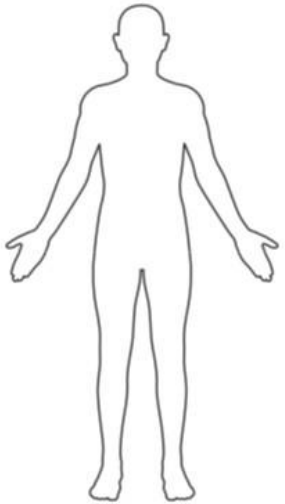
I have the following relevant financial relationships to disclose:

Employee of: Acrivon Therapeutics Inc.

Stockholder in: Acrivon Therapeutics Inc.

Next-generation precision medicine powered by AP3

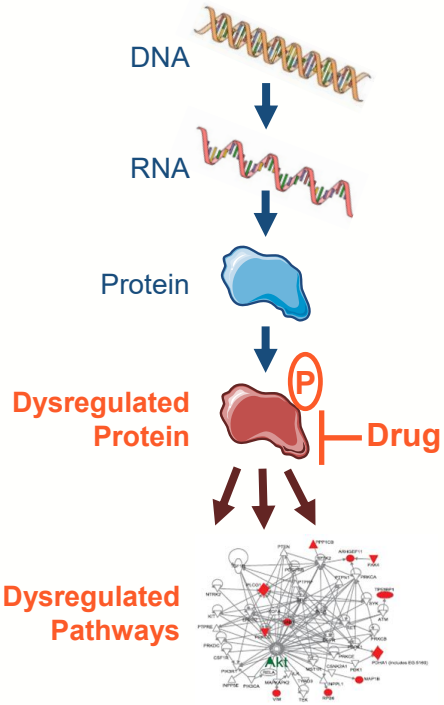
Current focus oncology, I&I next



Fibrosis

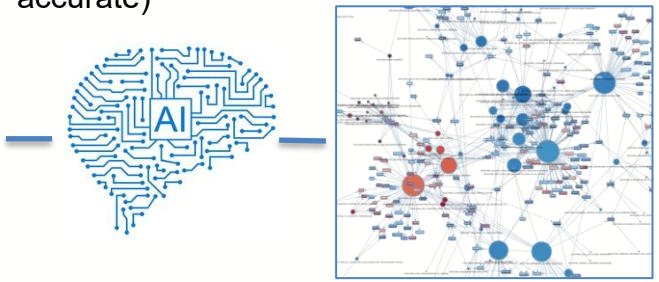
Cancer

Inflammation



Acrivon Predictive Precision Proteomics (AP3)

- AI-driven, proteomics-based rational drug design and informed clinical development
- AP3 enables an exact match between the disease-driving, dysregulated pathways with drug mechanism of action (Acrivon meaning ≈ exact, accurate)



Proprietary tools
- Data portal
- Interactome
- Protein activity predictor

Acrivon Therapeutics overview

Development Site (Boston)

- Drug development and clinical biomarkers
- Clinical leadership and trial oversight
- ML/AI-driven AP3 analyses

HQ LOCATED IN BOSTON - ACCESS TO LEADING DRUG DISCOVERY, BIOTECH, AND PHARMA

Precision Proteomics Site (Lund/Copenhagen)

- Early drug discovery
- BM identification and drug profiling
- AP3 mass spectrometry

PROTEOMIC HUB LOCATED IN MEDICON VALLEY - NORTHERN EUROPE`S LEADING LIFE SCIENCE CLUSTER

Founders

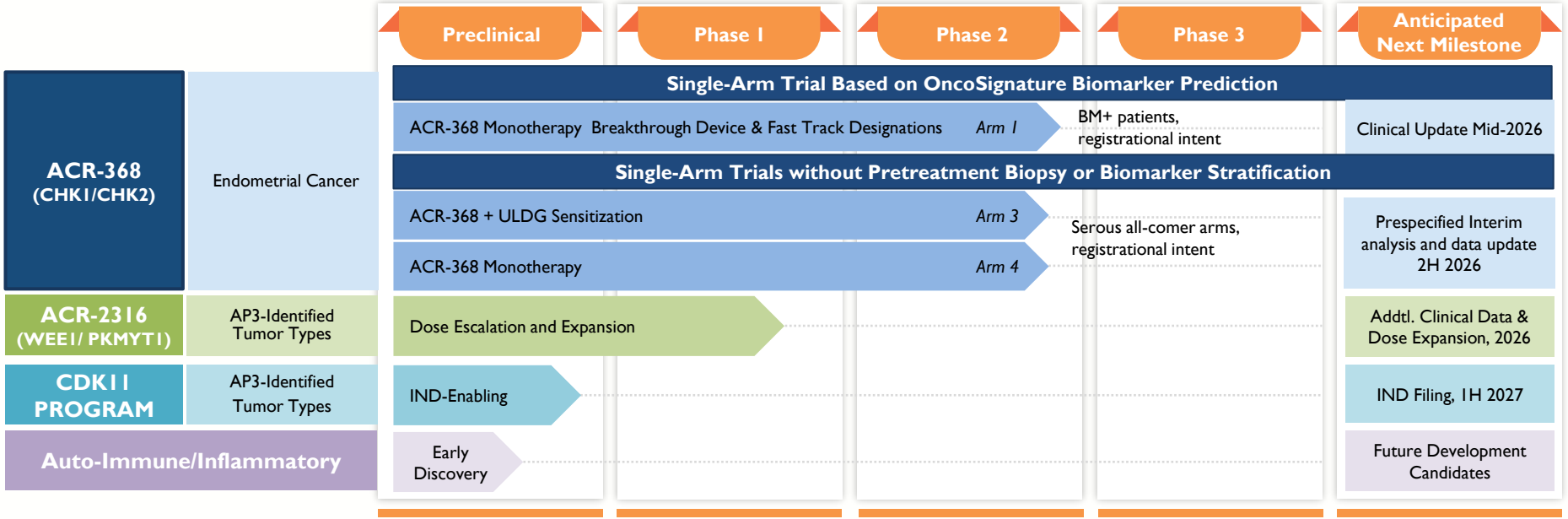
Peter Blume-Jensen, MD, PhD
CEO, President, Co-Founder
Inventor of AP3

Kristina Masson PhD, MBA
EVP, Bus Ops, Lund Site Head
Co-Founder

Jesper V. Olsen PhD
Novo-Nordisk Foundation Protein Center, Cph.
Academic Co-Founder.

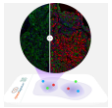
Founded 2018, IPO 2022 (NASDAQ: ACRV)

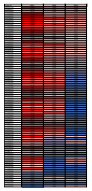
Acrivon pipeline

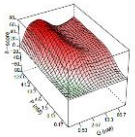


Acrivon AP3-based precision medicine

Novel Target Identification
Activated druggable targets – diseased vs normal







Clinical Biomarkers
Predictive OncoSignature tests

Indication Finding
Sensitive tumor types

Single agent activity
Target/pathway addiction

Resistance Mechanisms
Rational drug combinations

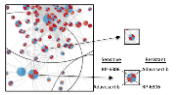
AP3

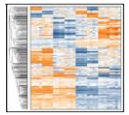
Drug Discovery SAR
Optimized pathway effects

Therapeutic Index
Dial out AE liabilities

PD Markers
~60,000 per compound

Informed in-licensing
AP3 profiling of candidates



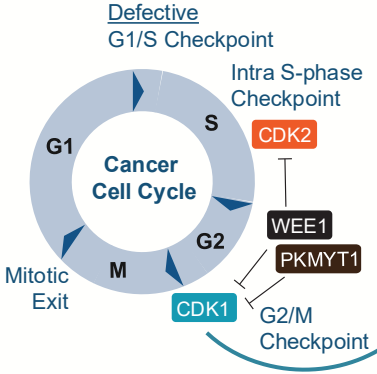


Streamlined Clinical Development
Predicted sensitive indications with informed dose optimization

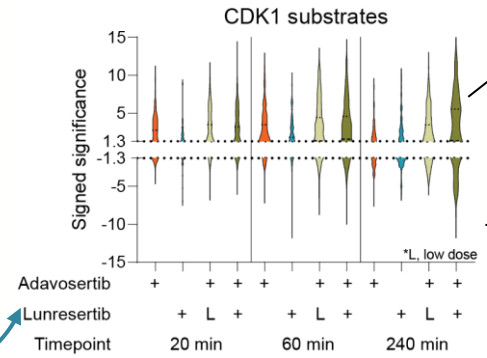
AP3 reveals suboptimal mitotic pathway regulation by clinical WEE1/PKMYT1 inhibitors and guides discovery of ACR-2316

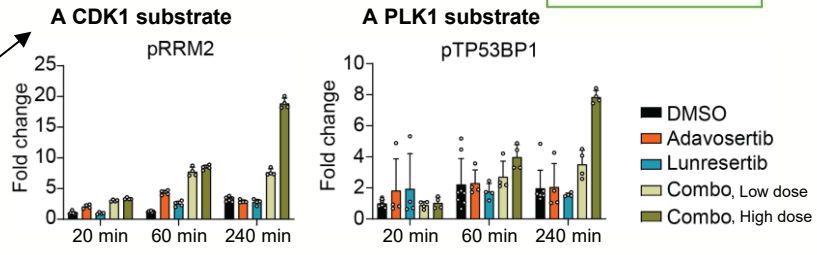
American Association for Cancer Research

WEE1/PKMYT1 kinases are critical cell cycle checkpoints in cancer

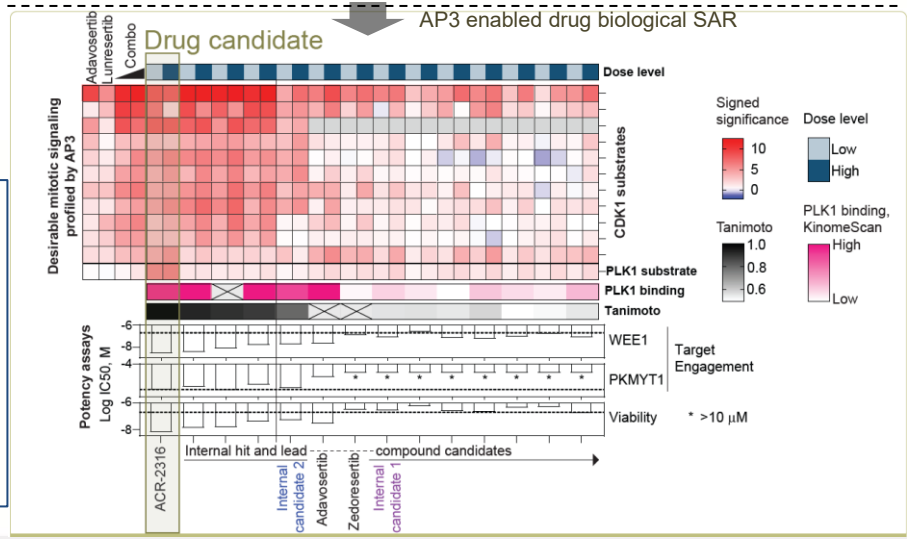


WEE1/PKMYT1 regulates compensatory CDK1 signaling





AP3 enabled drug biological SAR



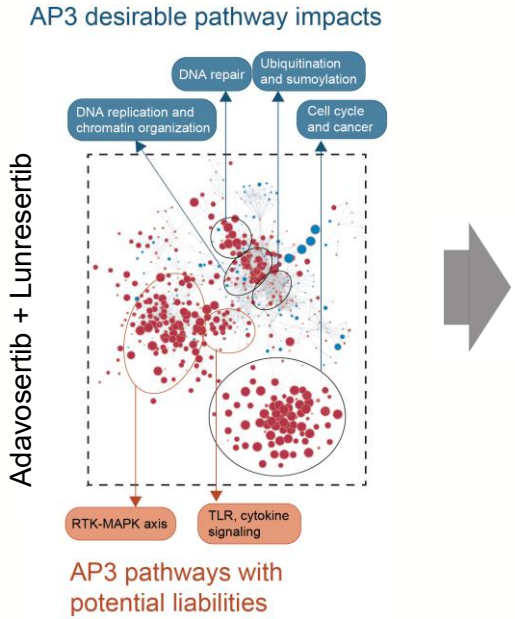
- WEE1 and PKMYT1 regulate S and G2-M cell cycle checkpoints to ensure proper DNA replication and mitotic completion
- Defective DNA repair is highly prevalent in cancers, creating a dependency on checkpoint proteins
- AP3 was applied to design a molecule with potent single agent activity and exquisite selectivity to achieve expanded Therapeutic Index
- AP3 enabled identification of ACR-2316 based on desirable pathway effects, including quenching of resistance mechanisms and PLK1 activation

AACR DRUG DISCOVERY AND DEVELOPMENT (AACR D3)

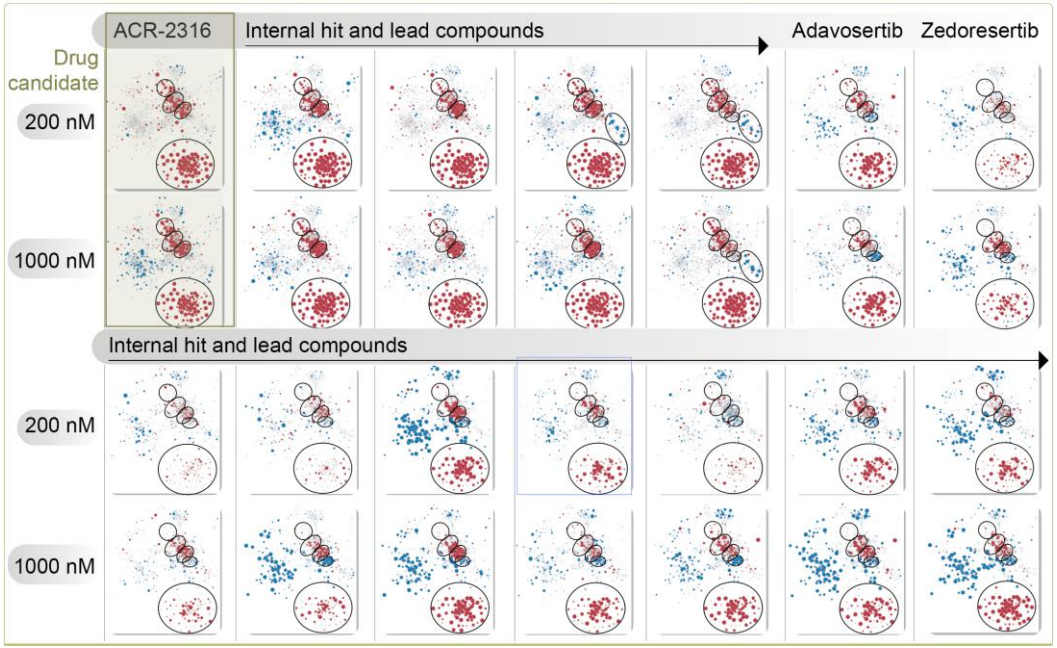
Poster session A, A082

AP3 biological SAR: phosphoproteomic pathway signatures guide prioritization of ACR-2316

AP3 defines the mechanistic therapeutic index derived from the combination WEE1/PKMYT1 inhibition



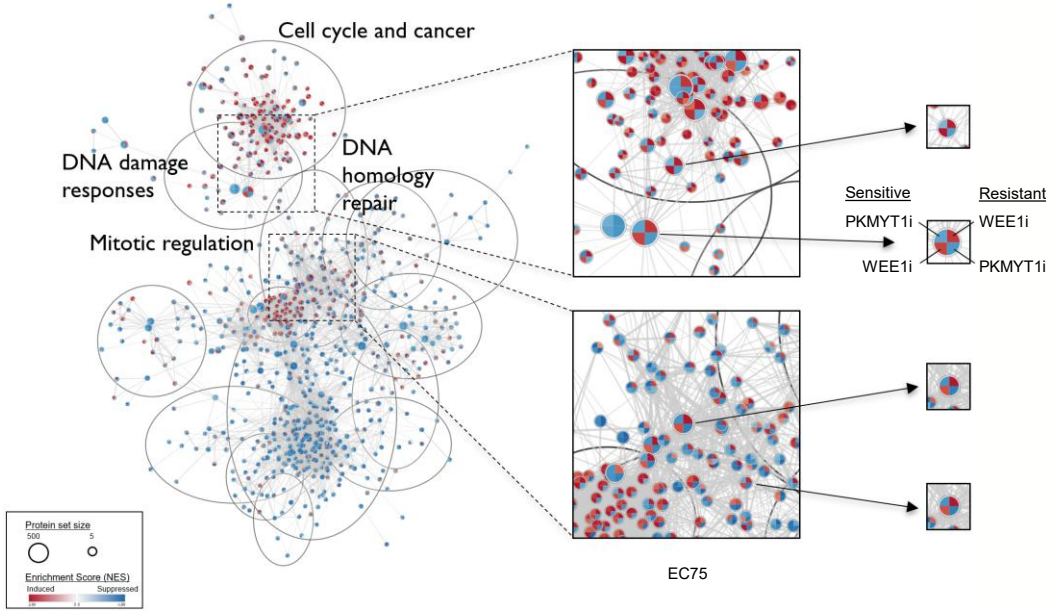
AP3 profiles phosphoproteomic signaling across internal development candidates, enabling compound prioritization based on established desirable pathway signatures



Poster session A, A082

ACR-2316: uniquely designed by AP3 for superior single-agent activity over WEE1 and PKMYT1 inhibitors

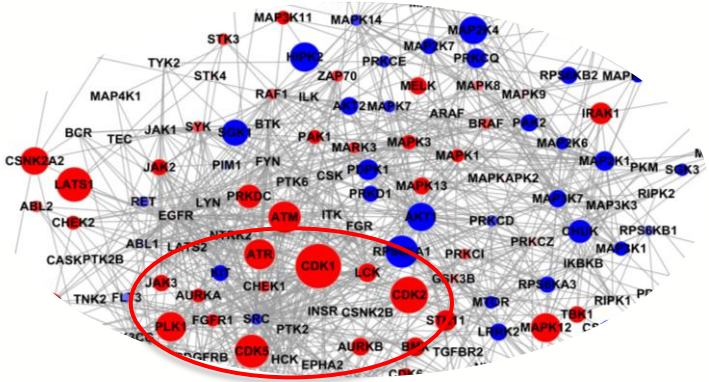
ACR-2316 designed to quench dominant resistance mechanisms originating from PKMYT1 identified by AP3



EC75

Reciprocal quenching

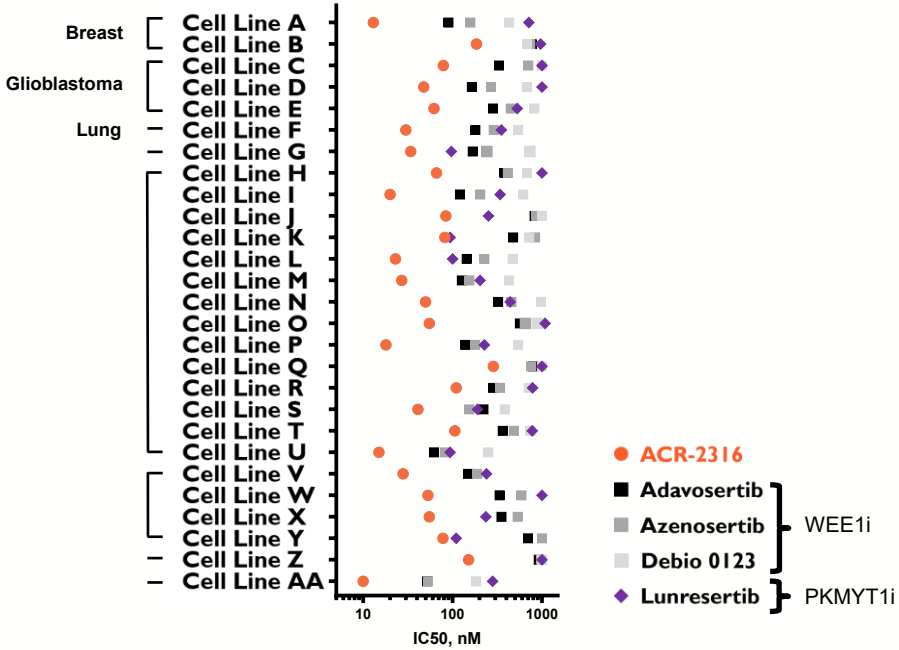
ACR-2316 designed using AP3-based generative AI to potently activate both CDK1/2 and PLK1 ensuring strong tumor cell death



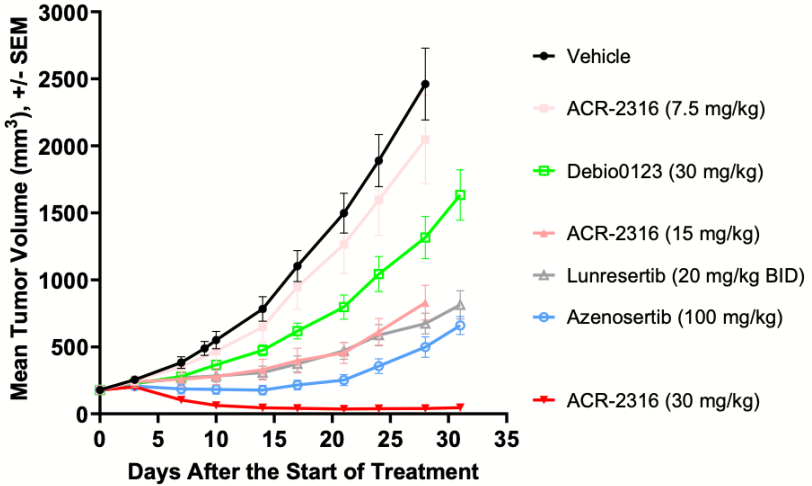
Potent pro-apoptotic mitotic catastrophe

ACR-2316 is highly potent across human tumor cell lines and induces complete tumor regression

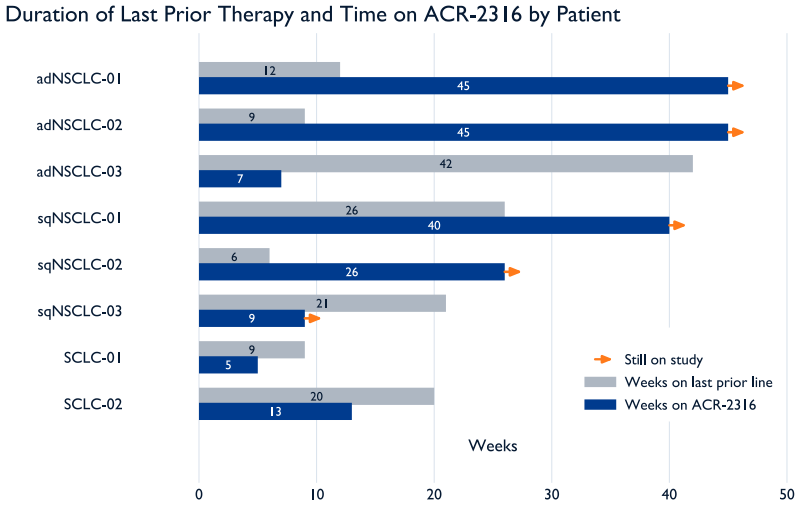
Human tumor cell lines (not genetically selected)

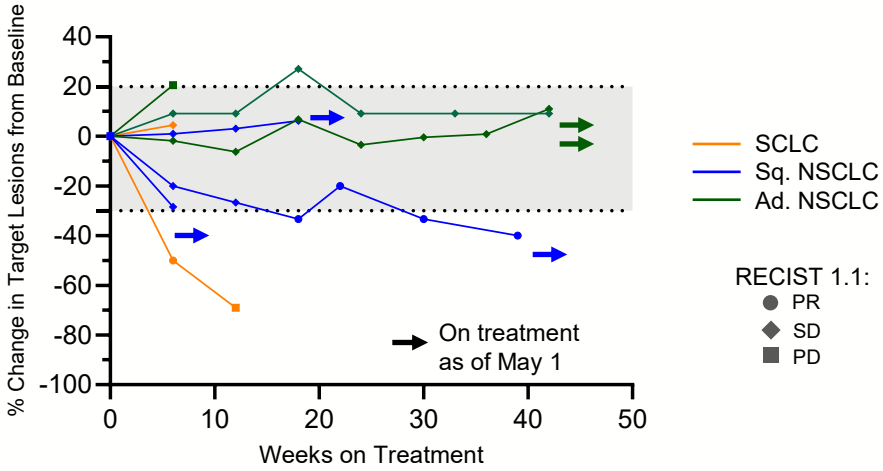


A human lung tumor cell derived xenograft



ACR-2316 demonstrates durable clinical activity in heavily pretreated patients with lung cancer





- Two weekly oral dosing regimens established; Clinical activity observed at ≥120 mg
- DCR (Target lesion) across all tumor types 79%
- Initial clinical activity and DCR (7/8) observed in lung cancer (median 3 prior lines therapy, incl. ICI and chemo)

Non QC'd data based on EDC as of 5/1/2026

ACR-2316 demonstrates a favorable clinical safety profile limited to transient, mechanism-based hematologic toxicity

Summary of ≥ Grade 3 TRAEs

Subjects treated up to or at established weekly dosing regimens · N = 20 · bar length = number of grade 3/4 total events

- Only transient, mechanism-based hematological AEs, primarily neutropenia.
- No other types of toxicities observed (N = 13) above tolerated weekly doses.
- Notable absence of GI toxicities, long-lasting myelosuppression or more severe non-hematological AEs commonly seen with ADCs and chemotherapy.

NOTE: Subjects counted once at their maximum grade, not the sum of the rows above (9 event occurrences across 7 subjects). TRAEs with Grades 3/4 percentages ≥5% are included. No fatal TRAEs.

EDC extract April 14, 2026

Summary

AP3 enabled rational compound design

- ✓ Identified adaptive resistance mechanism induced by WEE1 inhibition
- ✓ Validated dual WEE1/PKMYT1 inhibition to quench resistance
- ✓ Selected lead candidates based on desirable signaling pathway activity, including potent PLK1 activation

ACR-2316: novel WEE1/PKMYT1 inhibitor with potent single agent activity

- ✓ Complete tumor regression across *in vivo* models
- ✓ High selectivity (co-crystallography) and short elimination T1/2 to ensure transient, mild AEs
- ✓ Potent WEE1 inhibition, balanced PKMYT1 inhibition, overcomes resistance and enables robust activation of CDK1, CDK2, and PLK1 for mitotic catastrophe
- ✓ Durable clinical activity observed in AP3-predicted tumor types, including SCLC, SqNSCLC and adenoNSCLC
- ✓ Favorable safety profile, limited to short-lived hematological AEs.

AP3 provides a broadly applicable, biology-driven, modality-agnostic platform for rational drug design by directly measuring signaling pathway activity states using proprietary phosphoproteomics and AI

Acknowledgement

A sincere thank you to our talented colleagues at Acrivon, partners, clinical collaborators, patients and their families who participated in our trials.


AACR
American Association
for Cancer Research