

Translating cancer biology into medicines

Cyclacel Pharmaceuticals, Inc. (CYCC) NOVEMBER 2024

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Cyclacel Opportunity

Discovered and developing fadraciclib & plogosertib cell cycle, oncology portfolio

Fadra next generation CDK2/9 inhibitor with unique Ph 2 precision medicine strategy

Single-agent, Ph 1, anticancer activity (CR, PR, SD) with good tolerability including:

o GYN (breast/endom./ovarian), hepatobiliary, NSCLC, pancreatic, testicular and T-cell lymphoma

Enroll two Phase 2 cohorts potentially supporting registration pathways

o patients with solid tumors with CDKN2A/CDKN2B abnormalities (readout 2H 24, n~12)

o T-cell lymphoma (readout 2H 24-1H 25)



What Problem Are We Trying to Solve?

Abnormalities in genetic tumor suppression mechanisms enable cancer progression

CDKN2A and/or CDKN2B abnormalities are widely found in many solid tumors

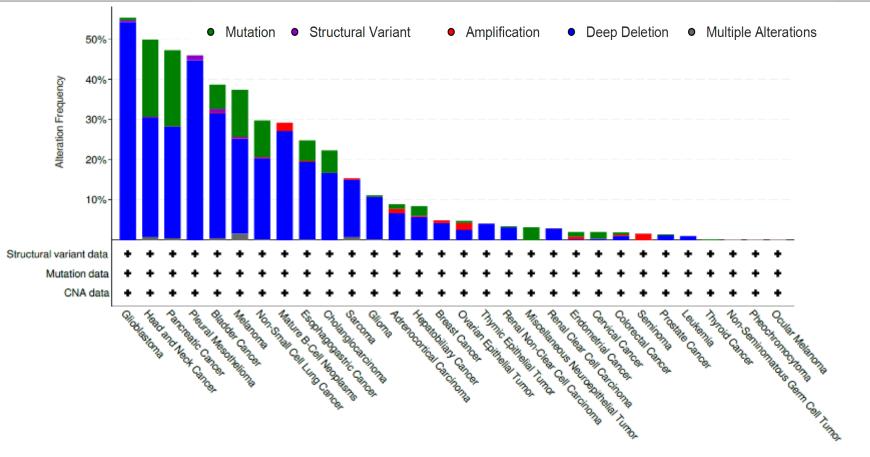
Use pharmacologic inhibitors acting in the p16 (CDK2) and/or p53 (CDK9) pathways to restore tumor suppression

Opportunities/Challenges:

- CDK2 and CDK9 versus CDK2 versus CDK9
- Single agent and/or combination
- Historical toxicities (mostly hematological) have limited clinical utility

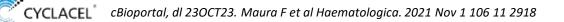


CDKN2A Alterations

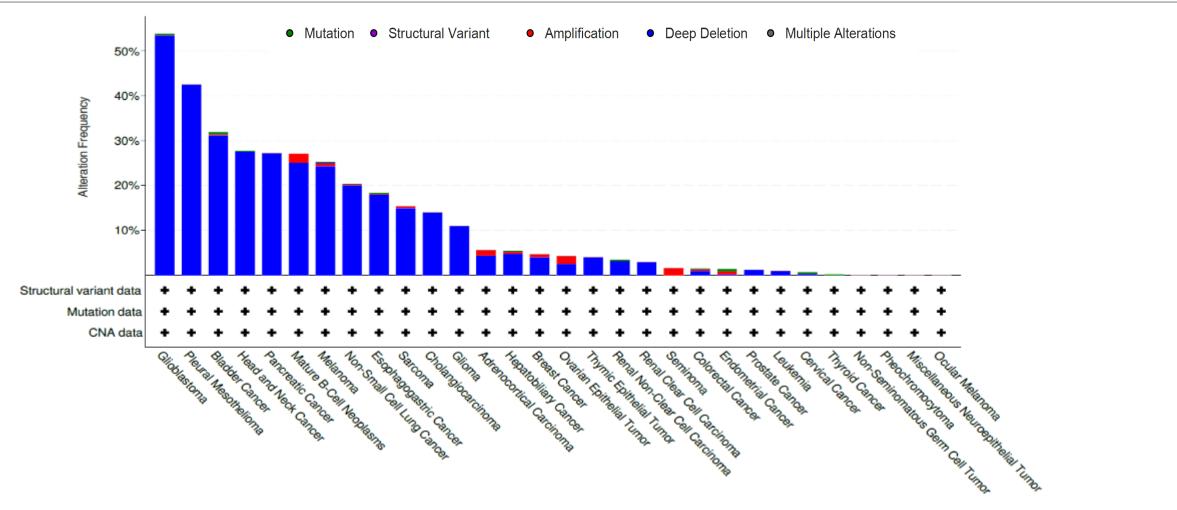


Solid tumors >10%: GBM, H&N, pancreas, esophagus, lung, bladder, HCC/BTC, breast, melanoma, sarcoma

Lymphoma: CDKN2A deletions in 46% of PTCL-NOS patients.



CDKN2B Alterations



>10%: glioma, lung, bladder, H&N, pancreas, melanoma, esophagus, sarcoma, HCC/BTC, breast, ovarian

CYCLACEL^{*} cBioportal, dl 230CT23.

Fadra Phase 1 DE Patient Groups (n=11 had CDN2A/B abnormalities)

- Two dose escalation (DE) studies:
 - 065-01 IV (n=52)
 - 20/52 had sequencing data
 - 6/20 had CDKN2A and/or CDKN2B alterations
 - 065-101 oral (n=47)
 - 21/47 had sequencing data
 - 5/21 had CDKN2A and/or CDKN2B alterations

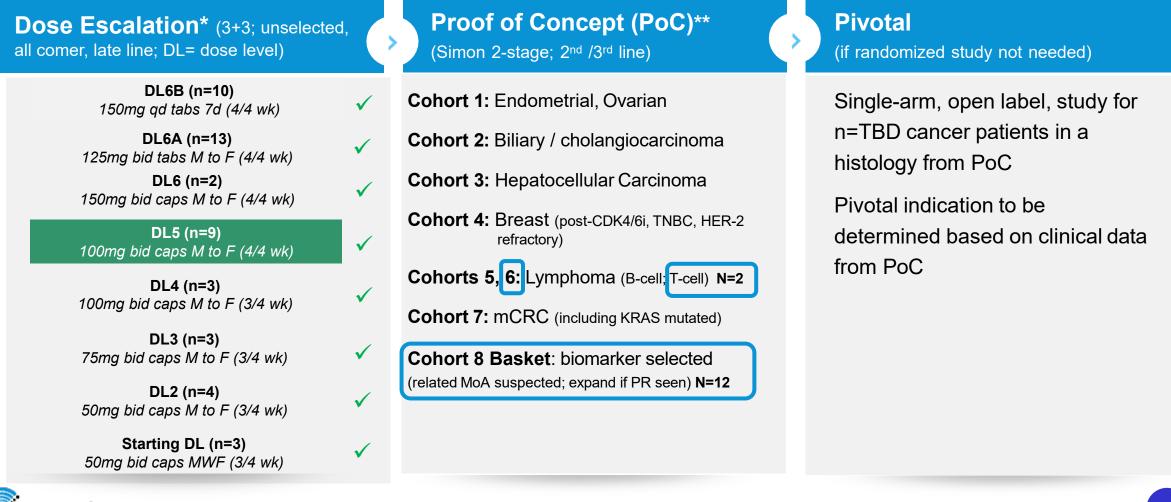


Ph 1 DE Responder Profiles: CDKN2A/B Alterations (retrospective review)

Patient <i>Study</i>	Histology	Best Response (sum of target lesions)	Dose Level	Schedule	Mutation
38 iv <i>065-01</i>	Endometrial	CR (-100%)	213mg QD	2d/wk 2/3 wks	CDKN2A, CDKN2B, MTAP loss, MCL1 amp
14 iv <i>065-01</i>	Ovarian	SD (-2.5%)	192mg/m ²	1d/3 wks	CDKN2A, CCNE1, MYC gain
11 iv <i>065-01</i>	Salivary gland	SD (0.8%)	128mg/m ²	1d/3 wks	CDKN2A mutation & gain CDKN2B gain
51 oral <i>065-101</i>	NSCLC squamous	SD (-22%)	125mg BID	5d/wk 4/4 wks	CDKN2B loss
21 oral <i>065-101</i>	PTCL angioimmunoblastic	PR (-16%)	100mg BID	5d/wk 4/4 wks	CDKN2A mutation
16 oral <i>065-101</i>	Cholangio-carcinoma	SD (-5%)	75mg BID	5d/wk 4/4 wks	CDKN2A mutation
55 oral <i>065-101</i>	Pancreatic	SD (4%)	125mg BID	5d/wk 4/4 wks	CDKN2A loss
62 oral (<i>065-101</i>	Sertoli germ cell testicular	SD (-12%)	150mg QD	7d/wk 4/4 wks _©	CDKN2A, CDKN2B, MTAP loss

Oral Fadra 065-101 Ph 1/2 Solid Tumors & Lymphoma (ongoing, unselected, late line)

Enrolled n=47 as of March 26, 2024. No DLT in cohorts 1-5 (n=22). DL5=RP2D. PoC part to start next.



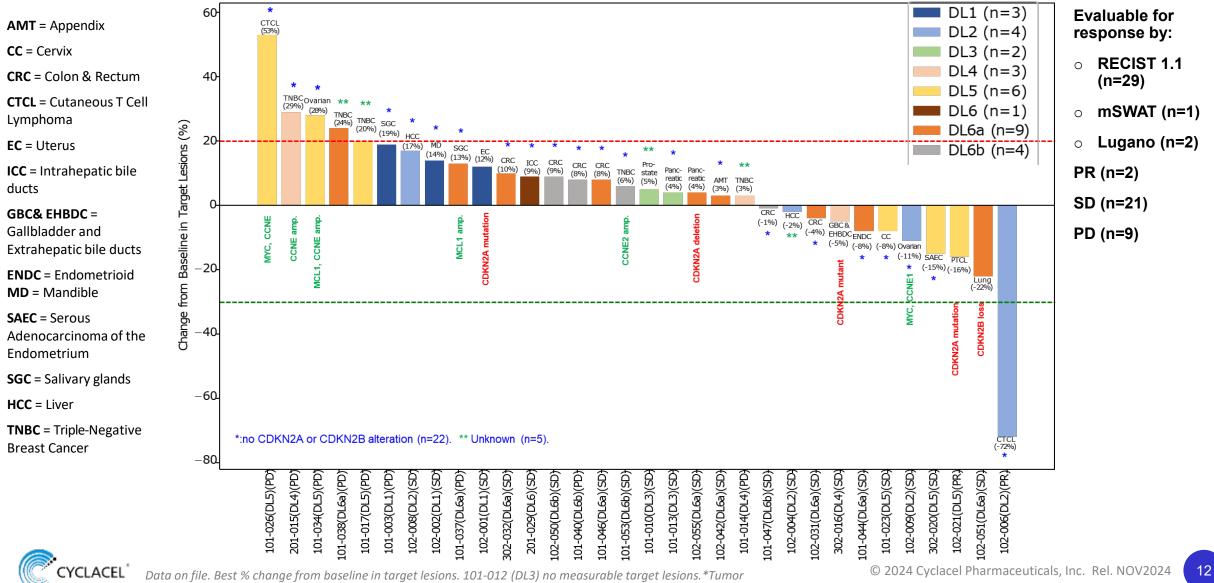
*Single agent. **Single agent; followed by combination. ClinicalTrials.gov Identifier: NCT04983810.

Oral Fadra Ph 1 DE Safety Summary

- All dose levels
 - Mostly grade 1 and 2 and reversible
 - Gastrointestinal disorders, including nausea, vomiting, diarrhea, and constipation
 - General, including fatigue
 - Metabolism, including hyperglycemia
 - Hematological, including platelet decrease
- Dose limiting toxicities (DLT) observed at 125mg BID and higher
 - Grade 3 nausea and hyperglycemia; both manageable and reversible
- Dose levels 1-5 were well tolerated with no DLTs reported

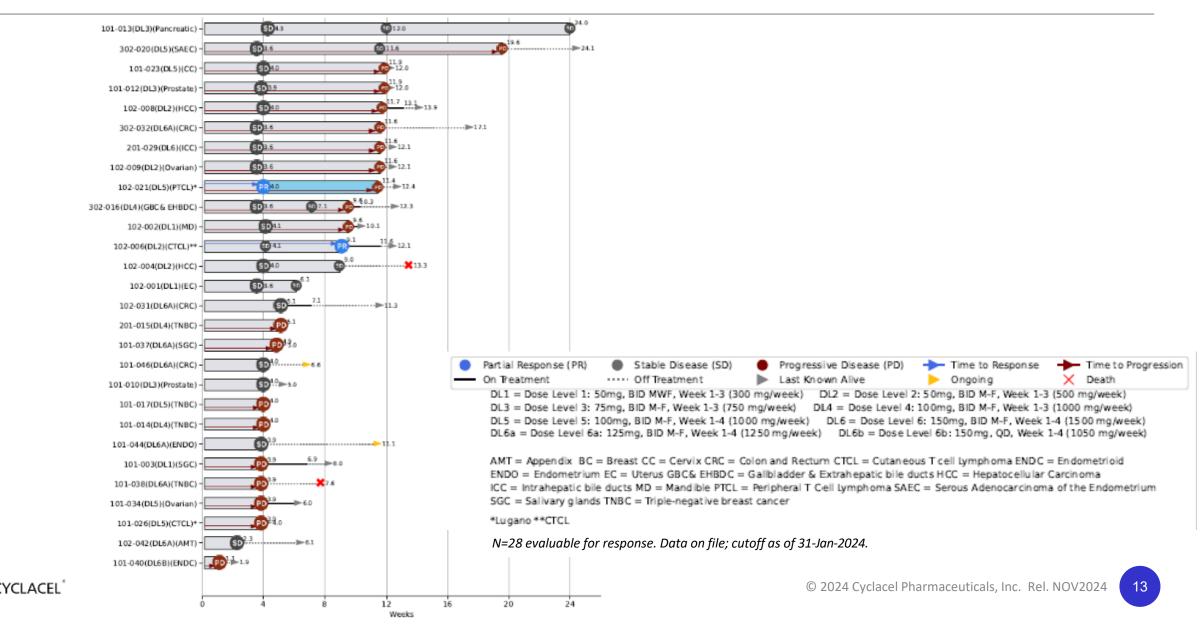


Oral Fadra Ph 1 DE 065-101 Response (all comer, n=32, as of 31JAN24)

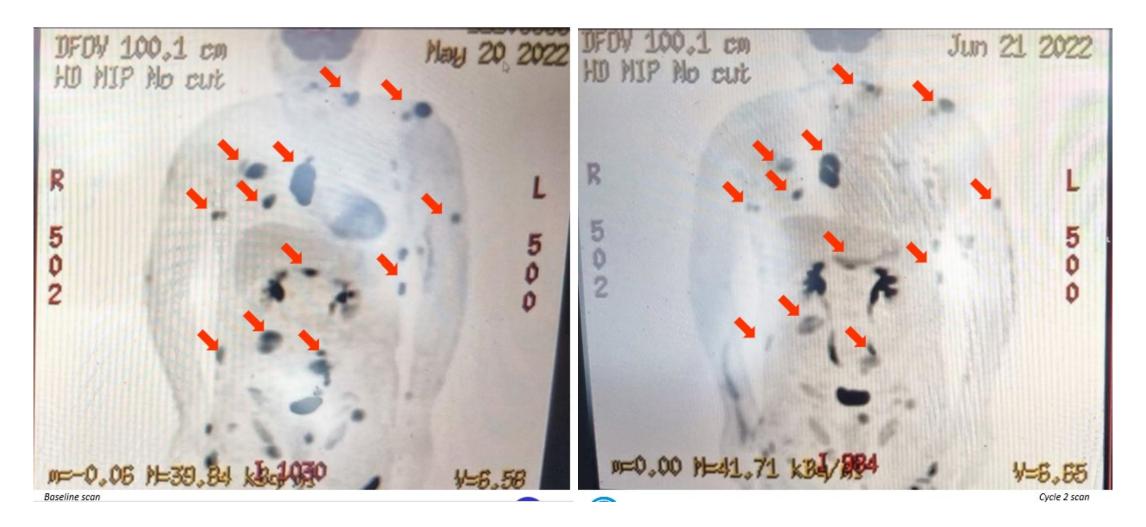


assessments at 4 weeks post-treatment and every 8 weeks thereafter.

Oral Fadra Ph 1 DE 065-101 Swimmers Plot (dose escalation part)



PR in angioimmunoblastic PTCL pt. (oral 065-101 DE, 1st cycle, CDKN2A loss)





 Data on file. PET scan images kindly provided by the principal investigator. CDKN2A deletions in 46% of PTCL-NOS patients, Maura F et al Haematologica. 2021 Nov 1 106 11 2918.

CDKN2A deletion in T Cell Lymphoma

ARTICLE



Incidence of CDKN2A deletions was 46%.¹

Haematologica 2021 Volume 106(11):2918-2926 Non-Hodgkin Lymphoma

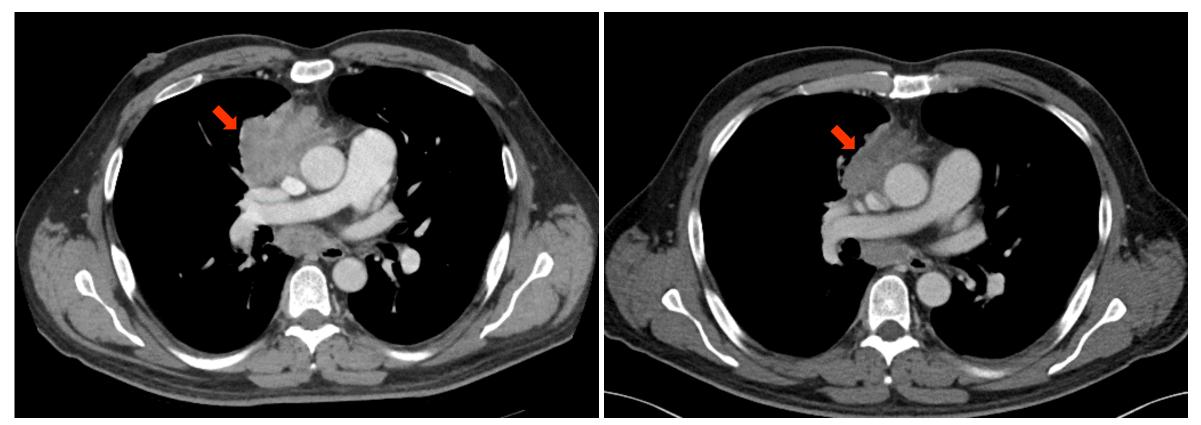
CDKN2A deletion is a frequent event associated with poor outcome in patients with peripheral T-cell lymphoma not otherwise specified (PTCL-NOS)

Francesco Maura,¹⁻⁴ Anna Dodero,⁵ Cristiana Carniti,⁵ Niccolò Bolli,^{2,5} Martina Magni,⁵ Valentina Monti,⁶ Antonello Cabras,⁶ Daniel Leongamornlert,³ Federico Abascal,³ Benjamin Diamond,¹ Bernardo Rodriguez-Martin,⁷ Jorge Zamora,⁷ Adam Butler,³ Inigo Martincorena,³ Jose M. C. Tubio,⁷ Peter J. Campbell,³ Annalisa Chiappella,^{8°} Giancarlo Pruneri^{2,6} and Paolo Corradini^{2,5}

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Squamous NSCLC patient (oral 065-101, DE, 1 cycle DL6a)

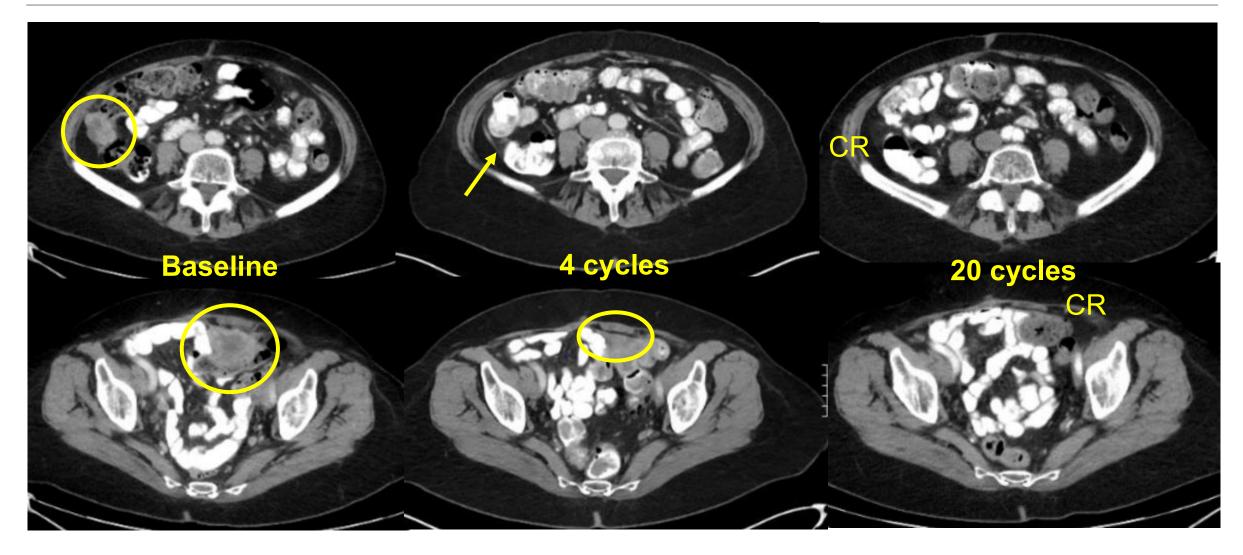


Baseline scan 7-SEP-23

50y old, NOV22-APR23 carboplatin+paclitaxel; MAY23 atezolizumab+docetaxel, progressed Cycle 1 scan 9-OCT-23 SD sum of all target lesions **-22**%. D1C1 14-SEP-23 **NGS: CDKN2B loss**



PR then CR Endometrial Pt (065-01 Part 2 IV with CDKN2A, CDKN2B and MTAP loss)





CYCLACEL^{*} Do, KT, et al., 32nd EORTC/AACR/NCI Virtual Symposium 24-25 Oct. 2020. CR=complete response.

Oral Fadra Expansion Cohort 8: RELATED TEAE (N=12)

System Organ Class (SOC)/Preferred Term (PT) n (%)	Any G	G1	G2	G≥3
Patients with at least 1 related TEAE	7 (58.3)	3 (25.0)	4 (33.3)	0
Gastrointestinal disorders	5 (41.7)	3 (25.0)	2 (16.7)	0
Diarrhoea	2 (16.7)	0	2 (16.7)	0
Nausea	2 (16.7)	2 (16.7)	0	0
Vomiting	2 (16.7)	2 (16.7)	0	0
Investigations	2 (16.7)	1 (8.3)	1 (8.3)	0
Blood creatinine increased	1 (8.3)	0	1 (8.3)	0
Platelet count decreased	1 (8.3)	1 (8.3)	0	0
Metabolism and nutrition disorders	2 (16.7)	1 (8.3)	1 (8.3)	0
Hypocalcaemia	2 (16.7)	1 (8.3)	1 (8.3)	0
Hyperglycaemia	1 (8.3)	0	1 (8.3)	0
Hypokalaemia	1 (8.3)	0	1 (8.3)	0
General disorders & administration site conditions	1 (8.3)	0	1 (8.3)	0
Asthenia	1 (8.3)	0	1 (8.3)	0
Nervous system disorders	1 (8.3)	1 (8.3)	0	0
Dysgeusia	1 (8.3)	1 (8.3)	0	0
Psychiatric disorders	1 (8.3)	1 (8.3)	0	0
Insomnia	1 (8.3)	1 (8.3)	0	0
Renal and urinary disorders	1 (8.3)	1 (8.3)	0	0
Renal failure	1 (8.3)	1 (8.3)	0	0
Vascular disorders	1 (8.3)	1 (8.3)	0	0
Hypotension	1 (8.3)	1 (8.3)	0	0

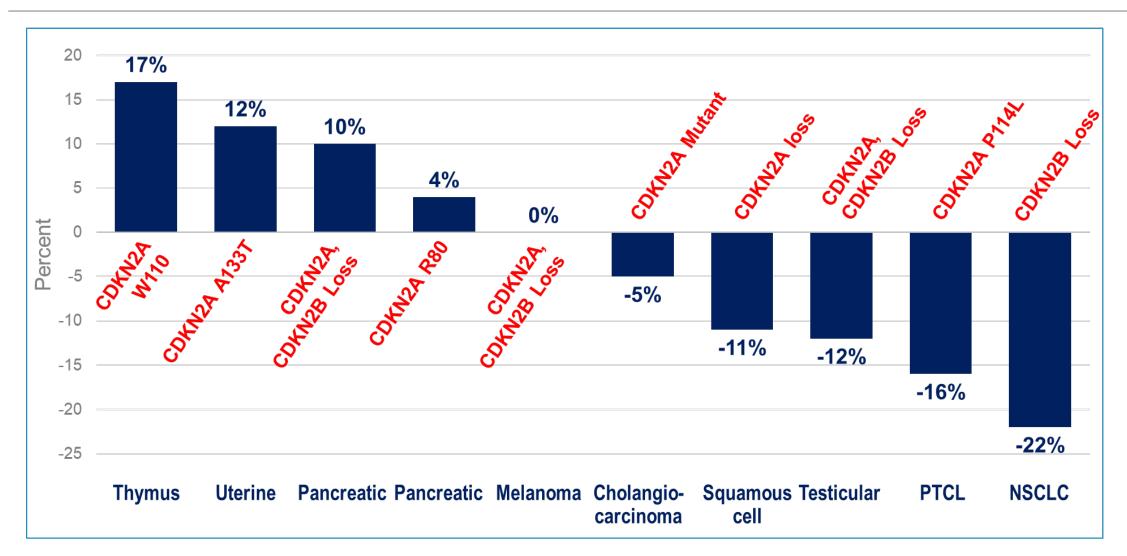


Oral Fadra Expansion Anticancer Activity (interim data; ongoing)

	Ν	PR	SD	PD	ORR	DCR
Dose Escalation	6	1	5	-	17%	100%
Expansion (interim data, ongoing)	6	-	2	4	0%	33%
Total (interim data, ongoing)	12	1	7	4	8%	67%



Oral Fadra Expansion Cohorts: Best % Change in Target Lesions (from baseline, all response types)





Single agent responses and broad activity in liquid and solid cancers

CDK2 + CDK9 inhibition may be superior to either CDK2 or CDK9

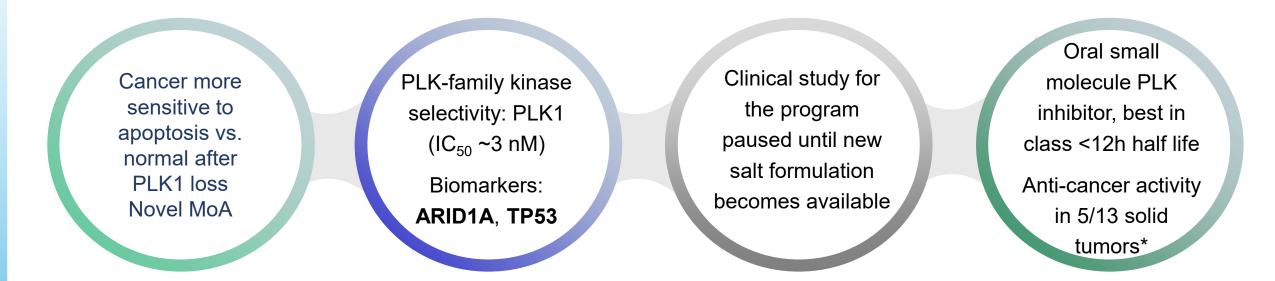
- Cancer cells adapt to CDK2i; CDK2i work better if CDK9i silences MYC
- Exploiting CDKN2A/B vulnerability for precision medicine strategy
- Fadra unusual next gen CDKi; has threaded the needle of transient suppression of anti-apoptosis proteins without broad hematological toxicity







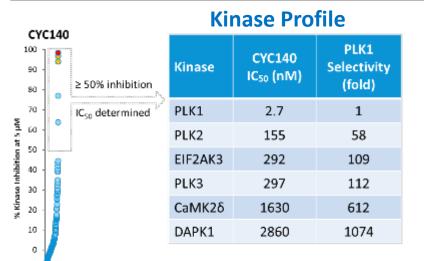
Plogosertib (CYC140) Next Gen PLK1 inhibitor



Novel mechanism with a unique **mutational** strategy **Targeting ARID1A and TP53 Mutated Cancers**



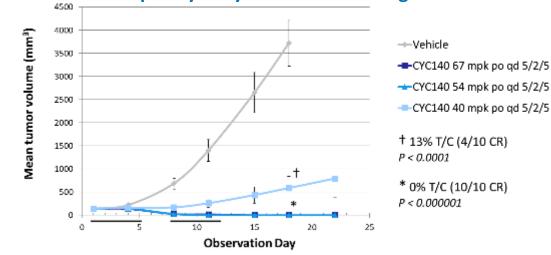
Plogo Preclinical Activity

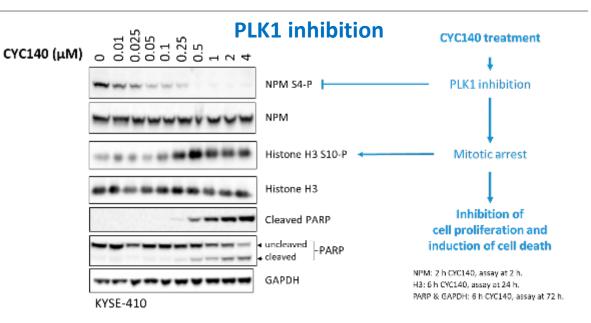


-10 • PLK1 • PLK2 or 3

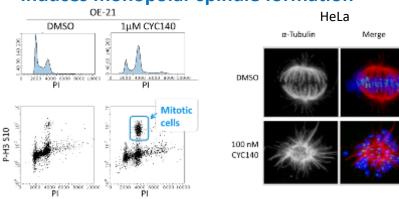
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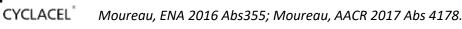






CYC140 increases mitotic cell number and induces monopolar spindle formation





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PLK Inhibitors in Clinical Development

Volasertib

(Boehringer Ingelheim; i.v. BI-6727 discontinued)

- BTD in AML Ph2 data; but Ph 3 POLO-1 in AML failed; imbalance of deaths likely due to myelosuppression; long terminal half-life ~110h
- Dose intensity led to single agent activity
- Epigenetic activity incl. BRD4 inhibition

Onvansertib

(Cardiff; p.o., selectivity primarily PLK1, secondarily CDK9, etc.*)

- Signal in KRASmut mCRC with bevacizumab/FOLFIRI; terminal $t_{1/2}$ ~24h
- Ph 1b: AML w/chemo; prostate w/ abiraterone; mPDAC w/chemo; SCLC
- Ph 2: mCRC 3 arm RCT 2 doses triplet therapy vs control bevacizumab/chemo (n=90)

Plogosertib

(Cyclacel; p.o., selectivity primarily PLK1, secondarily PLK2, PLK3)

- Preclinical activity in multiple solid tumors and leukemias; terminal $t_{1/2}$ ~11h
- Single agent anticancer activity in NSCLC, ovarian, biliary, ACC, etc. (4 dose levels)
- Epigenetic MoA incl. BRD4 inhibition: modulating novel cancer pathways



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Plogo 140-101 Oral Ph1/2 Ongoing in Solid Tumors & Lymphoma

DL7 (n=3) 20mg qd M to F (wk 1 to 3) DL6 (n=3) 20mg ad M to F (wk 1 & 3) DL5 (n=3) 15mg qd M to F (wk 1 to 3) DL4 (n=3) 15mg qd M to F (wk 1 & 3) DL3 (n=3) $10mg \, qd \, M$ to F (wk 1 to 3) DL2 (n=3) \checkmark 10mg qd M to F (wk 1 & 3) Starting DL (n=3) \checkmark $5mg \ qd \ M \ to \ F \ (wk \ 1 \ to \ 3)$

Dose Escalation* (3+3; all comer,

late line; DL=dose level)

Schedule: 3 out of 4 wk per cycle.

Proof of Concept (PoC)**

(Simon 2-stage; 2nd /3rd line)

Cohort 1: Bladder cancer

Cohort 2: Breast cancer (TNBC)

Cohort 3: Lung cancer (NSCLC and SCLC)

Cohort 4: Hepatocellular carcinoma (HCC) and biliary tract cancer

Cohort 5: Metastatic colorectal cancer (mCRC) including KRAS-mutated

Cohort 6: B-cell lymphoma including diffuse large B-cell lymphoma (DLBCL)

Cohort 7: T-cell lymphoma (CTCL/PTCL)

Cohort 8 Basket: tumors suspected to have related MoA (expand if responses) **Pivotal** (if randomized study not needed)

Single-arm, open label, study for n=TBD cancer patients

Indication in pivotal study to be determined based on clinical data from PoC



Active

 \checkmark

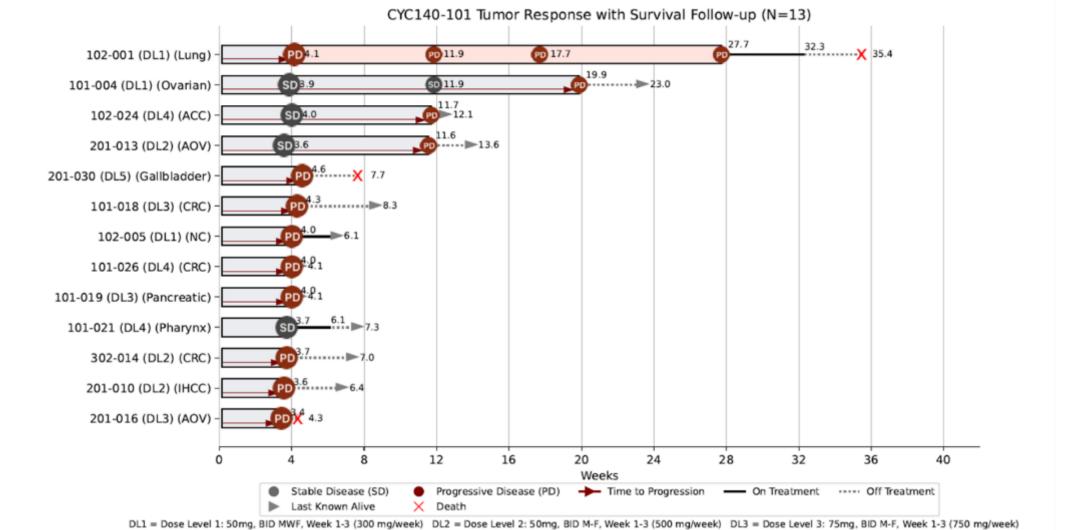
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Oral Plogo Well Tolerated up to Dose Level 5

- Drug-related adverse events reported, mostly grade 1 and 2 and reversible
 - General including fatigue
 - Hematological: anemia
 - Investigations: mild transaminase increase
- No dose limiting toxicities observed to date



Plogo Oral 140-101 DL1-4 Swimmers Plot (dose escalation ongoing)



DL4 = Dose Level 4: 100mg, BID M-F, Week 1-3 (1000 mg/week) DL5 = Dose Level 5: 100mg, BID M-F, Week 1-4 (1000 mg/week)

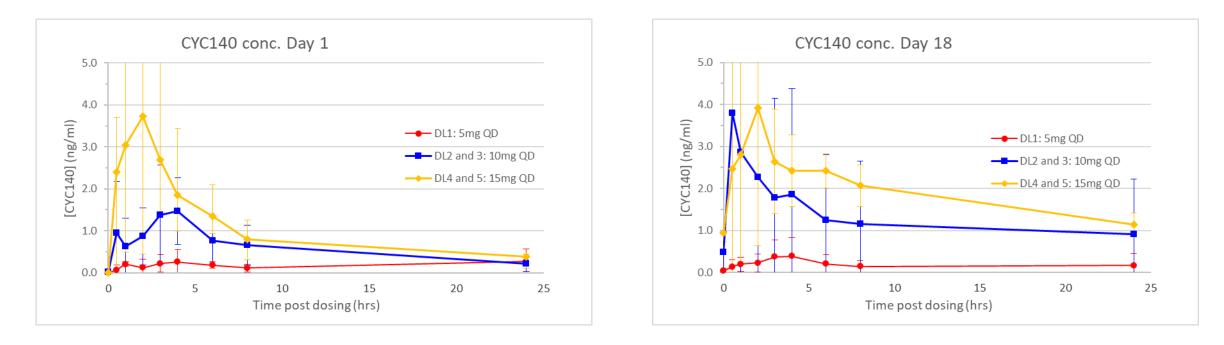
ACC = Adenoid Cystic Carcinoma (Salivary glands) AOV = Ampulla of Vater CRC = Colon and Rectum IHCC = Intrahepatic cholangiocarcinoma NC = NUT carcinoma (Paranasal sinuses) Data cutoff date: 2023-10-02



Mean (±SD) Plasma Plogo Concentration-Time Plot C1D1 & C1D18

Day 1

Day 18



Based on preclinical modeling data, efficacious doses yet to be achieved.

CYCLACEL* Data on file.

Plogo Conventional Dose Escalation Strategy

Potential activity across mechanistically relevant tumors

- Specific mutations in SWI/SNF complex subunit proteins, incl. ARID1A, SMARCA, etc.
- Novel targets in molecular pathways with unmet medical need
- Could lead to patient selected, biomarker driven Ph1 expansion group

Preclinical sensitivity data from world-class laboratories in CRC, lymphoma, melanoma, ovarian, SCLC.

Requires updated formulation to increase exposure levels

Increased patent exclusivity to 2040



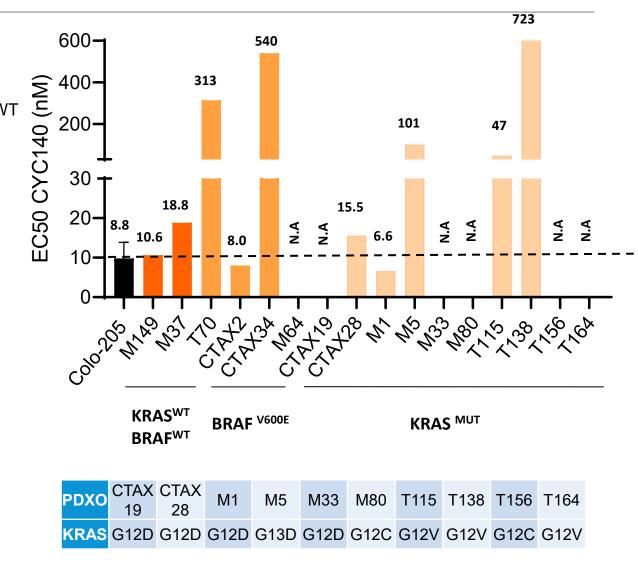
Colorectal PDX Organoid Sensitivity to Plogo

In vitro 3D models from 16 CRC PDX

- 10 KRAS^{mut}, 3 BRAF^{V600E}, 3 KRAS^{WT}/BRAF^{WT}
- Completed EC_{50} by cell viability (19-point dose curve: 0.038 nM 10 μ M)

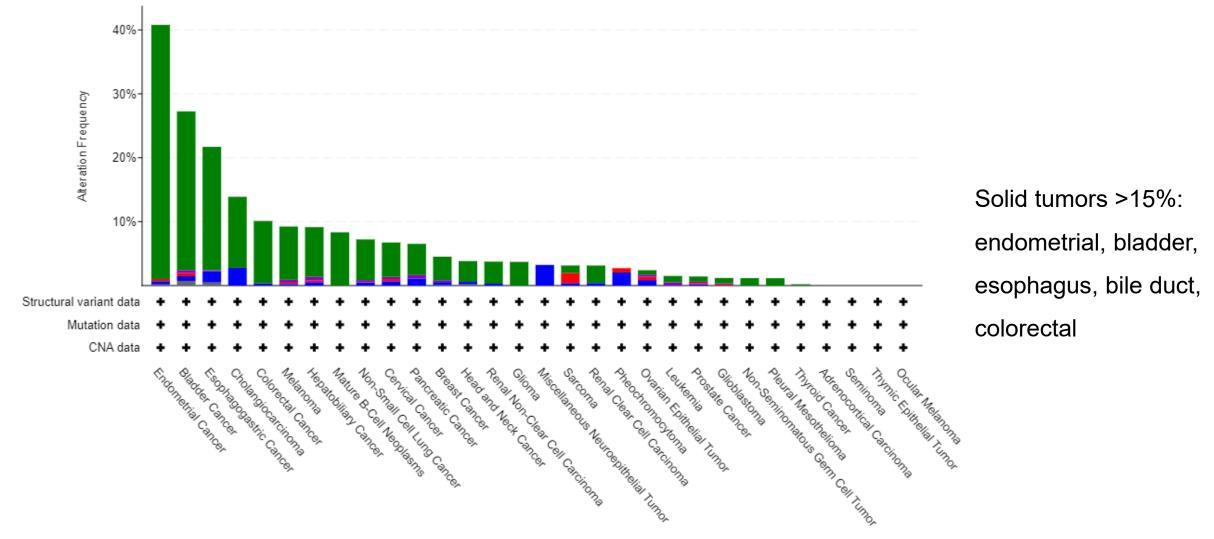
Sensitivity to plogo:

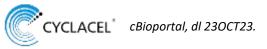
- 5 models with $EC_{50} < 30 \text{ nM}$
- Does not appear BRAF or KRAS dependent
- None of resistant are ARID1A mut
- 3/5 sensitives are ARID1A mutant
- 5/5 sensitives are TP53 mutant





ARID1A Modifications





Epigenetic hypothesis

Plogo enables chromatin accessibility at low concentrations

Combination strategy with other epigenetic modulators

– Hypomethylating agents or HDAC Inhibitors

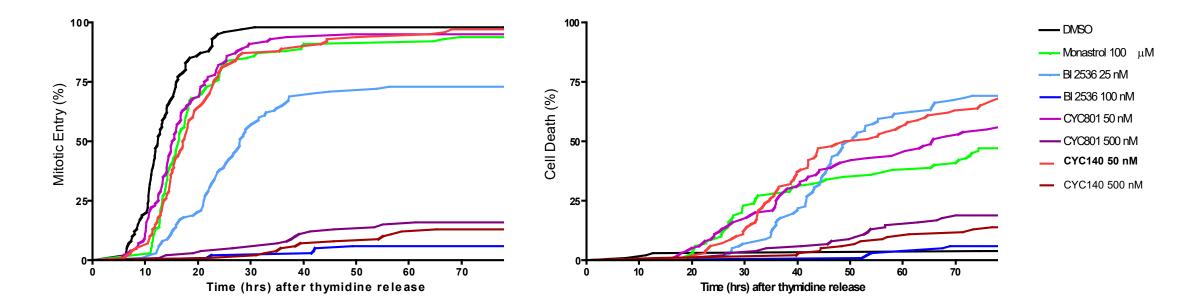
Can use current formulation

Front line opportunity in TP53 mutated AML



Optimizing PLK1i Exposure May Enhance Cell Death Induction – Rationale for Lower, Prolonged Dosing

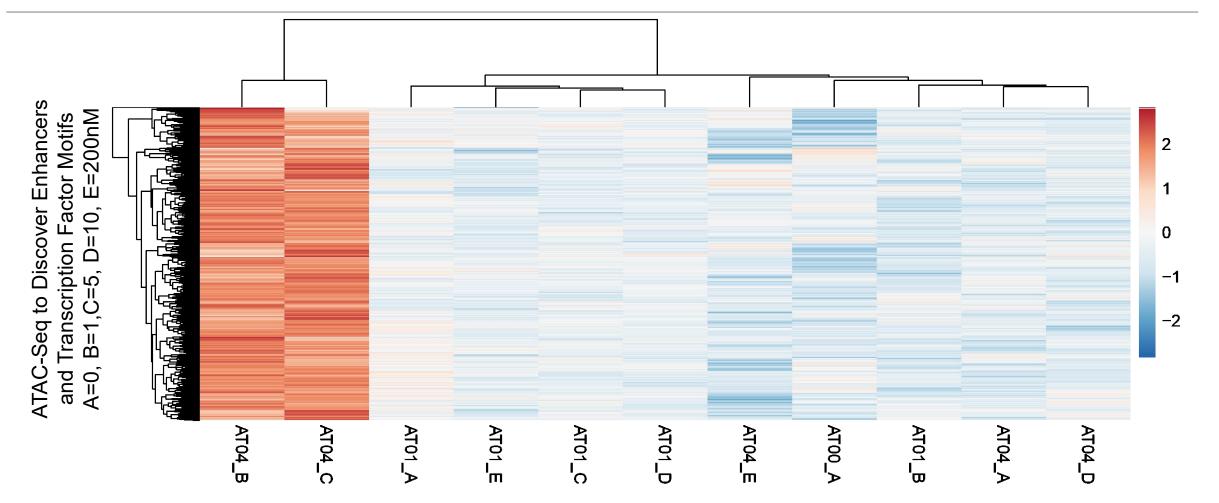
RKO colon carcinoma cell line - Single thymidine block and release prior to treatment



At high doses, PLK1i treatment stops growth; at lower doses PLK1i starts cell cycle and then more tumor cells die.



Low Dose Plogo has Dramatic Effect on Chromatin Access



Red: open & transcribing segments. Blue: closed chromatin segments



TP53 mutated patients do not benefit from 1L AML Standard of Care:

- venetoclax + azacitidine; poor OS

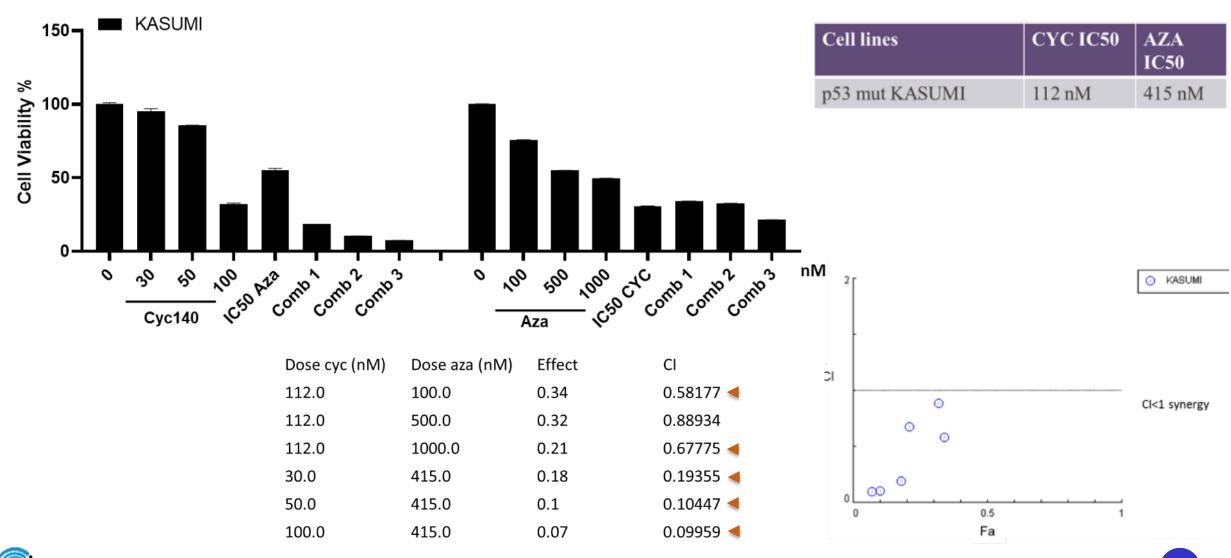
Ethical to test as 1L treatment in a single arm study

Large unmet medical need

Excellent opportunity for disease modifying treatment



Preclinical Plogo (aka CYC140) + Aza Activity in AML



Data on file.

CYCLACEL

Financial Position & Capitalization

Cash equivalents: \$6.0 million (as of June 30, 2024)¹

Operating cash burn (excludes non-cash items):

- 2023 Annual: \$16.1 million¹
- \bigcirc 6 months ended June 30, 2024: \$4.3 million¹

Fully diluted shares: 18.1 million¹

Estimated capital into Q4 2024¹

Nasdaq compliance with stockholder equity rule; extension granted to December 24, 2024²



Milestone Momentum *

✓ Fadra initial Phase 2 data in cohort with CDKN2A/B abnormalities 2H 24

- Fadra initial lymphoma cohort data 1H 25
- Fadra final Phase 2 data in cohort with CDKN2A/B abnormalities 2H 24
- Fadra complete tablet manufacture and validation 1H 25
- **Plogo** alternative salt formulation clinical supply availability





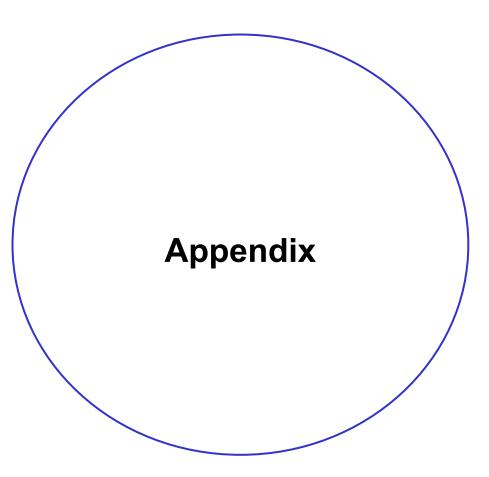


Thank You

Cyclacel Pharmaceuticals, Inc.

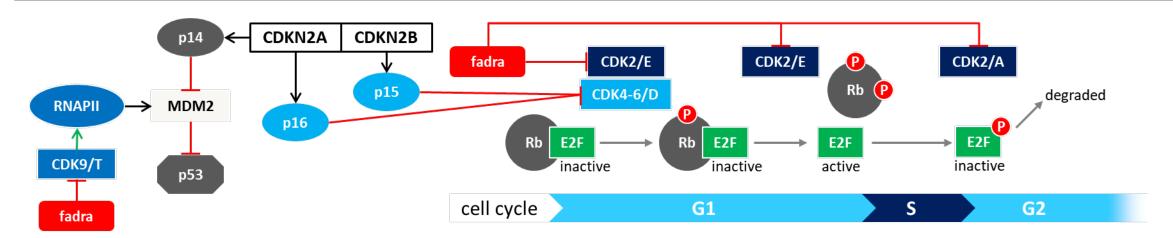
200 Connell Drive #1500 Berkeley Heights, NJ 07922

Contact: <u>ir@cyclacel.com</u> +1 (908) 517 7330





CDKN2A/B Genetic Abnormalities and Fadra MoA



CDKN2A encodes p16^{INK4a}, CDKN2B p15^{INK4b} which inhibit D-type cyclin complexes w/ CDK4 & CDK6

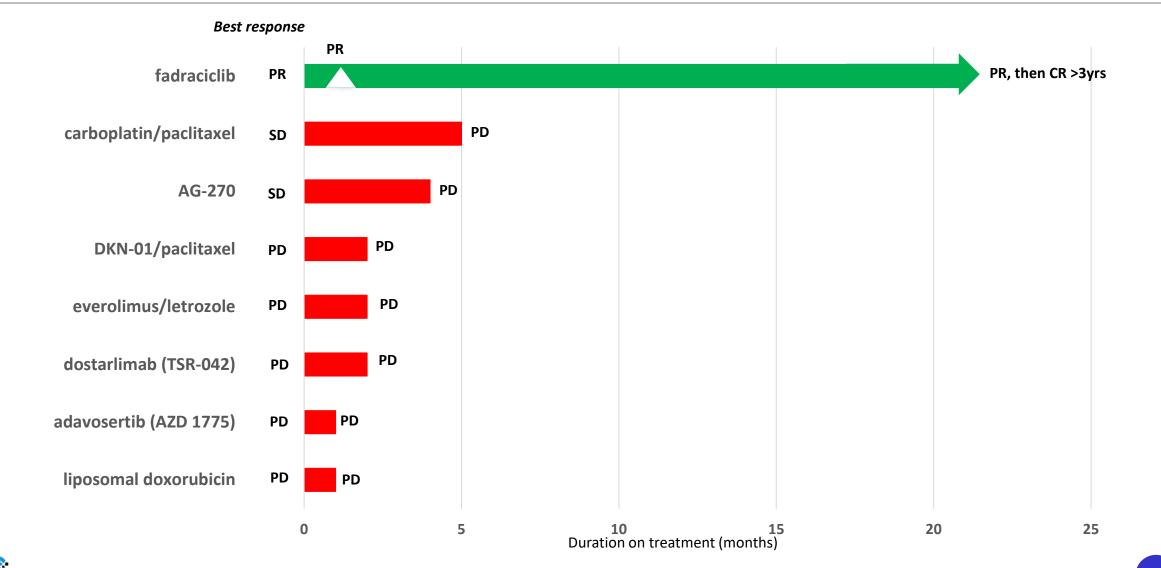
- Dysregulated CDK4/6 drive cancer progression, proliferation in G1, suggesting a role for CDK4/6 inhibition
- Abemaciclib (CDK4/6i) activity in CDKN2A mutant cells is limited by CDK2 bypass of CDK4/6 inhibition ¹

CDKN2A also encodes p14^{ARF}, which disrupts MDM2-directed degradation of p53; suppression of MDM2 expression by **CDK9i** may compensate for loss of this activity

No approved drugs for patients with CDKN2A/ CDKN2B abnormalities



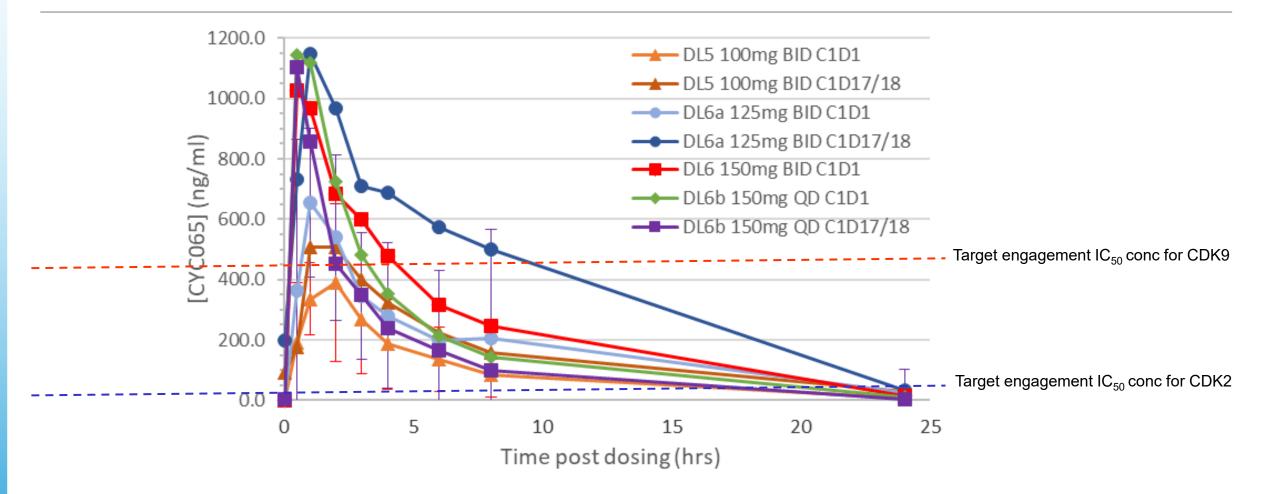
Endometrial Patient History 065-01 Part 2 IV



CYCLACEL^{*} Data on file. Do, KT, et al., 32nd EORTC/AACR/NCI Virtual Symposium 24-25 Oct. 2020. PD=progressive disease. SD=stable disease. © 2024 Cyclacel Pharmaceuticals, Inc. Rel. NOV2024

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Dose Proportional PK with CDK2 and 9 Coverage at Higher Dose Levels





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Fadra Suppresses E2F (CDK2 dependent) DL5 Phase 1 Patients

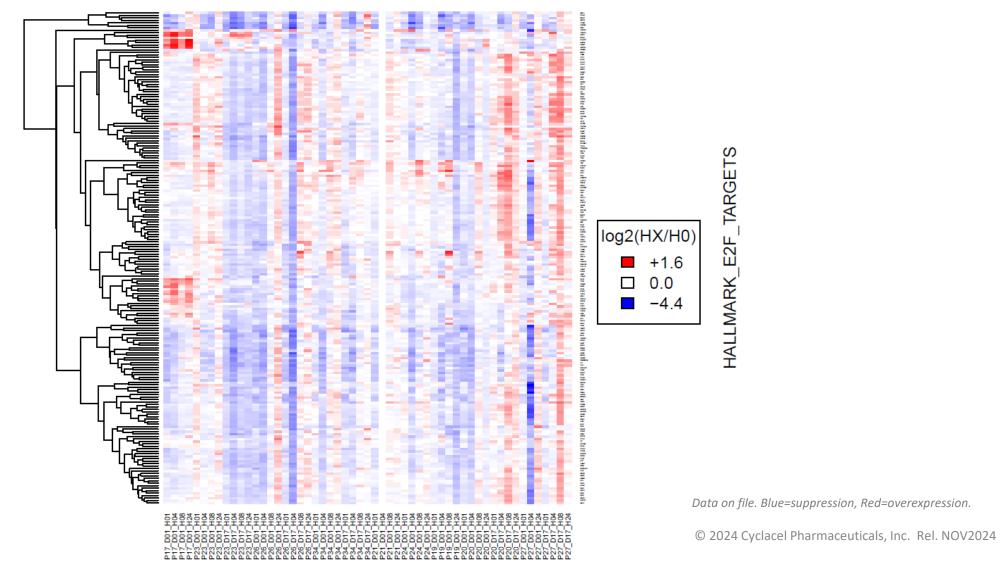
TARGETS

E2F

HALLMARK

44

Gene expression levels CYC065–101 DL5



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Fadra Suppresses CDKN2A/B Transcription in Patients

DL2: 50 mg bid	101_010_D01_H01	101_010_D01_H04	101_010_D01_H08	101_010_D17_H01	101_010_D17_H04	101_010_D17_H08	101_010_D17_H24	101_012_D01_H01	101_012_D01_H04	101_012_D01_H08	101_012_D01_H24	101_012_D17_H01	101_012_D17_H04	101_012_D17_H08	101_012_D17_H24	101_013_D01_H01	101_013_D01_H04	101_013_D01_H08	101_013_D01_H24	101_013_D17_H01	101_013_D17_H04	101_013_D17_H08	101_013_D17_H24
CDKN2A																							
CDKN2B																							

DL5: 100 mg bid

CDKN2A	P017_D01_H01	P017_D01_H04	P017_D01_H08	P017_D01_H24	P019_D01_H01	P019_D01_H04	P019_D01_H08	P019_D01_H24	P020_D01_H01	P020_D01_H04	P020_D01_H08	P020_D01_H24	P020_D17_H01	P020_D17_H04	P020 D17 H08	P020 D17 H24	P021 D01 H01	1 D01 H0	P021 D01 H24	<u> </u>	P023_D01_H04	P023_D01_H08	P023 D01 H24	P023_D17_H01	 3_D17_F	P023_D17_H08	P023_D17_H24	P024_D01_H01	P024_D01_H04	P024_D01_H08	P024_D01_H24	P026_D01_H01	P026_D01_H04	P026_D01_H08	P026_D01_H24	P026_D17_H01	P026_D17_H04	P026_D17_H08	P026_D17_H24	P027_D01_H01	P027_D01_H04	P027 D01 H24	P027 D17 H01		P027_D17_H24	P034_D01_H01	P034_D01_H04	P034_D01_H08	P034_D01_H24	P034_D17_H01	P034_D17_H04	P034_D17_H08

DL6b: 150 mg qd	101_039_D01_H01	101_039_D01_H04	01_039_D	101_039_D01_H24	101_040_D01_H01	101_040_D01_H24	101_047_D01_H01	101_047_D01_H04	101_047_D01_H08	101_047_D01_H24	,	1_047_D17_H0	101_047_D17_H28	01_053_D	101_053_D01_H04	101_053_D01_H08	101_053_D01_H24	101_053_D17_H01	101_053_D17_H08	1_053_D17_H2	102_041_D01_H01	102_041_D01_H04	02_041_D	102_041_D01_H24	2 05 05	02_050_D0	2_050_D(2_057_D	02_057_D01_H0	302_057_D01_H08	302_057_D01_H24	log2 (Hx +3 0 -3	3
CDKN2B																																	

