



Patient-first Al drug creation



Forward Looking Statements

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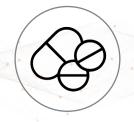
Better drugs, faster

Patient-first AI strategy with tech-driven scalability





Encode and automate every stage of drug design and development



OUR FOCUS

Design patient-centric drugs with an improved probability of success



OUR STAGE

Validated platform with rapidly scaling pipeline



Our Al-first achievements in biotech

Demonstrated impact and validation of our AI platform in drug discovery







First ever Al-designed drugs to enter clinical trials

First AI system
demonstrated to
improve clinical
outcomes in oncology

Unprecedented & repeatable 10x productivity in drug candidate creation



Delivering results across partnerships

>\$200mn cash from partners to date, eligible for >\$7.5bn in additional milestones





Taking projects from ideas to the clinic

Partners increasingly adopting our technology at greater scale

	BILL&MELINDA GATES foundation	GEOR REMAKING MEDICINE	Rally bio	APEIROO	SANOFI	ر ^{اال} Bristol Myers Squibb ّ	BAYER E R
Idea generation	>		Rallybio				
Target evaluation							
Design Al	>						
Personalised medicine							
Project management							
Clinical							



Deal highlights industry shift in drug discovery

Utilises Exscientia's platform from idea generation through patient selection

Leveraging Exscientia's end-to-end AI capabilities allows for fundamentally improved overall process

Exscientia leading target discovery, drug design and translational activities up to candidate nomination

Sanofi bringing deep therapeutic area and biology expertise, as well as clinical and commercial capabilities

Up to 15 small molecule targets across oncology and immunology

Economics reflect Exscientia's value creation



Financial terms

- \$100 million upfront payment, potential
 \$5.2 billion total payments
- Up to \$343 million per target in potential payments including \$193 million for research, development and regulatory milestones and up to \$150 million for commercial milestones
- High-single digit to mid-teens tiered royalties

Exscientia co-investment option increases royalty rate to 21% on net sales of co-funded products



We are a pharmatech

Equal importance of technology and drug hunting skills



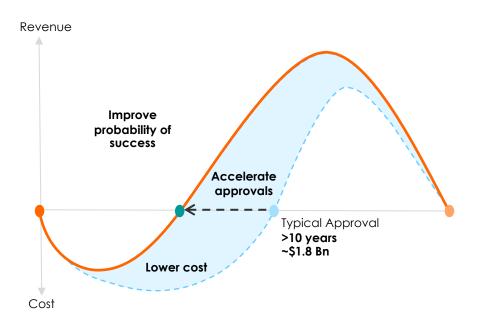




As of December 31, 2021

Transforming pharmacoeconomics with technology

Better drugs faster also means better business models



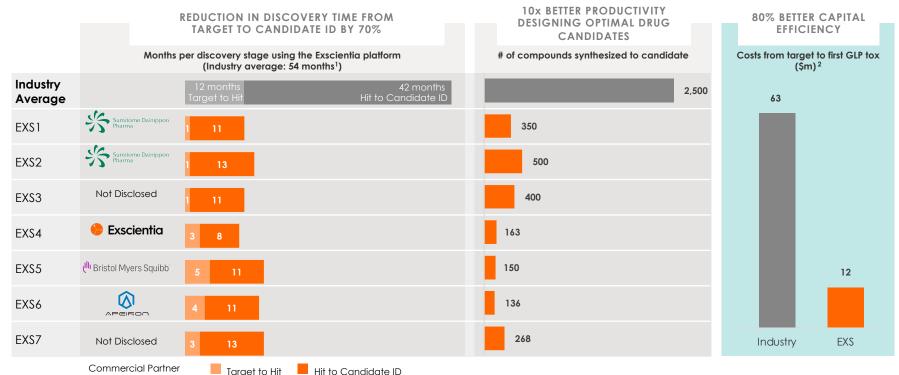
- Better designed drugs have more impact on patients driving greater market demand
- Improved probability of success multiplies potential ROI
- Faster development and lower input costs allow more scientific exploration
- Al-first approach improves decision making at all stages
- Typical economic lifecycle of a drug

 Exscientia's goal for improving the economic lifecycle of drugs



Outstanding efficiency in drug discovery

Consistently outperformed in time and cost over industry benchmarks



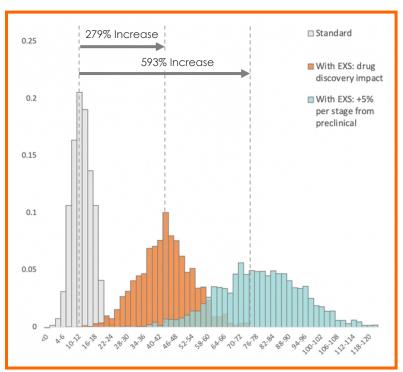


^{1.} Paul et al, Nature Reviews Drug Discovery 2010 9 (2) 203-214

^{2.} Morgan et al, Nature Reviews Drug Discovery 2018

Foundations for transforming an industry

Modelling how our tech strategy can have dramatic NPV impact



AI_Time acceleration	_		
Time to candidate (yrs)	1		
rNPV (\$M)	18.1		
Change	69%		
Al_Cost reduction			
Cost to candidate (\$M)	8	p(to market)	7%
rNPV (\$M)	14.6	rNPV (\$M)	40.6
Change	36%	Change	279%
Al_Success rate (7 out of 8 in discovery) Probabilty to enter market at start rNPV (\$M) Change	7% 20.1 88%		
Al_Success rate (+5% per stage from precli	p(to market) rNPV (\$M)	11% 74.2	
rNPV (\$M)	24.2	Change	593%
Change	126%		



2021 marked by significant pipeline expansion

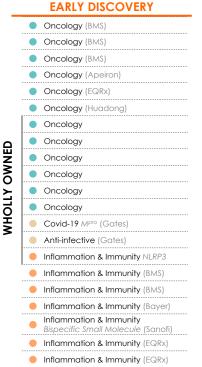
Progress in new programmes and delivery of key milestones





Rapidly scaling pipeline: doing more to learn more

Platform is agnostic of therapeutic area and target, enabling expansion



	LATE DISCOVERY
•	Oncology (BMS)
•	Respiratory (Bayer)
	Oncology ENPP1 (RallyBio)
•	HPP ENPP1 (RallyBio)
	Psychiatry (Blue Oak)
•	Oncology HPK1



PHASE 1 High Adenosine Signature Cancers A2a

>30 Projects in progress



How patient-first AI can produce better drugs, faster

Virtually every molecule we make is designed and selected by algorithm







Learn from all data types

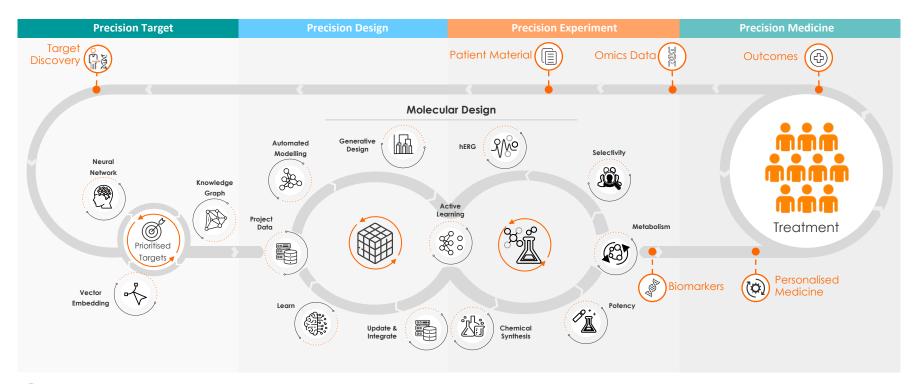


The patient is the best model



Patient-first AI is a learning process

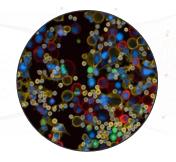
Our end-to-end architecture brings the patient into every stage of drug creation





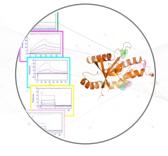
Extensive proprietary data generation capabilities

Over 45,000 sq ft of laboratories producing assays, seed data and structures



Primary tissue disease models

Live patient tissues
Single cell resolution
Deep learning Al
Biobanked samples



World-class biosensors

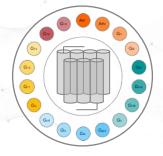
Proprietary seed data
GPCRs in native state
Label free and
automated



High throughput crystallography

Proprietary seed data

Automated Hotspot
binding site analysis



Extensive pharmacology

Transducerome mapping

Automated assay
development

Polypharmacological

profiling



Substantial flow of milestones

Business continues to gain momentum

2021 Accomplishments

- √ Two drugs entered the clinic
- √ \$1.3bn BMS partnership expansion
- ✓ BMS & CDK7 nominations
- ✓ Entered JVs with EQRx, Gates & GT
- ✓ Launched automation lab
- √ Successful IPO raising >\$510 million
- √ >\$75 million cash from partners

By Year-End 2022

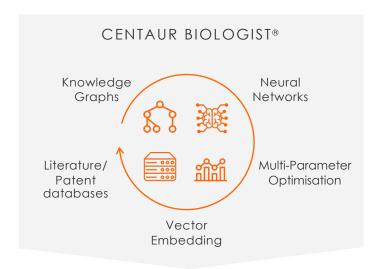
- √ \$5.2bn Sanofi collaboration expansion
- A2a Phase 1 data
- At least one more IND/CTA filing
- Additional candidate nominations
- Further translational validation data
- Operational expansion and scaling
- Geographic expansion



Al Platforms **Exscientia** 18

Prioritising and validating targets with Centaur Biologist

Al-driven target identification through deep learning algorithms





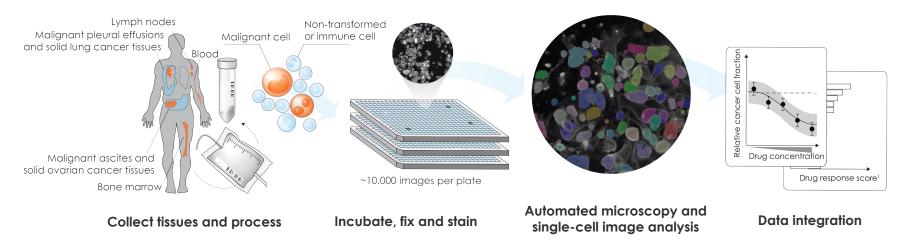
- Applies deep learning to genome-scale datasets to identify connections and predict target-disease associations
- Builds insights from constructing global knowledge graphs
- TrendyGenes algorithm generates graphic representation of literature identifying trends from over 30 million publications
- Disease area agnostic with application to date across oncology, immuno-oncology, immunology and rare disease

Enables Exscientia to identify targets with a higher probability of translating into the clinic



Automated high content patient tissue imaging platform

Differential drug activity in complex primary tissues at the single-cell resolution



Patent-pending wet lab methods

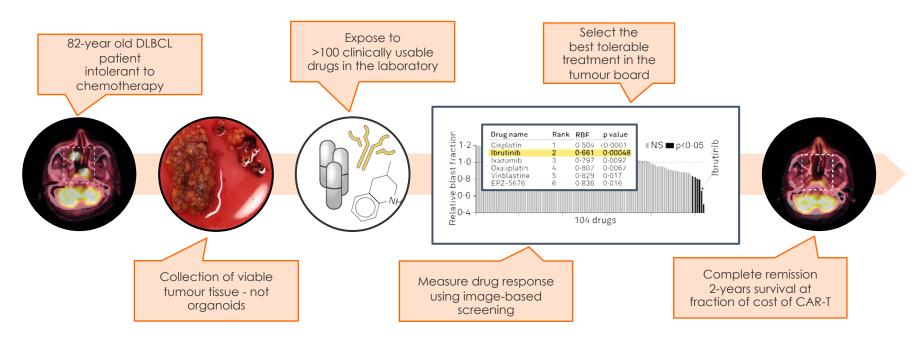
Proprietary software and deep learning algorithms





Proven to prioritize clinically effective drugs

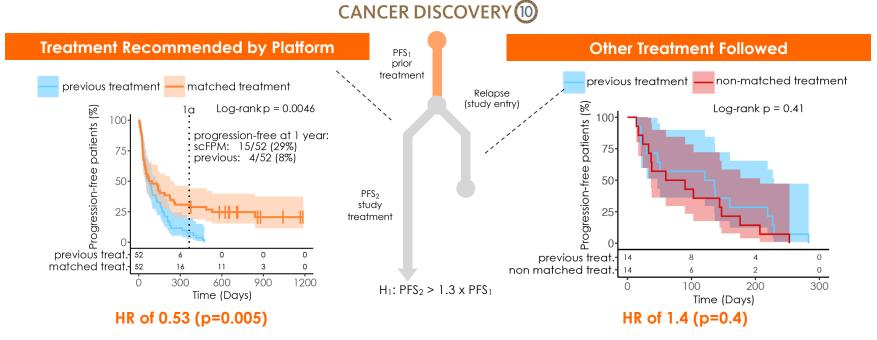
First-ever functional drug testing platform to achieve interventional POC





First AI platform demonstrated to improve clinical outcomes

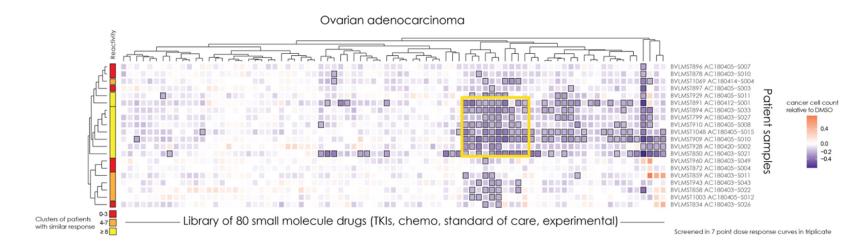
Deep learning prioritised cancer therapy led to significantly better PFS





Target discovery in primary patient tissues

Single cell phenotypic screening to ID novel targets

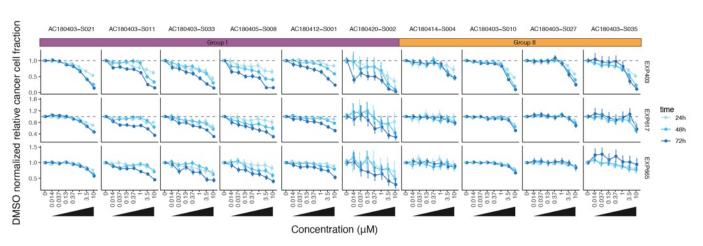


Evaluating an array of drugs and primary tissues at single cell resolution to quantify cancer cell cytotoxicity uncovers **potential novel target space in ovarian cancer**.

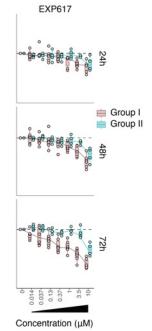


Defining patient selection during drug design

EXS617 (iCDK7): ovarian cancer patient samples stratify into two groups



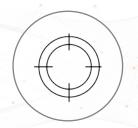
Group II (n=4) require higher concentrations of EXS617 than Group I (n=6) for effect Understanding why will guide patient selection and is the focus of ongoing studies





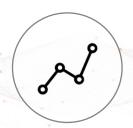
Precision objectives for precision design

Dozens of endpoints can be optimised in parallel





Candidate Criteria	Design Goal
CDK7 IC ₅₀ (nM)	<10
CDK family selectivity	>100 fold
HCC70 (breast cancer) IC50 (nM)	<100
OVCAR-3 (ovarian cancer) IC50 (nM)	<100
hERG IC ₅₀ (μM)	>5
Human μsome Clint μL/min/mg	<15
Human Hep Clint μL/min/10 ⁶ cells	<15
Caco-2 A2B (efflux) 10 ⁻⁶ cm/s	>3 (<5)

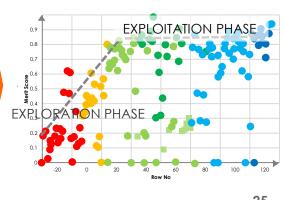


MPO: Multi-Parameter Optimisation





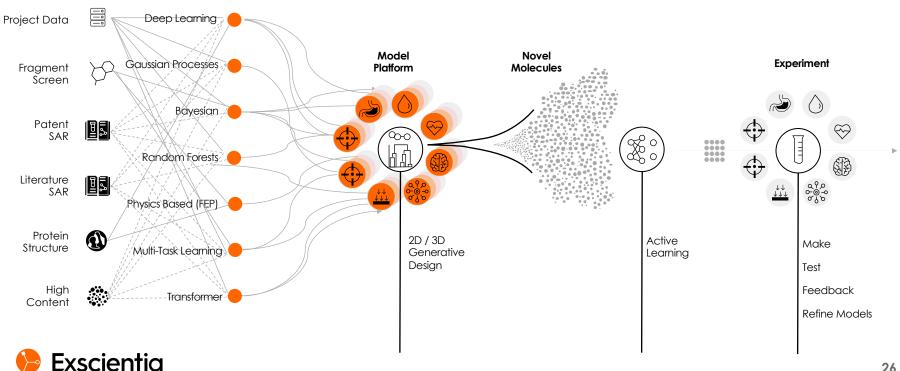
Merit: Project Telemetry





Data and model agnostic

Our AI design platform can optimise complex drugs from diverse starting data







Active learning Al leads to creative breakthroughs

Counterintuitive selection goes against preconceptions and breaks dogma

Al system to maximise information gain



Chooses which compounds to synthesise from output of generative design and predictive models

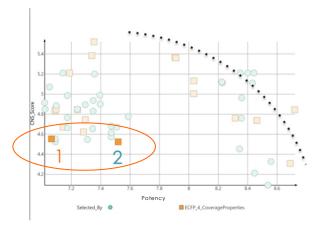


Mathematically evaluates how much can be learned from each compound



Efficiently explores the available structural and property space

Example of our AI choosing unexpected candidates that led to a design breakthrough and development candidate



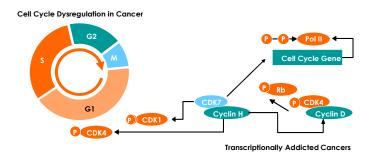
20 compounds (square) are selected by active learning



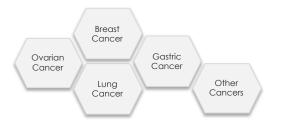
Technology in action CDK7 CASE STUDY: EXS617 **Exscientia**

CDK7 inhibition provides broad oncology opportunity

Dual targeting of cell cycle and transcription mechanisms



CDK7: Potential for multiple cancer indications



Importance of cell cycle inhibition

- CDK4/6 inhibitors have demonstrated the potential for cell cycle inhibitors to impact cancer
 - Ibrance (palbociclib) generated ~\$5B sales in 2019
 - 65-75% of patients show response, but acquire resistance

Transcription and cell cycle dysregulation are both hallmarks of cancer

- Inhibiting both may be more effective in controlling growth
- Aberrant CDK7 overexpression is common in multiple indications and associated with poor prognosis
- Majority of cancers are 'transcriptionally addicted' with c-Myc overexpression

Potential for first line therapy or for CDK 4/6 refractory patients



CDK7: Precision design to maximise effectiveness

Mechanism requires a tightly controlled target product profile

Non-covalent potency and selectivity

- Both potency and selectivity are critically important
- Early entrants increased potency and selectivity by covalent bonding
- This dramatically increased off target toxicity, leading to discontinuation

Design needs to achieve potency and selectivity non-covalently

Short therapeutic window

- Ideal therapeutic coverage would be 6-8 hours at IC80
- Longer periods will lead to increasing systemic toxicity

Product needs to be highly potent, but with a short half-life

Bioavailable

- CDK7 inhibition will lead to toxicity if it remains at any site other than the tumour
- Absorption variability will cause either supra-doses or sub-therapeutic dosing

Goal is for very rapid absorption at the lowest possible dose



Design flaws can impact clinical outcomes

Unable to validate CDK7 mechanism without a clean drug profile

	Assay	Candidate Criteria	Competing Phase 1 Candidate	Competing Phase 1/2 Candidate		
Target affinity and	CDK7 IC ₅₀ (nM)	<10	6	30	Lack of selectivity could lead to	
selectivity	CDK family selectivity	>100 fold		< 20	systemic toxicity	
Cell potency	HCC70 (breast cancer) IC50 (nM)	<100	2.5	500		
	OVCAR-3 (ovarian cancer) IC50 (nM)	<100	0.8		Low potency will require high dosing for efficacy	
Safety and metabolism	hERG IC ₅₀ (μM)	>5	5	24	disting its sine day	
	Human μsome Clint μL/min/mg	<15	9	3.6	Efflux concerns for a cell cycle inhibitor:	
	Human Hep Clint μL/min/10 ⁶ cells	<15	7	< 15		
Permeability / transporter liability	Caco-2 A2B (efflux) 10 ⁻⁶ cm/s	>3 (<5)	0.55 (51)	0.14 (107)	o Substantial GI tox	
	pH 7.4 μg/ml	>50	132	>100	High variability on absorptionAbility to stay in tumor cell	
General properties	F % (p.o.)	>30%	100%	30 %		



Our EXS617 candidate resolves critical design issues

Designed in <12 months and just 136 experimental compounds

	Assay	Candidate Criteria	Competing Phase 1 Candidate	Competing Phase 1/2 Candidate	EXS617
Target affinity and	CDK7 IC ₅₀ (nM)	<10	6	30	2
selectivity	CDK family selectivity	>100 fold		< 20	
Cell potency	HCC70 (breast cancer) IC50 (nM)	<100	2.5	500	4.2
	OVCAR-3 (ovarian cancer) IC50 (nM)	<100	0.8		0.8
Safety and metabolism	hERG IC ₅₀ (μM)	>5	5	24	>30
	Human μsome Clint μL/min/mg	<15	9	3.6	<3
	Human Hep Clint μL/min/10 ⁶ cells	<15	7	< 15	2
Permeability / transporter liability General properties	Caco-2 A2B (efflux) 10 ⁻⁶ cm/s	>3 (<5)	0.55 (51)	0.14 (107)	5.3 (4)
	pH 7.4 μg/ml	>50	132	>100	120
	F % (p.o.)	>30%	100%	30 %	77%

Meets or Exceeds criteria Minor deviation

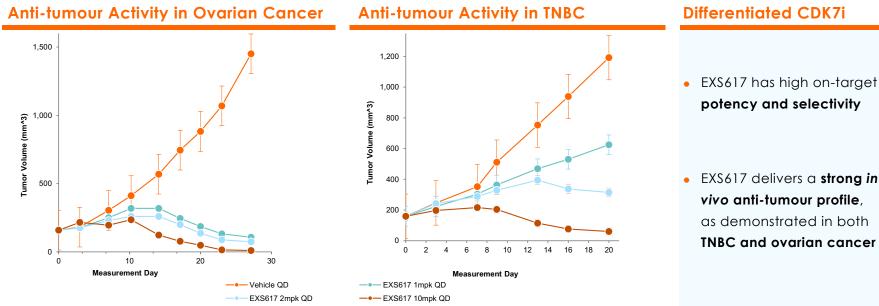
Major deviation

- Potent biochemical and cellular activity
- High selectivity
- Excellent bioavailability and efflux



CDK7i: highly effective in classical models

Potent anti-tumour activity demonstrated in multiple solid tumour types



EXS617 has high on-target potency and selectivity

vivo anti-tumour profile, as demonstrated in both TNBC and ovarian cancer

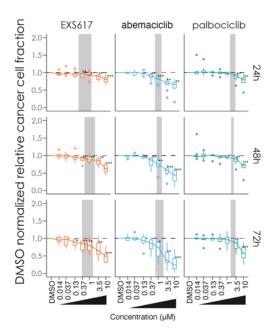


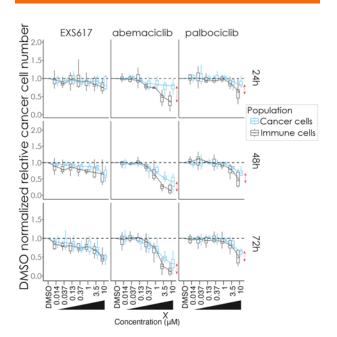
CDK7i: Sparing immune cells in comparison to CDK4/6i

TME evaluation from patient samples shows impact beyond just cancer cells









Key results

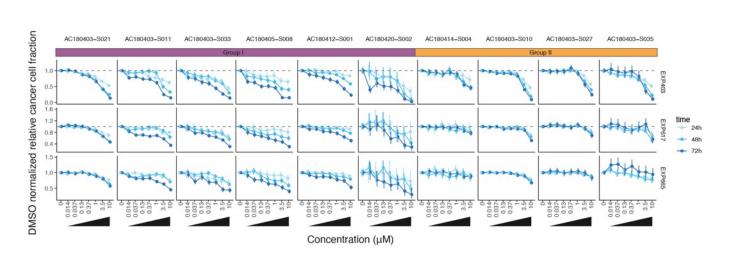
- (A) EXS617 has same depth of response on ovarian cancer cells as CDK4/6 inhibitors but at lower concentrations (N=10)
- (B) The CDK4/6 inhibitors have greater immune cell (off-target) effects than EXS617

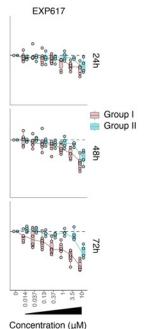
Development of CDK7 inhibitors with reduced immune off-target effects may decrease risk of clinical neutropenia



CDK7i – defining patient selection during drug design

EXS617: ovarian cancer patient samples stratify into two groups





Group II (n=4) require higher concentrations of EXS617 than Group I (n=6) for effect Understanding why will guide patient selection and is the focus of ongoing studies





Exscientia plc
OXFORD HEADQUARTERS
The Schrödinger Building
Oxford Science Park
Oxford OX4 4GE

investors@exscientia.ai

Registered address: The Schrödinger Building, Oxford Science Park, Oxford, OX4 4GE, United Kingdom

Registered number: 13483814

