

Targeting tumor suppressor loss to unmask vulnerabilities in cancer for the next generation of precision medicines

Corporate Overview August 2022



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Certain statements in this presentation may be considered forward-looking statements. Forward-looking statements generally relate to future events, Tango's future financial and operating performance, goals, expectations, beliefs, development plans and development objectives for Tango's product pipeline. In some cases, you can identify forward-looking statements by terminology such as "may", "should", "expect", "intend", "will", "path", "achievable", "milestones" "goal", "forecast", "estimate", "anticipate", "believe", "predict", "potential" or "continue", or the negatives of these terms or variations of them or similar terminology. For example, statements concerning the following include or constitute forward-looking statements: Company has a cash runway into 2H 2024; Company has a productive discovery platform, Tango has a sustainable pipeline of novel precision oncology drugs and drug programs; the anticipated milestones for the Company's drug programs, including the timing for initial (and final) safety and efficacy clinical trial data and results, the timing of first-in-human clinical trials, the timing of IND-enabling studies, the timing of IND filings, the timing of clinical trial initiation and the timing of development candidate declaration; Tango's discovery platform and its increased probability of meaningful clinical results; there is a clear path to clinical POC in MTAP-null solid tumors with multiple histologies; potential for histology-agnostic registration for PRMT5 inhibitor with broad based activity across tumor types; the Company is actively enrolling patients in the TNG908 clinical trial; the Company's drug candidates planned for 2022; TNG908 is a potentially first in class PRMT5 inhibitor that is synthetic lethal with MTAP deletion; the Company will be pursuing novel combination therapies with inhibitors that have a complementary mechanism of action; TNG908 composition of matter patent expected to expire no earlier than 2041 (and that pending patent applications related thereto will issue as patents); TNG462 is potential best-in-class PRMT5 inhibitor (and has potential for broader and deeper clinical activity and is expected to have an increased therapeutic index and efficacy); the development plans for the PRMT5 franchise (including future multiple combination trials and plans to evaluate TNG908 and TNG462 in clinical studies); future clinical trial designs; the significant patient opportunities for the Company's pipeline therapies; synergy of USP1 in both PARP-sensitive and -resistance models suggests potential to meaningfully expand patient benefit from PARP inhibitors: Tango has sufficient cash balance to fund operations into second half of 2024 (and is sufficient to achieve multiple projected key milestones); the anticipated benefits of synthetic lethal drugs; planned expansion cohort of the TNG908 phase 1/2 clinical trial for glioblastomas; TNG908 expected to be brain penetrant in clinical study; projected dose escalations in TNG908 phase 1/2 study; the Company's key milestones for 2022 and 2023; one of the largest genetically defined patient populations may benefit from the PRMT5 franchise; and the anticipated benefits of future product candidates including those identified in the future through the Tango discovery platform. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward looking statements. These forwardlooking statements are based upon estimates and assumptions that, while considered reasonable by Tango and its management, are inherently uncertain. Drug development, clinical trials and commercialization involve a high degree of risk, and only a small number of research and development programs result in commercialization of a product. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: Tango has a limited operating history and has not generated any revenue to date from drug sales, and may never become profitable (and may utilize cash resources more quickly than anticipated); Tango has limited experience with conducting clinical trials (and will rely on a third party to operate the clinical trial for TNG908) and may not be able to commence the clinical trial, enroll and dose patients when expected and may not generate results in the anticipated timeframe (or at all); the benefits of Tango pipeline products (stand-alone and as potential combination therapies) that are seen in pre-clinical experiments may not be present in clinical trials or in use commercially or may not be safe and/or effective in humans (and Tango or a third-party may not be able to obtain approval or commercial sales of any stand-alone or combination therapies); Tango has incurred significant operating losses and anticipates continued losses for the foreseeable future; Tango will need to raise capital in the future and if it is unable to raise capital when needed or on attractive terms, the Company would be forced to delay, scale back or discontinue some of our development programs or future commercialization efforts; Tango may be unable to advance the preclinical development programs into and through the clinic for safety or efficacy reasons or experience significant delays in doing so as a result of factors beyond Tango's control; Tango's approach to the discovery and development of product candidates is novel and unproven, which makes it difficult to predict the time, cost of development, and likelihood of successfully developing any products; Tango may not identify or discover development candidates (including next generation products) or may expend a portion of its limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success; delays or difficulties in the initiation, enrollment or dosing of patients in clinical trials could delay or prevent receipt of regulatory approvals; our products candidates may cause adverse or other undesirable side effects that could, among other things, delay or prevent regulatory approval; our dependence on third parties for conducting clinical trials and product; our ability to obtain and maintain patent and other intellectual property protection for our technology and product candidates or the scope of intellectual property protection obtained is not sufficiently broad; and delays and other impacts on product development and clinical trials from the COVID-19 pandemic. Additional information concerning risks, uncertainties and assumptions can be found in Tango's filings with the SEC, including the risk factors referenced in Tango's Annual Report on Form 10-K for the year ended December 31, 2021, as supplemented and/or modified by its most recent Quarterly Report on Form 10-Q. You should not place undue reliance on forward-looking statements in this presentation, which speak only as of the date they are made and are gualified in their entirety by reference to the cautionary statements herein. Tango specifically disclaims any duty to update these forward-looking statements.

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COMPANY OVERVIEW



Tango summary



Precision oncology company based on synthetic lethality, combining discovery and clinical development in the same genetic context



Expanding oncology target space into tumor suppressor gene loss with a productive, state-of-the-art discovery platform



Sustainable pipeline of novel drug programs for cancers with specific tumor suppressor gene Multiple development candidates declared in 2022

A novel synthetic lethal PRMT5 inhibitor for MTAP-deleted cancers in the clinic and a next generation molecule in IND-enabling studies

A novel synthetic lethal inhibitor targeting STK11-induced immune evasion in IND-enabling studies



Broad strategic collaboration with Gilead based on immune evasion effects of tumor suppressor gene loss

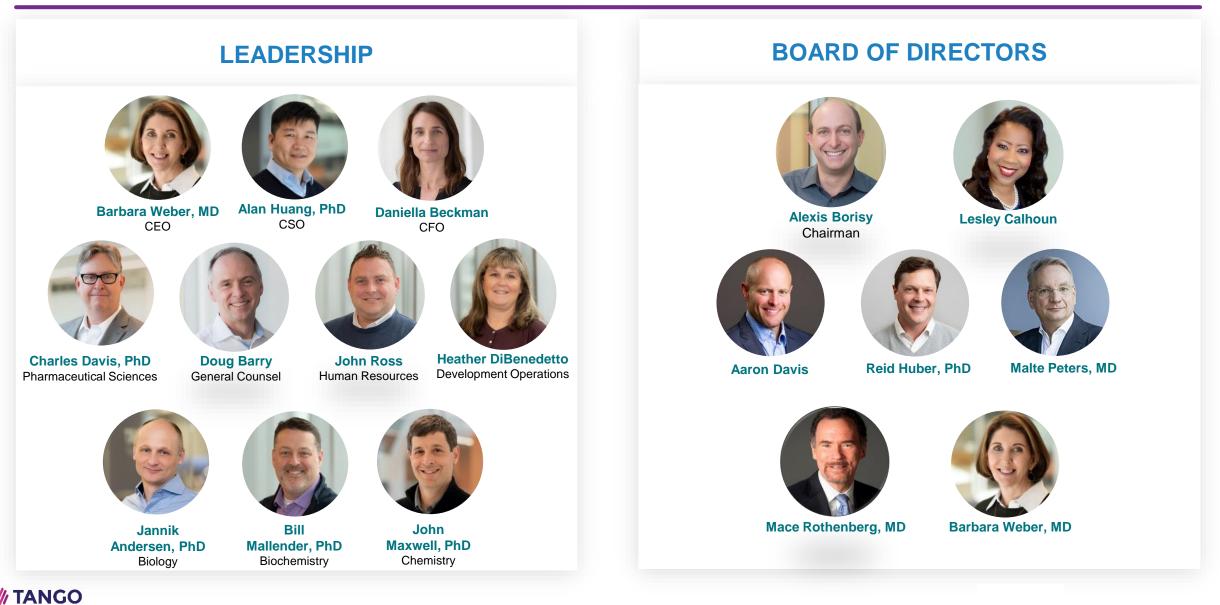


Management team with deep expertise in cancer genetics, drug discovery, clinical development Cash runway into 2H 2024

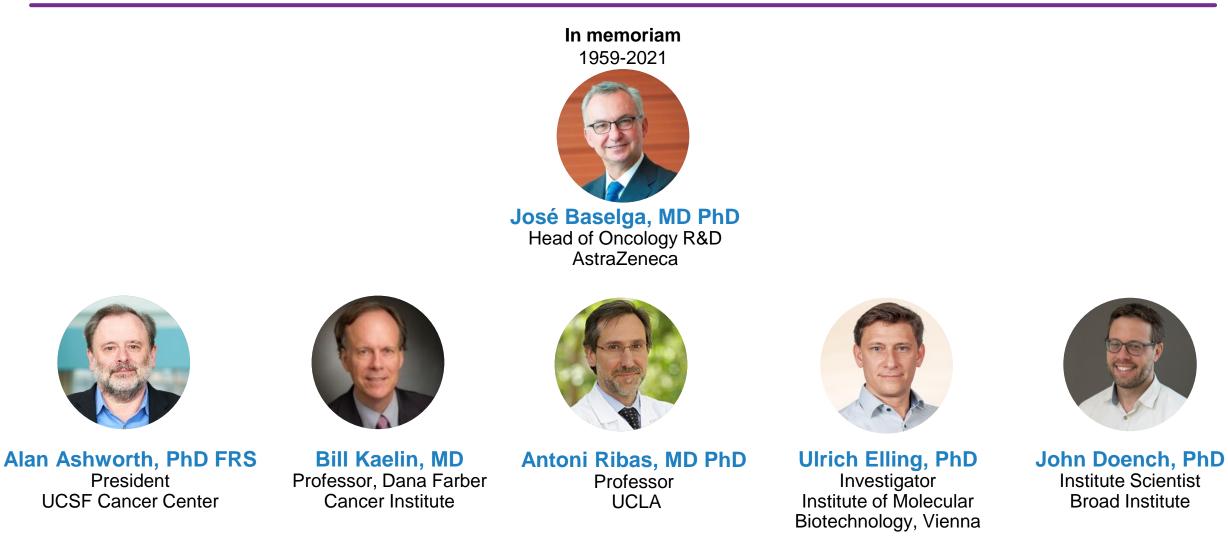
Leaders in drug discovery, cancer biology, functional genomics and translational medicine

herapeutics





Scientific advisors





Leaders in cancer genetics, synthetic lethality, CRISPR technology and immuno-oncology

A strong strategic partnership with Gilead









PROGRAM	PATIENT SELECTION	DISCOVERY	IND- ENABLING	CLINICAL		ANTICIPATED MILESTONES
				Phase 1/2	Phase 3	
PRMT5 TNG908	MTAP-del	Initial clinical data 1H 202	Initial clinical data 1H 2023			
PRMT5 TNG462	cancers					IND filing 1H 2023
TARGET 3* TNG260	STK11-mut cancers					IND filing 1H 2023
USP1	BRCA1/2-mut cancers					Development candidate 2H 2022 IND filing 2023
Multiple synthetic lethal targets	Tumor suppressor gene loss					

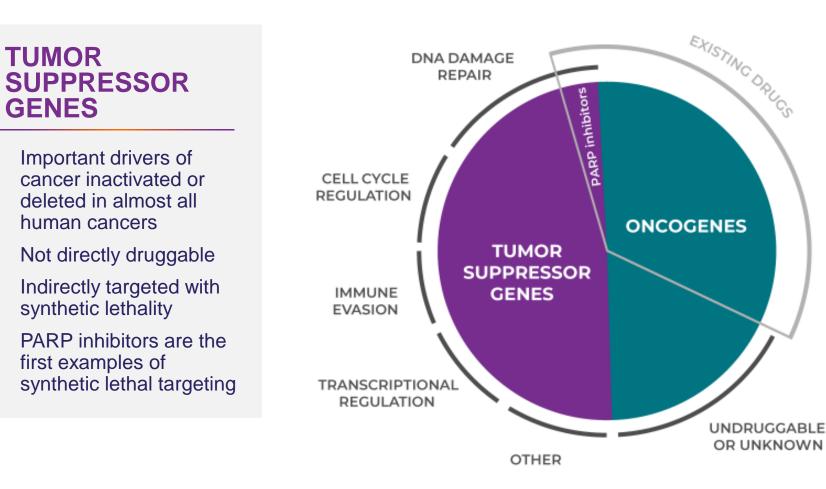
Gilead options and licensed targets not listed *Wholly-owned immune evasion program



SYNTHETIC LETHALITY FOR CANCER THERAPEUTICS



Most cancer targets are not drugged yet



Cancer Genes

SYNTHETIC LETHALITY

is currently the only way to target tumor suppressor gene loss

CRISPR **TECHNOLOGY**

makes large scale synthetic lethal discovery efforts feasible

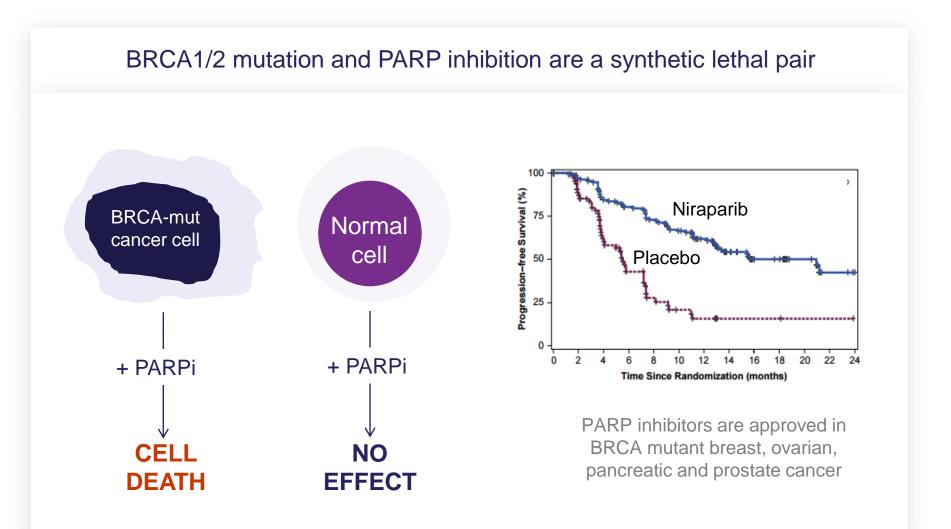


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GENES

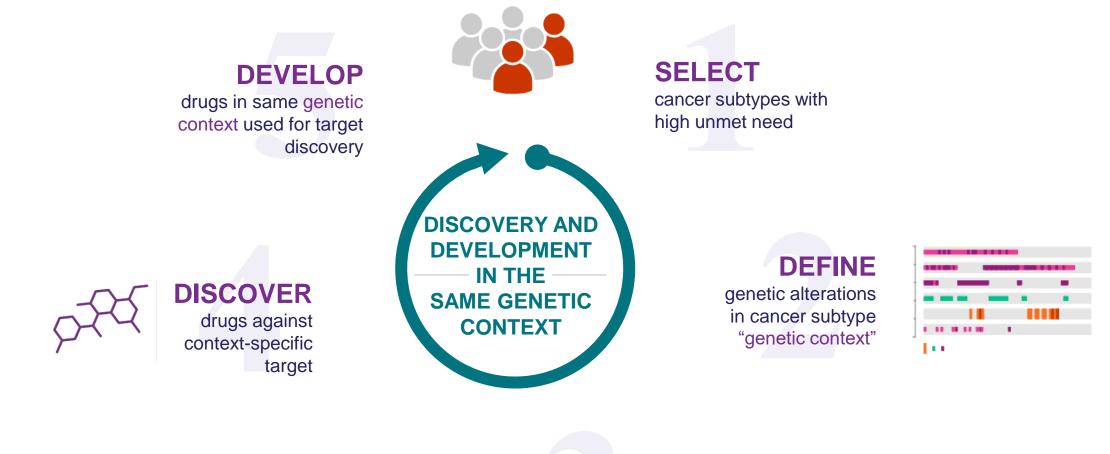
PARP is the first synthetic lethal drug target



- PARP inhibitors are clinical validation for synthetic lethal drug targeting
- Synthetic lethal drugs inherently have a wide therapeutic index
- Multiple analyses suggest hundreds of synthetic lethal pairs exist in human cancer



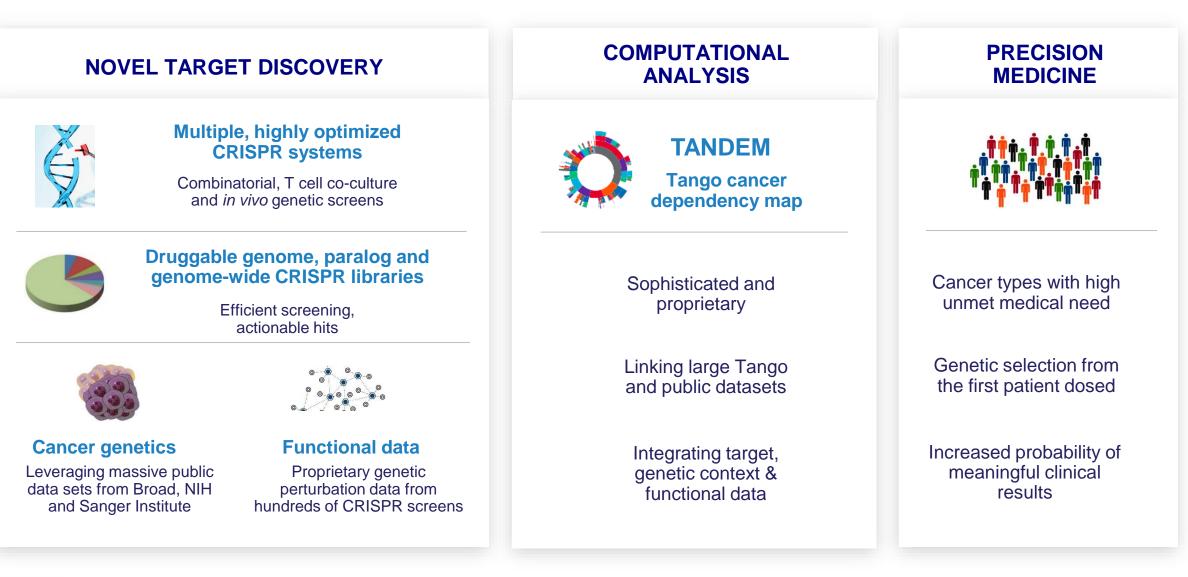
A unique approach to target discovery and clinical development in the same genetic context







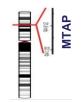
A robust discovery platform linked to a precision medicine approach



PRMT5 inhibition in **MTAP-deleted** cancers



Lead program is a potentially first-in-class synthetic lethal PRMT5 inhibitor



TNG908

MTA-cooperative PRMT5 inhibitor that is synthetic lethal with MTAP deletion that is blood-brain barrier penetrant

TNG462

Next-generation MTA-cooperative PRMT5 inhibitor with enhanced potency and MTAP-selectivity



DIFFERENTIATED MECHANISM

Novel MTA-cooperative mechanism targeting tumor cells with MTAP deletion enables stronger target inhibition than non-selective PRMT5 inhibitors



LARGE PATIENT OPPORTUNITY 10-15% of all human cancers have MTAP deletion

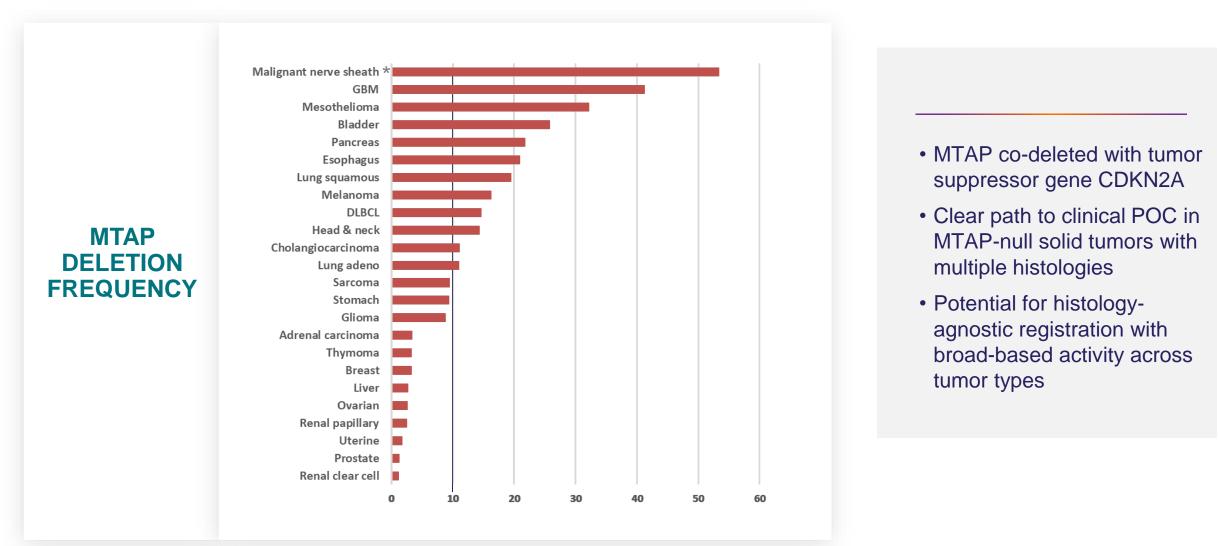


NEAR TERM MILESTONES

Currently in Phase 1 dose escalation, initial clinical data 1H 2023



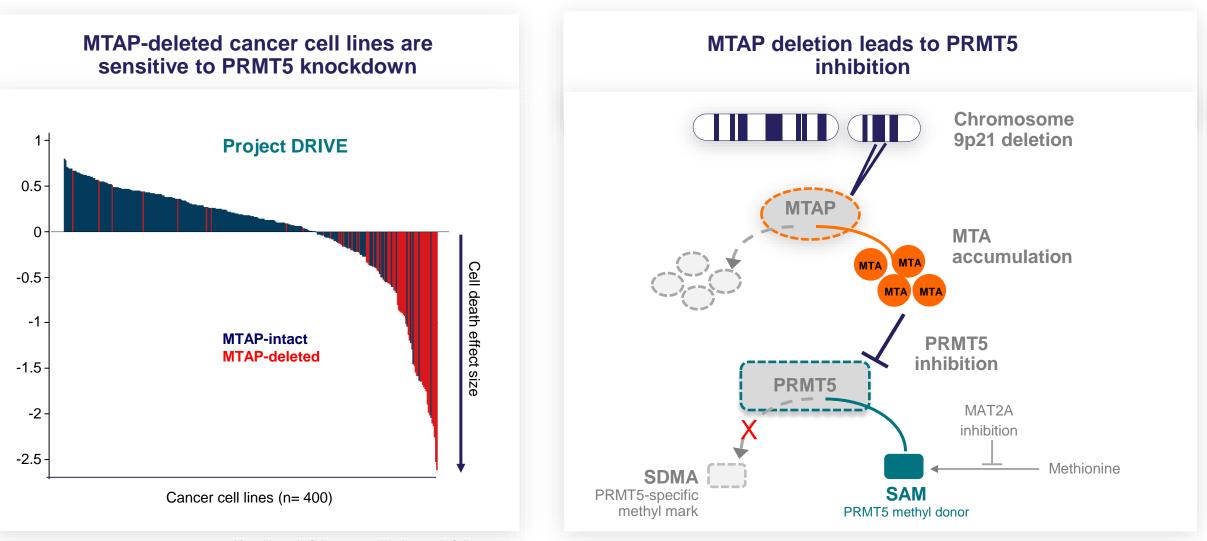
10-15% of all human cancers are MTAP-null



TCGA PanCancer Atlas *Lee et al, Nature Genetics 2014



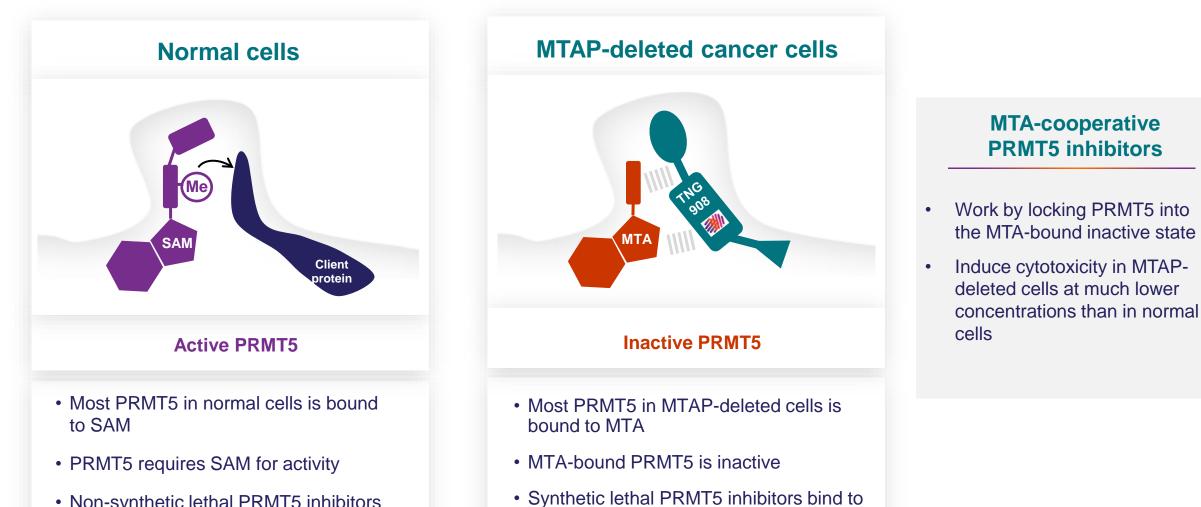
PRMT5 and MTAP are a synthetic lethal pair



Mavrakis et al., Science 2016; Kryukov et al., Science 2016



TNG908 is an MTA-cooperative PRMT5 inhibitor that is synthetic lethal with MTAP deletion

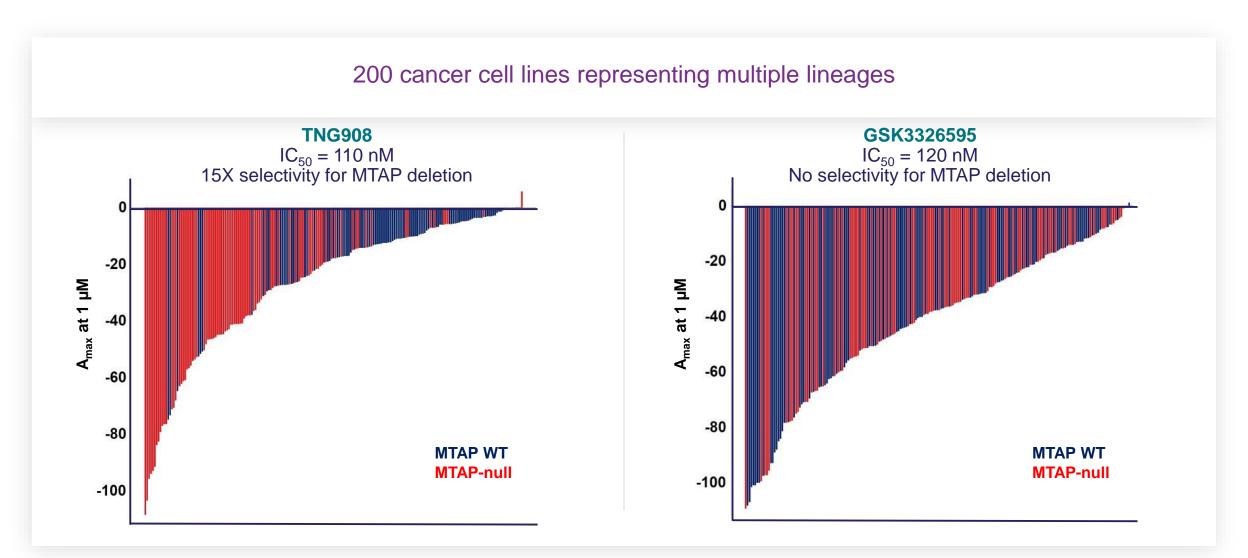


the PRMT5-MTA complex

 Non-synthetic lethal PRMT5 inhibitors suppress PRMT5 equally in normal and MTAP-del cells

nerapeutics

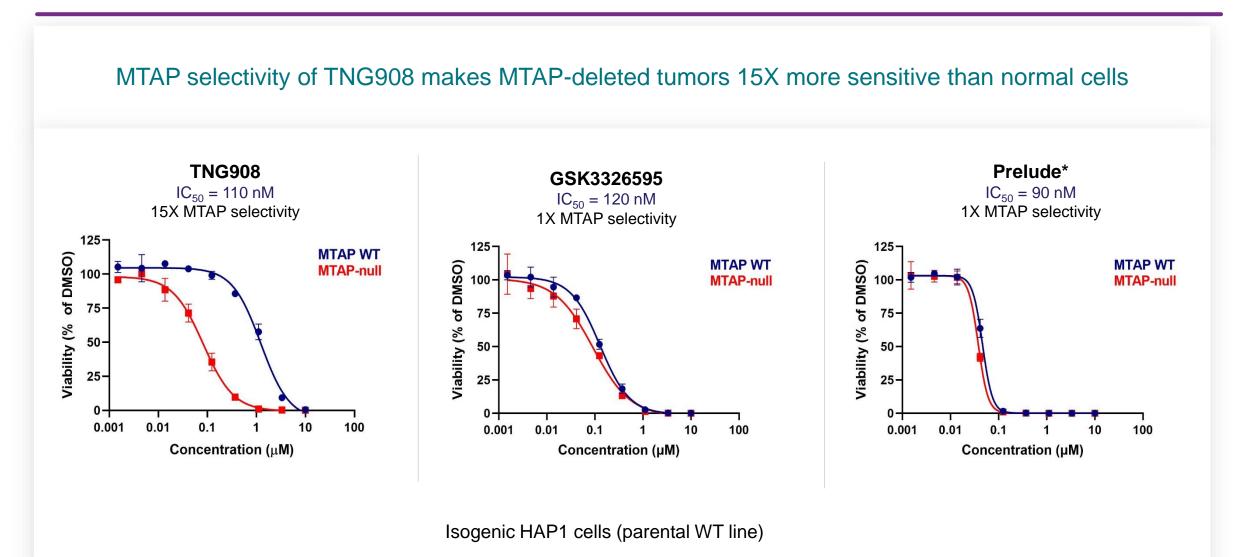
MTA-cooperative PRMT5 inhibitors are highly selective for MTAP-null cancer cell lines





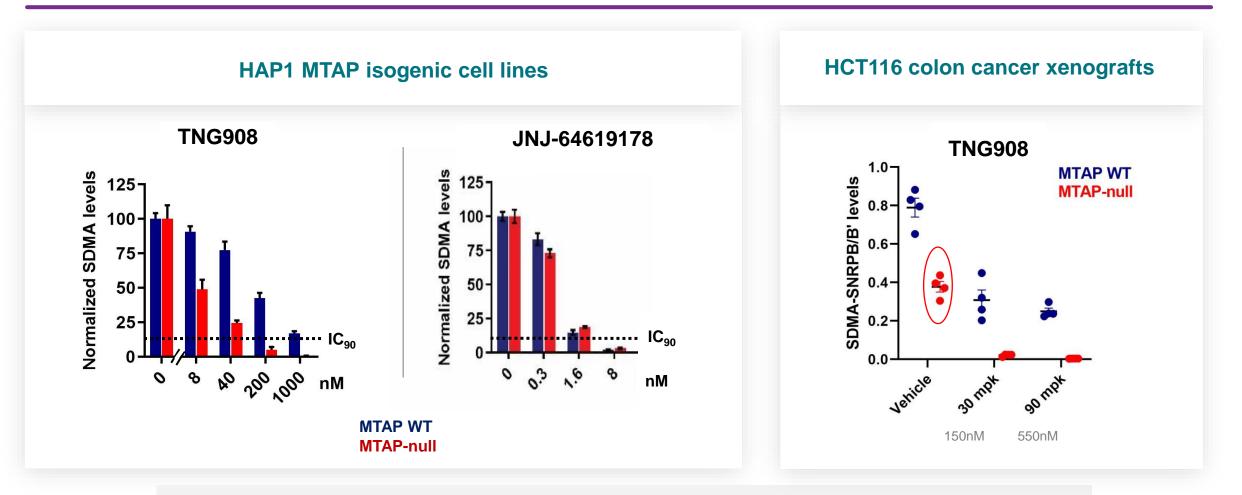
7-day viability assay All cell lines represented in both panels

TNG908 is 15X selective for MTAP-null cells



* Compound I from Patent WO2020168125, chemical structure of Prelude clinical molecules not disclosed

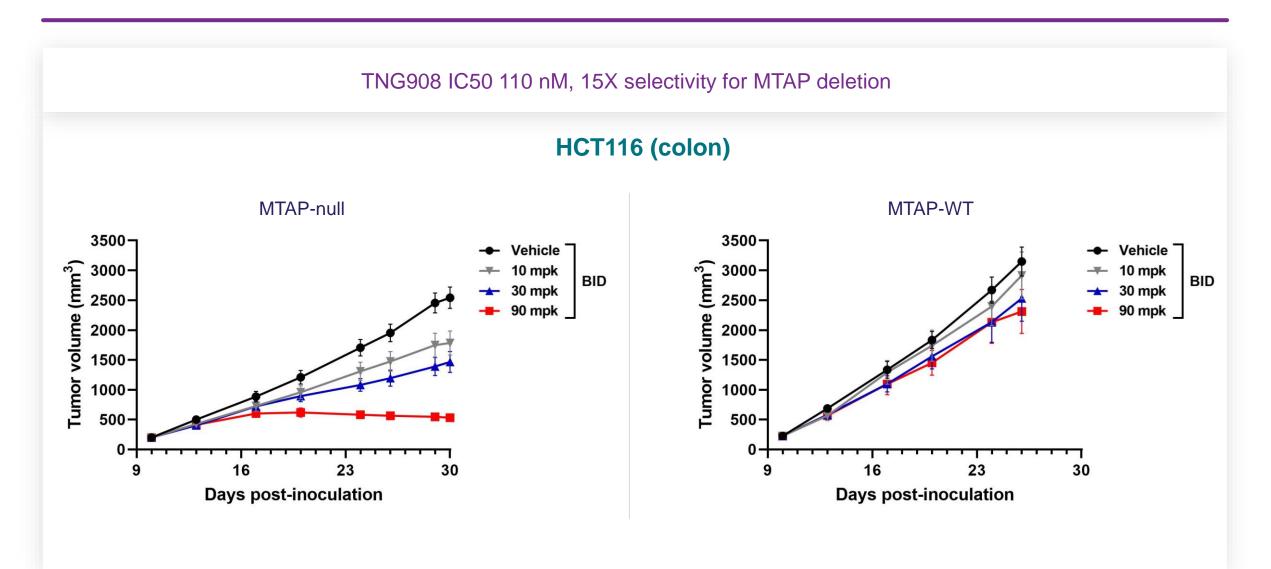
TNG908 PRMT5 inhibition is dose-dependent and MTAP-null selective



- SDMA measures PRMT5-specific methylation
- SDMA suppression in MTAP-null and WT cells cannot be uncoupled by non-selective PRMT5 inhibitors

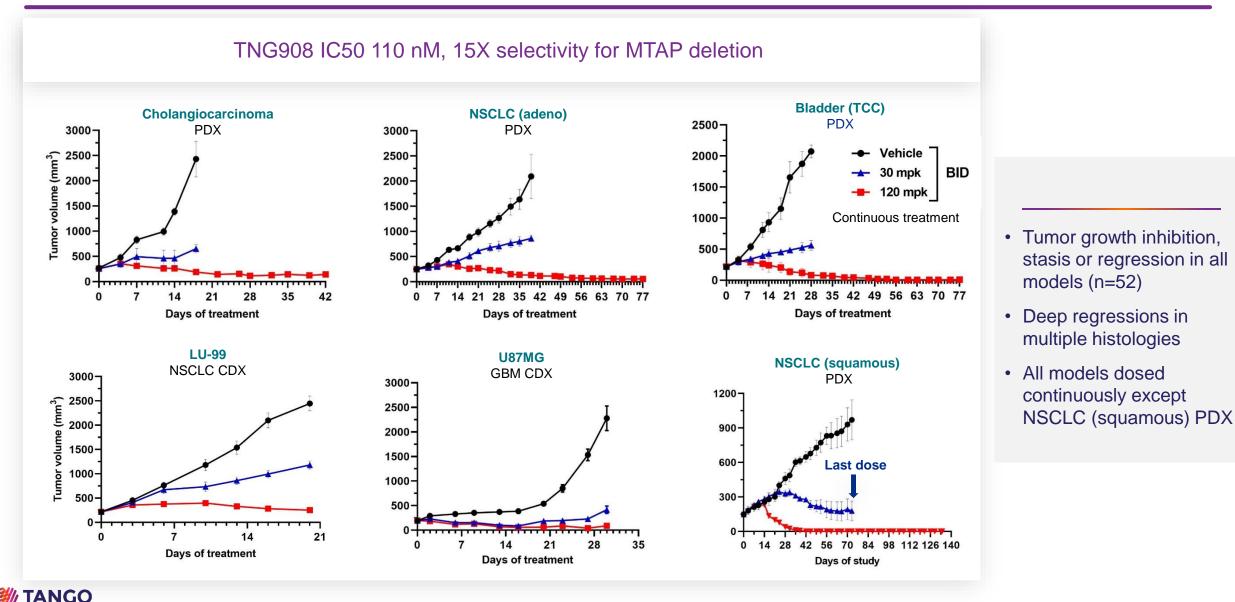


TNG908 anti-tumor activity is dose and MTAP-deletion dependent



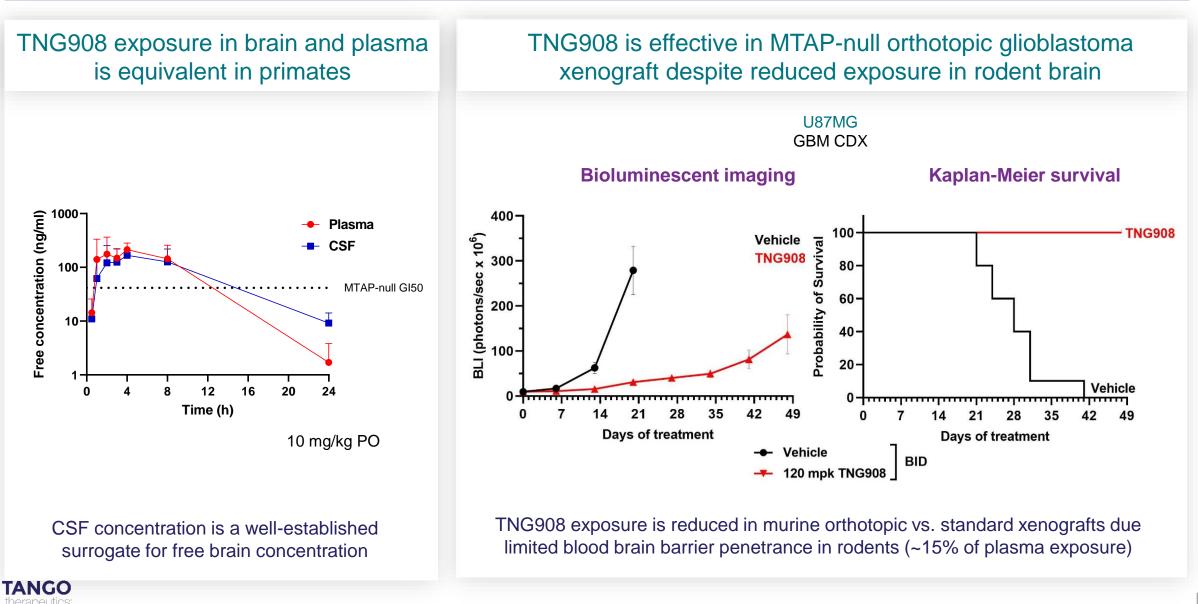


TNG908 drives tumor regression in MTAP-null xenograft models across lineages

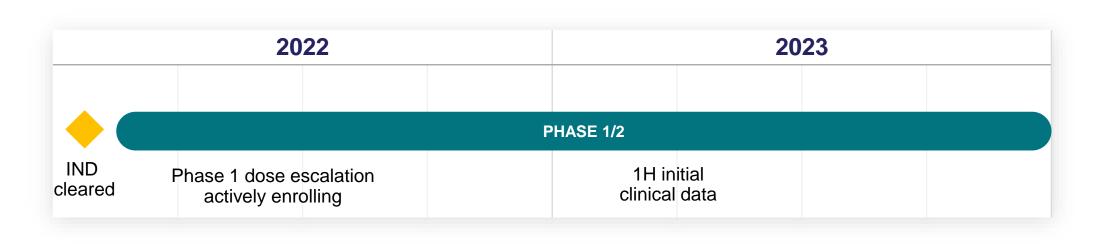


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TNG908 is efficacious in a murine orthotopic GBM CDX model



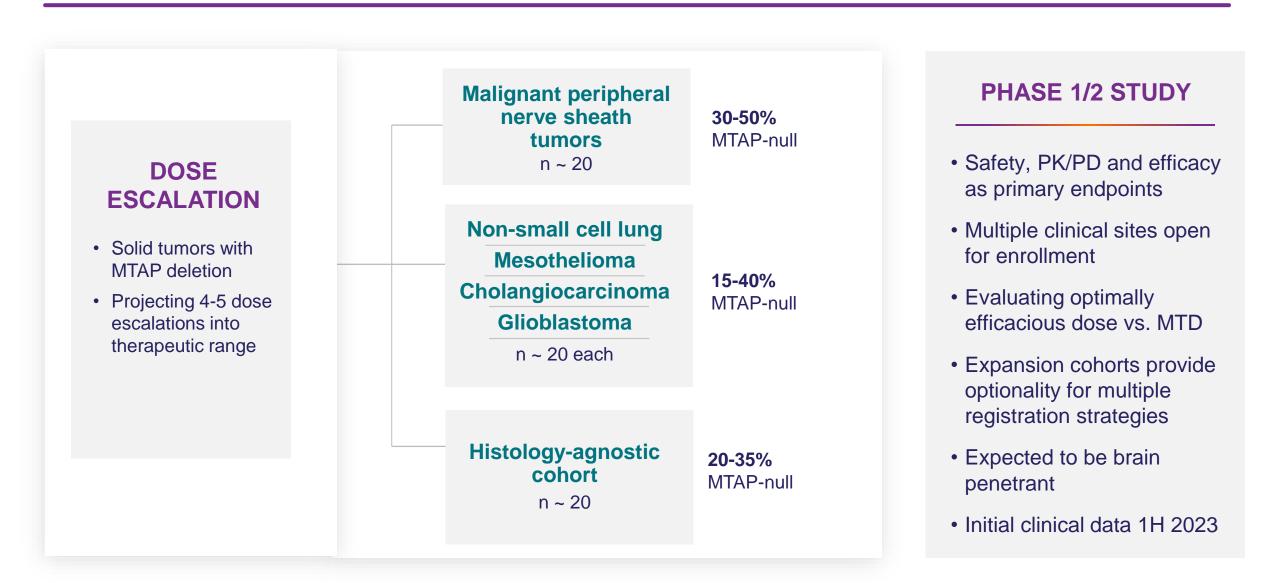
TNG908 is a potentially first-in-class PRMT5 inhibitor that is synthetic lethal with MTAP deletion



CLINICAL STAGE PROGRAM

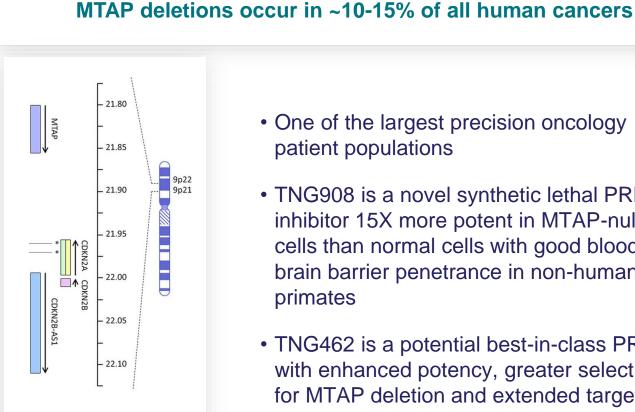
- Deep and durable regressions in cell-based and patient-derived xenograft models across histologies
- In dose escalation, multiple clinical sites open for enrollment
- FDA Fast Track designation granted February 2022
- Received US Orphan Drug Designation from FDA for MPNST
- Pursuing novel combinations with inhibitors that have complementary mechanism of action
- TNG908 composition of matter issued patents expected to expire no earlier than 2041

Efficient trial design to evaluate efficacy in multiple indications





Investing in our PRMT5 franchise with a nextGen molecule



The most common homozygous deletion in human cancer

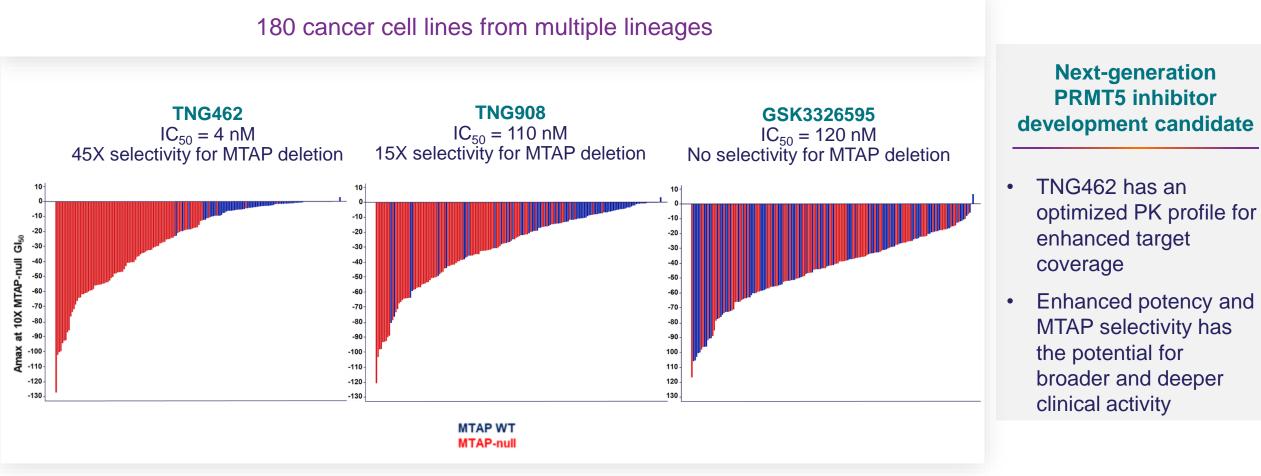
- One of the largest precision oncology patient populations
- TNG908 is a novel synthetic lethal PRMT5 inhibitor 15X more potent in MTAP-null cells than normal cells with good bloodbrain barrier penetrance in non-human
- TNG462 is a potential best-in-class PRMT5 with enhanced potency, greater selectivity for MTAP deletion and extended target coverage

A COMPREHENSIVE DEVELOPMENT PLAN

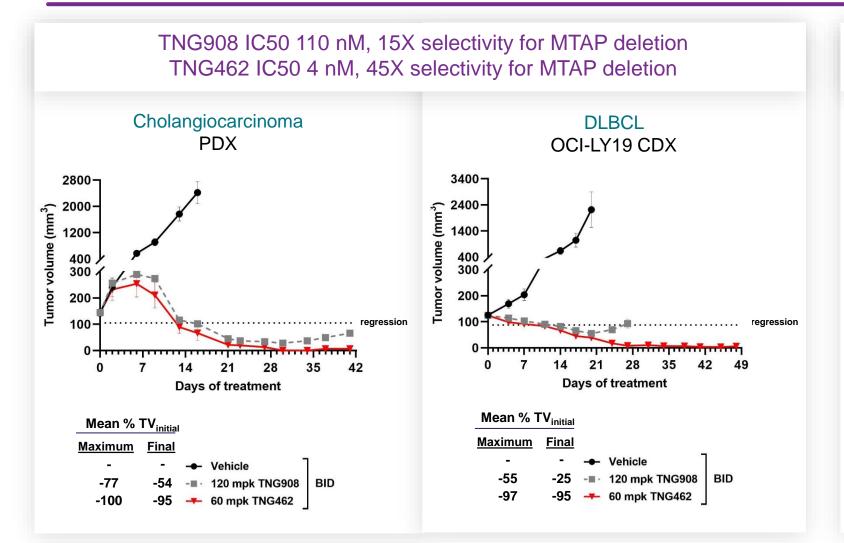
- Multiple combination trials based on strong preclinical data and rationale
- Extensive effort to define and • address resistance mechanisms in a range of genetic backgrounds
- Both TNG908 and TNG462 to be ٠ evaluated in clinical studies



TNG462 is highly potent and 45X selective for MTAP deletion



TNG462 is a potentially best-in-class PRMT5 inhibitor



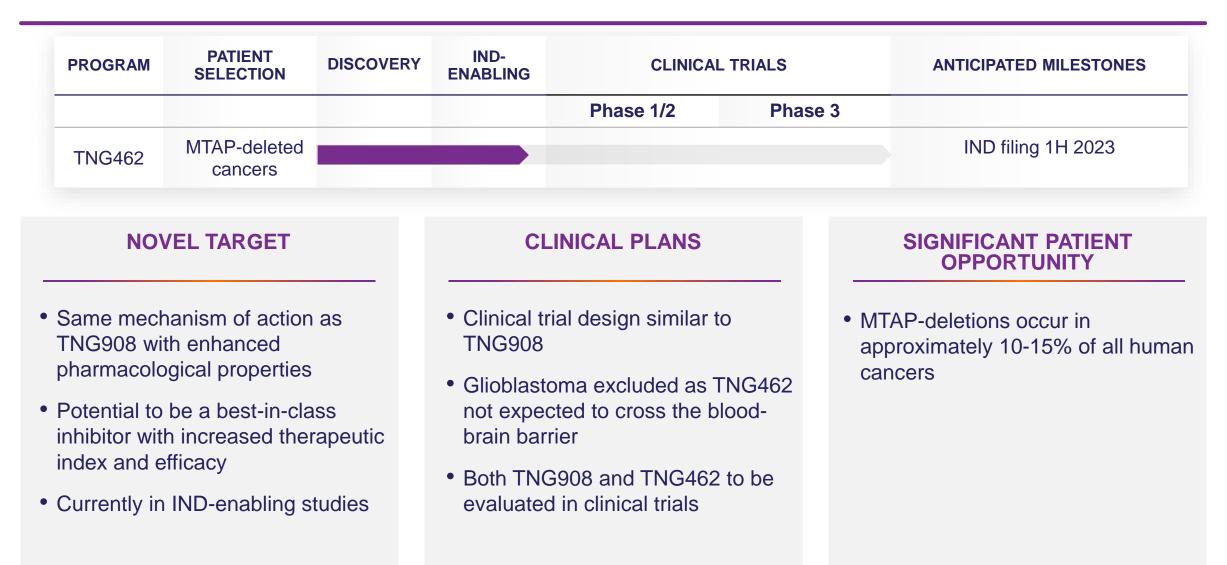
TNG462 induces deep and durable regressions across histologies

	TNG908	TNG462
LN18 (GBM)	16%	73%
LU99 (lung)	48%	66%
OCI-Ly19 (DLBCL)	55%	97%
Bladder PDX	80%	82%
Cholangio PDX	77%	100%

% tumor regression

5/6 mice with cholangiocarcinoma and 5/6 mice with DLBCL had complete regressions when treated with TNG462

TNG462 IND filing planned 1H 2023

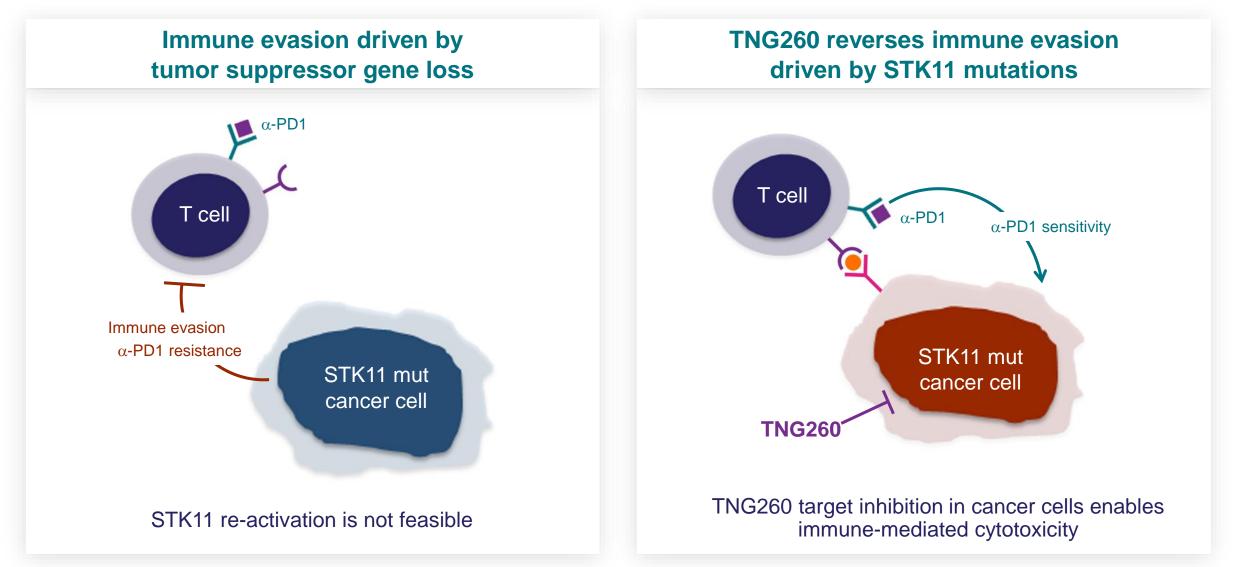




Target 3 inhibition reverses immune evasion in STK11 mutant cancers



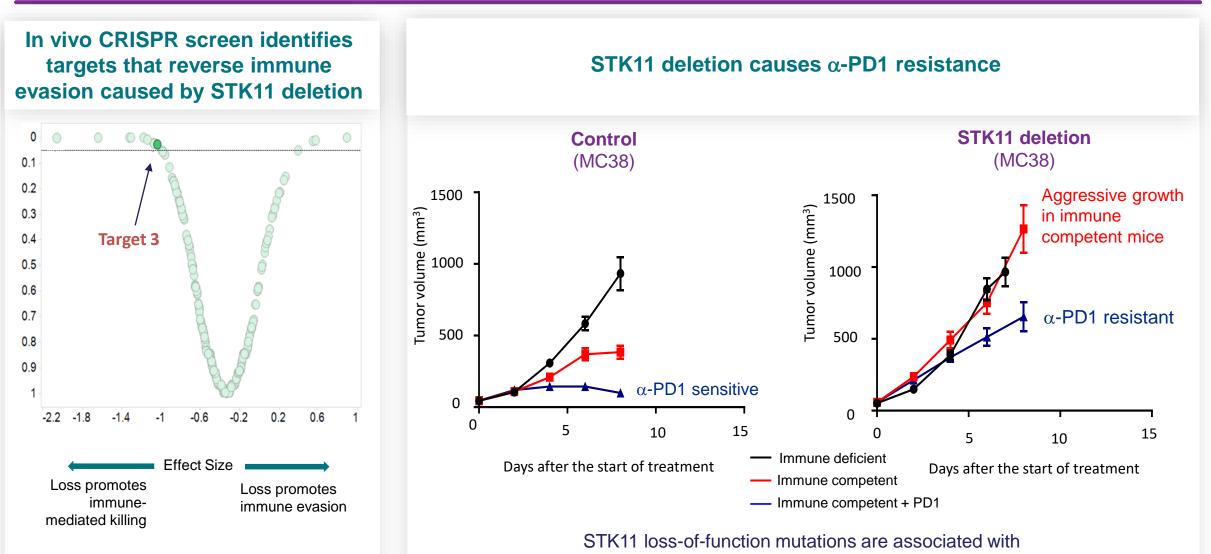
TNG260 reverses immune evasion caused by STK11 loss-offunction mutations





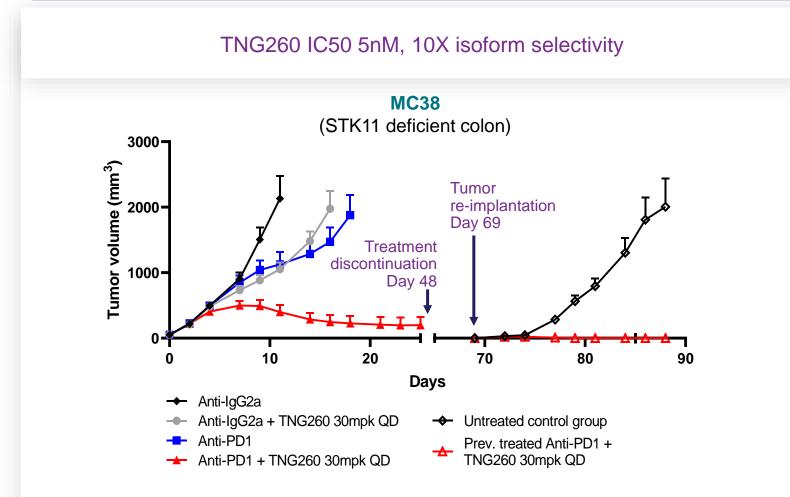
STK11 loss-of-function mutations drive immune evasion

nerapeutics[.]



clinical immune checkpoint inhibitor resistance

TNG260 inhibition induces complete regression and establishes immune memory in an STK11 mutant tumors



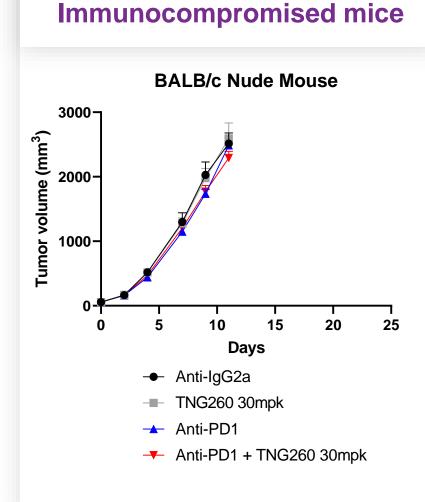
- 5/8 mice had complete tumor regression at day 34, treatment discontinued at day 48
- All mice with complete regression remained tumor free off treatment for 21 days
- 5/5 with complete regression rejected tumor reimplantation

nerapeutics

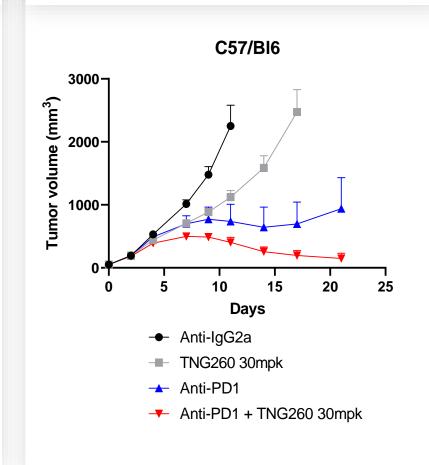
	TNG260
•	TNG260 reverses immune evasion in STK11 mutant tumors
•	TNG260 has strong <i>in vivo</i> efficacy in combination with anti-PD1 antibody
•	TNG260 induces immune memory and renders treated mice resistant to tumor re-implantation
•	Potent, highly selective molecule with good pharmacologic properties

• Currently in IND-enabling studies

Anti-tumor efficacy of TNG260 requires an intact immune system



nerapeutics



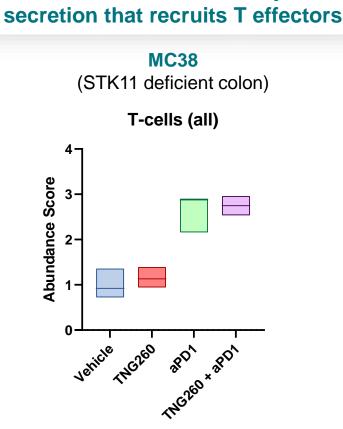
Immunocompetent mice

TNG260

- Development candidate selected 2Q 2022
- Anti-tumor effect of TNG260 not observed in mice lacking T cells

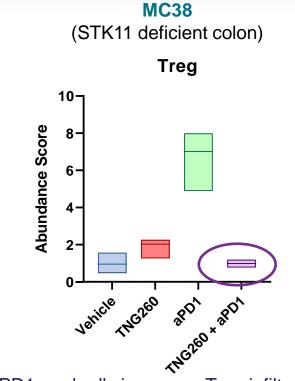
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TNG260 eliminates Treg infiltration caused by α -PD1 without reducing T effector influx



α-PD1 induces tumor cell cytokine

 CXCL9, 10 and 11 recruit T effector cells that mediate tumor cell killing and is increased by the combination TNG260 eliminates immune suppressive Treg infiltration caused by α -PD1



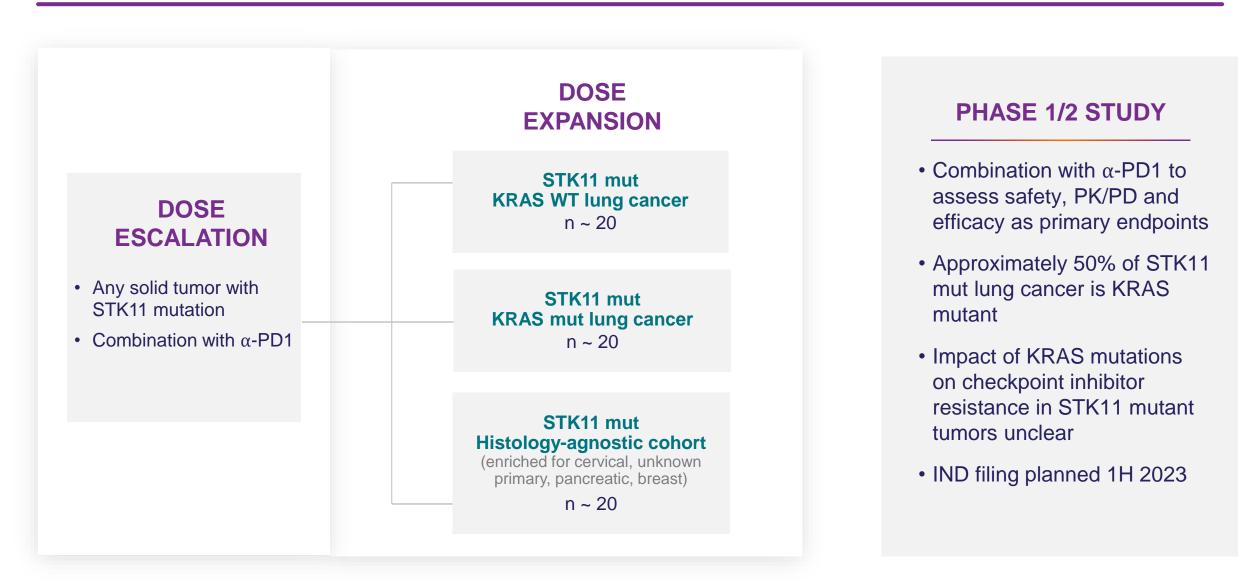
- α -PD1 markedly increases Treg infiltration
- CCL1 and CCL22 recruit Tregs that drive immune evasion and are reduced to baseline by the combination

MECHANISM OF ACTION

- TNG260 results in specific transcriptional changes in STK11 mutant cells
- TNG260 mediated transcriptional changes alter tumor secretion of specific cytokines
- Changes in cytokines secretion caused by TNG260 + α-PD1 change the T cell ratio in the tumor to strongly favor immune-mediated tumor cell killing

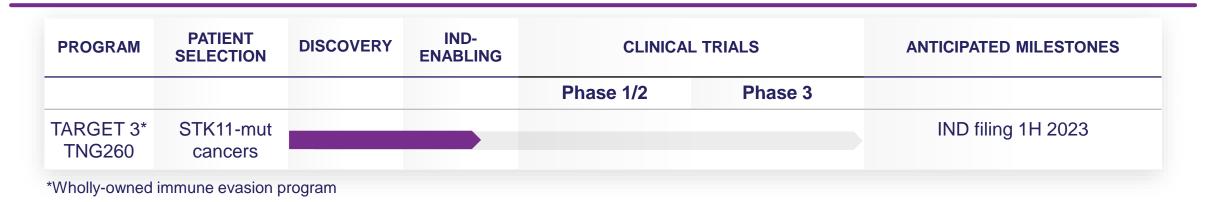


Trial design to assess TNG260 inhibitor plus α -PD1 in multiple tumors types to evaluate safety, efficacy and the effect of KRAS mutation on outcome





TNG260 IND filing planned 2023



NOVEL TARGET

- STK11 mutations are key drivers of immune evasion in lung cancers and occur in multiple other tumor types
- TNG260 inhibition reverses checkpoint inhibitor resistance in preclinical STK11-mutant models
- Evidence of immune memory induction after complete regression immunizes mice against tumor regrowth

CLINICAL PLAN

- Novel mechanism with strong *in vivo* efficacy
- Induction of immune memory that prevents tumor regrowth in responders
- In IND-enabling studies with planned IND filing 1H 2023
- Phase 1/2 clinical study to evaluate efficacy in combination with α-PD1 in STK11 mutant cancers

SIGNIFICANT PATIENT OPPORTUNITY

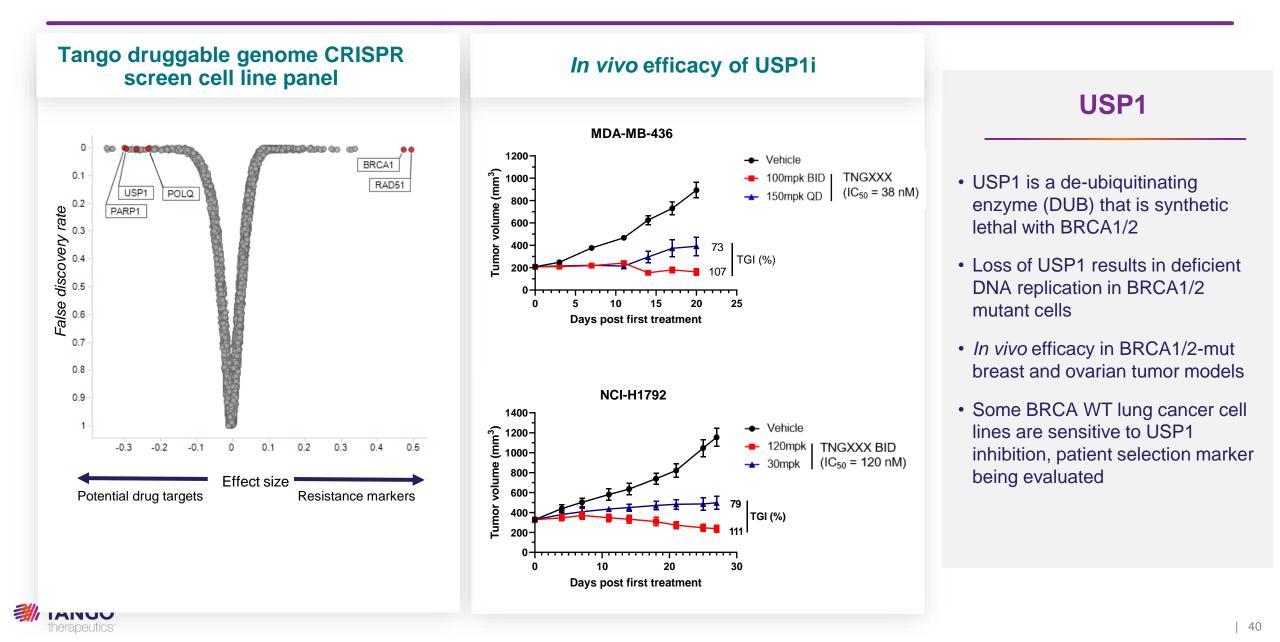
- STK11 mutations occur in ~15% NSCLC, 15% cervical, 10% carcinoma of unknown primary, 5% breast and 3% pancreatic cancers
- STK11 mutations are associated with clinical checkpoint inhibitor resistance
- STK11 mutations among the first genetic patient selection for an immuno-oncology clinical trial



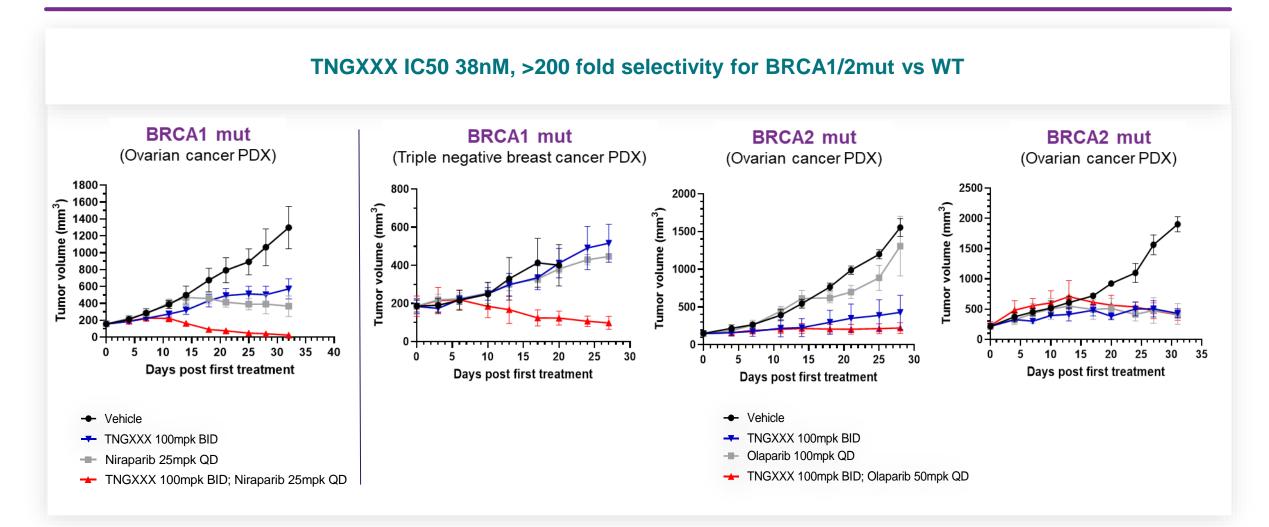
USP1 inhibition in BRCA1/2 mutant cancers



USP1 and BRCA1/2 are a synthetic lethal pair



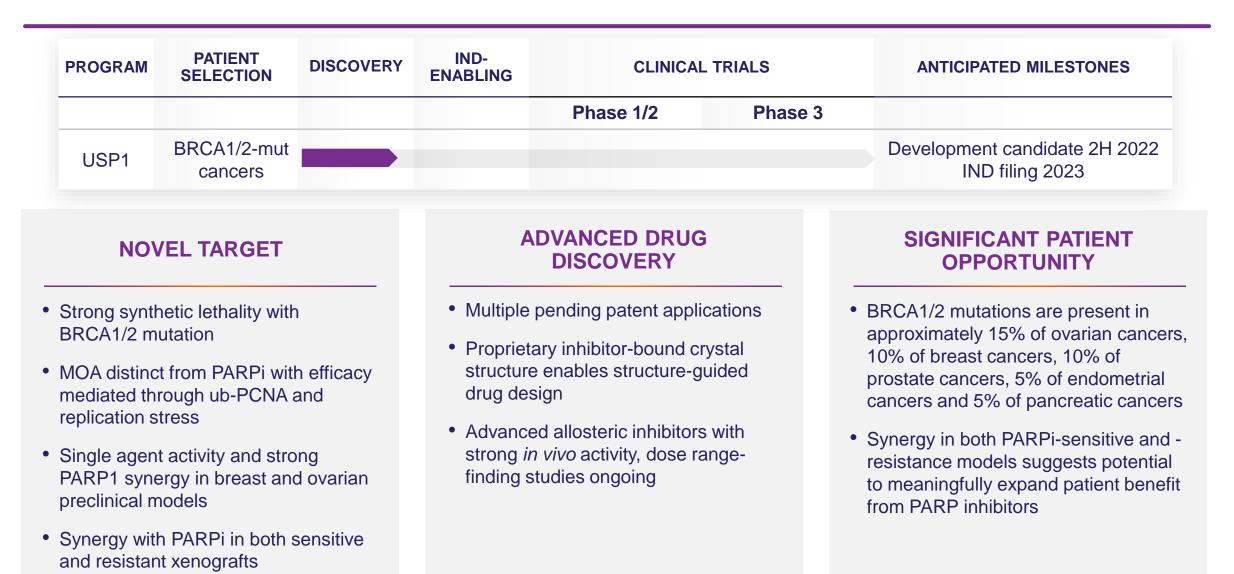
Advanced lead has single agent and PARPi combination activity



Single agent and combination activity in PARPi sensitive and resistant models



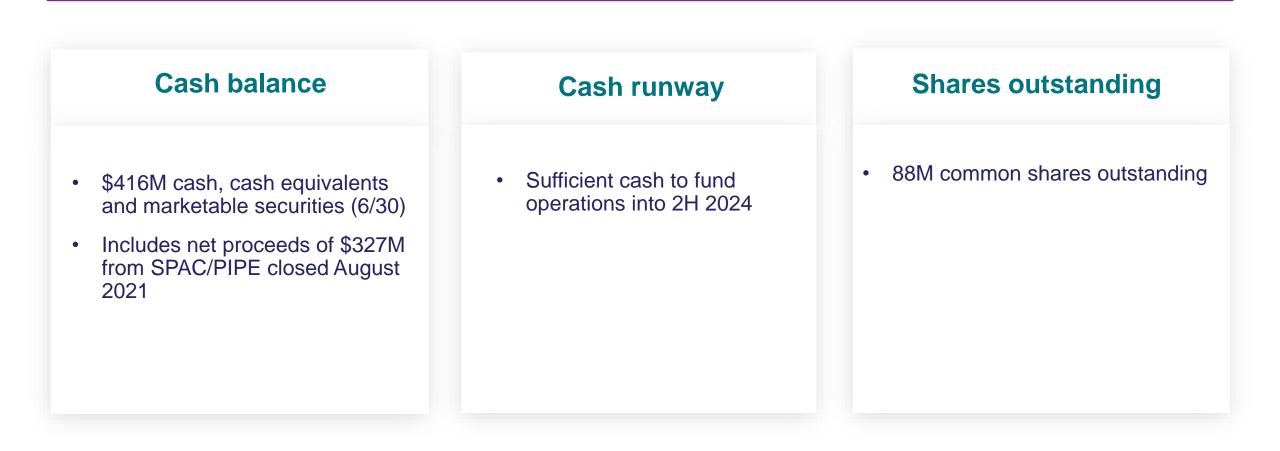
USP1 development candidate in 2H 2022



FINANCIAL HIGHLIGHTS AND MILESTONES



Q2 2022 financial highlights (Nasdaq: TNGX)





Sufficient cash to achieve multiple projected key milestones

2022	2023
FY	FY
 Initiate TNG908 first-in-human clinical trial in 2Q Development candidate for nextGen PRMT5 TNG462 in 2Q Development candidate for Target 3 TNG260 in 2Q Development candidate for USP1 in 2H 	 Initial safety and efficacy data on TNG908 in 1H IND filing for nextGen PRMT5 TNG462 in 1H IND filing for Target 3 TNG260 in 1H IND filing for USP1



