

mCRC Program Update and Clinical Development Plan

AUGUST 7, 2023



Forward-looking statements

CERTAIN STATEMENTS IN THIS PRESENTATION ARE

FORWARD-LOOKING within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be identified by the use of words such as "anticipate," "believe," "forecast," "estimated" and "intend" or other similar terms or expressions that concern our expectations, strategy, plans or intentions. These forward-looking statements are based on our current expectations and actual results could differ materially. There are a number of factors that could cause actual events to differ materially from those indicated by such forward-looking statements. These factors include, but are not limited to, our need for additional financing; our ability to continue as a going concern; clinical trials involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results; our clinical trials may be suspended or discontinued due to unexpected side effects or other safety risks that could preclude approval of our product candidates; our clinical trials may encounter delays in initiation or enrollment that impact the cost and timing of the trial readout; risks related to business interruptions, including the outbreak of COVID-19 coronavirus, which could seriously harm our financial condition and increase our costs and expenses;

uncertainties of government or third-party payer reimbursement; dependence on key personnel; limited experience in marketing and sales; substantial competition; uncertainties of patent protection and litigation; dependence upon third parties; regulatory, and risks related to failure to obtain FDA clearances or approvals and noncompliance with FDA regulations. There are no guarantees that any of our technology or products will be utilized or prove to be commercially successful. Additionally, there are no guarantees that future clinical trials will be completed or successful or that any precision medicine therapeutics will receive regulatory approval for any indication or prove to be commercially successful. Investors should read the risk factors set forth in our Form 10-K for the year ended December 31, 2022, and other periodic reports filed with the Securities and Exchange Commission. While the list of factors presented here is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forwardlooking statements. Forward-looking statements included herein are made as of the date hereof, and we do not undertake any obligation to update publicly such statements to reflect subsequent events or circumstances.

We are advancing our RAS-mutated mCRC program to the 1st line setting

We expect clinical data from our 1st line RAS-mutated mCRC trial in mid-2024



images: Flaticon.com

mCRC program positions onvansertib for accelerated and full-approval

mCRC clinical development program agreed with FDA

CRDF-004

1st line RAS-mutated mCRC trial 90 patients, randomized, 2 doses of onvansertib

Highlights of CRDF-004 exploratory trial

- Provide randomized clinical safety / efficacy data
- Confirm optimal dose in 1st line
- Expect to provide interim data readout in mid-2024

CRDF-005

1st line RAS-mutated mCRC registrational trial 320 patients, randomized

Highlights of CRDF-005 registrational trial

• Seamless registrational trial for accelerated and full approval, as agreed with FDA

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- ORR endpoint: For accelerated approval
- PFS / OS trend endpoint: For full approval

Our move into 1st line mCRC significantly increases market opportunity



* ROS1 estimated eligible patients presented in Turning Point Therapeutics' corporate presentation May 2022 slide 6 (NSCLC disease incidence in the US of 140k of which 2% of patients harbor ROS1 translocation). RET estimated eligible patients presented in Loxo Oncology's corporate presentation January 2018 disclosed on Form 8-K (Jan 8, 2018). mCRC estimated population includes 1st or 2nd line, KRAS- and NRAS-mutated cancers. mPDAC estimated population includes 2nd line PDAC patients. TNBC estimated population includes SCLC salvage patients.

Our pipeline opens many attractive opportunities for onvansertib

	Line of Therapy	Trial	Ph2	Ph3	Combination with:
mCRC	1 st line	Ph 2 (w/Pfizer)	randomized		FOLFIRI/bev and FOLFOX/bev
(NAS-mut)	2 nd line	Ph 1b/2	completed	•	FOLFIRI/bev
mPDAC	2 nd line	Ph 2	•		Onivyde [®] /5-FU

Investigator-initiated trials

TNBC	2 nd line	Ph 2	Dana-Farber Cancer Institute	•	Paclitaxel
SCLC	2 nd line	Ph 2	UPMC LIFE CHANGING MEDICINE	•	None (monotherapy)



Onvansertib clinical development plan in mCRC

CLINICAL FINDINGS FROM 2L Ph 1b/2 TRIAL

SCIENTIFIC BASIS FOR CLINICAL FINDINGS

CLINICAL DEVELOPMENT PATH FORWARD

Onvansertib clinical development plan in mCRC

CLINICAL FINDINGS FROM 2L Ph 1b/2 TRIAL

SCIENTIFIC BASIS FOR CLINICAL FINDINGS

CLINICAL DEVELOPMENT PATH FORWARD

Onvansertib specifically targets PLK1, a well-established cancer target

Onvansertib

First oral, well-tolerated PLK1-selective inhibitor

PROPERTIES

- Small molecule
- Oral dosing
- 24-hour half-life



SPECIFICITY

Exquisitely specific for PLK1

ENZYME	IC ₅₀ (µM)
PLK1	0.002
PLK2	>10
PLK3	>10
CK2	0.4
FLT3	0.4
CDK1/CycB	>10
42 other kinases and >140 in the Millipore panel	>10

Our focus is RAS-mutated tumors where there are no targeted therapies

Normal	1 st LINE	2 nd LINE		
Standard*	Chemo + bevacizumab	Chemo + bevacizumab	RAS-mut mCRC	is approx.
Targeted	+ EGFR inhibitor	NONE	half the mCRC p	opulation'
RAS Mutated				
Standard*	Chemo + bevacizumab	Chemo + bevacizumab		
Targeted	NONE	NONE	Normal	RAS mutated

* FOLFOX and FOLFIRI are interchangeable as SoC chemo for $1^{\rm st}$ and $2^{\rm nd}$ line.

1. Jones R et al. Br J Cancer. 2017 Mar 28;116(7):923-929

Our Ph1b/2 trial added onvansertib to SoC in the 2nd line setting



Two separate onvansertib MOAs underlie our focus on RAS-mut mCRC



1. Jones R et al. Br J Cancer. 2017 Mar 28;116(7):923-929

Our Ph1b/2 trial combined onvansertib with the current SoC in 2nd line



There were two cohorts of patients enrolled in our Ph1b/2 trial



* Two patients were deemed not evaluable per protocol and therefore excluded from the efficacy data set. Neither patient completed at least 1 cycle of treatment and both patients ultimately discontinued.

Our 2nd line trial patients may or may not have received bev in 1st line



Bev naïve patients achieved higher response rate with onvansertib+SoC

Best Radiographic Response and Duration of Response* – 66 evaluable patients (as of June 16, 2023)



Radiographic response determined per RECIST 1.1. Waterfall plot and table reflect interim data as of June 16, 2023 from an ongoing trial and unlocked database. Patients 02-008 and 07-029 were categorized as bev naïve in the July 25, 2022 data, but are now determined to have been bev exposed. mDoR CI: "-" means not reached. After external review of the tumor measurements completed May 12, 2023, it was determined that patients 02-008 were confirmed PRs.

** Bennouna et al., Lancet Oncol 2013; 14: 29–37; Giessen et al., Acta Oncologica, 2015, 54: 187-193; Cremolini et al., Lancet Oncol 2020, 21: 497–507; Antoniotti et al., Correspondence Lancet Oncol June 2020. Giantonio et al., 2007, J Clin Oncol 25:1539-1544; Moriwaki et al., Med Oncol, 2012, 29:2842–2848; Beretta et al, Med Oncol 2013, 30:486.

Bev naïve patients experienced more durable responses



* Swimmer plot / table reflect interim data as of June 16, 2023 from an ongoing trial and unlocked database. After external review of the tumor measurements completed May 12, 2023, it was determined that patients 02-028 and 04-038 were confirmed PRs.

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Patients on our trial achieved responses across KRAS mutations



^{1.} Jones R et al. Br J Cancer. 2017 Mar 28;116(7):923-929

PFS exceeds historical controls for SoC, particularly in bev naïve patients

Progression free survival* – 66 evaluable patients (as of June 16, 2023)





* Onvansertib mPFS are interim data as of June 16, 2023 from an ongoing trial and unlocked database

* Bennouna et al., Lancet Oncol 2013; 14: 29–37; Giessen et al., Acta Oncologica, 2015, 54: 187-193; Cremolini et al., Lancet Oncol 2020, 21: 497–507; Antoniotti et al., Correspondence Lancet Oncol June 2020. Giantonio et al., 2007, J Clin Oncol 25:1539-1544; Moriwaki et al., Med Oncol, 2012, 29:2842–2848; Beretta et al, Med Oncol 2013, 30:486.

Onvansertib in combination with FOLFIRI-bev is well-tolerated*

- All treated patients (N=68)
 - All dose levels (12mg/m2, 15mg/m2, 18mg/m2)
- No major / unexpected toxicities are seen
- 8 patients had a G4 hematologic AE
 - All resolved without issue
 - Required dose holds and/or growth factor support
 - None of the 8 patients discontinued treatment due to this AE

TEAE	GR1	GR2	GR3	GR4	т	OTAL	TEAE	GR1	GR2	GR3	GR4	т	otal
Fatigue	24	22	7	0	53	78%	Cough	11	0	0	0	11	16%
Neutropenia	1	18	23	7	49	72%	Pyrexia	8	1	1	0	10	15%
Nausea	29	13	4	0	46	68%	Dyspnea	7	3	0	0	10	15%
Diarrhea	21	13	4	0	38	56%	AST Increase	7	2	1	0	10	15%
Leukopenia	9	14	5	1	29	43%	Lymphocytopenia	2	7	0	0	9	13%
Anemia	22	5	2	0	29	43%	Dyspepsia	9	0	0	0	9	13%
Alopecia	20	5	0	0	25	37%	ALT Increase	8	0	1	0	9	13%
Abdominal Pain	14	8	3	0	25	37%	Hypocalcemia	9	0	0	0	9	13%
Stomatitis	15	6	3	0	24	35%	Insomnia	9	0	0	0	9	13%
Hypertension	4	10	9	0	23	34%	Dehydration	1	5	2	0	8	12%
Thrombocytopenia	17	5	1	0	23	34%	Hypokalemia	6	2	0	0	8	12%
Constipation	17	2	1	0	20	29%	Arthralgia	6	2	0	0	8	12%
Vomiting	11	6	3	0	20	29%	Hand / Foot Syndrome	5	2	0	0	7	10%
Epistaxis	15	0	0	0	15	22%	Hemorrhoids	5	2	0	0	7	10%
Headache	13	0	0	0	13	19%	Non-Cardiac Chest Pain	6	1	0	0	7	10%
Decreased Appetite	4	6	2	0	12	18%	ALP Increase	5	1	1	0	7	10%
Back Pain	10	2	0	0	12	18%							

* Data consists of all adverse events entered into the EDC as of June 13, 2023, from an ongoing trial and unlocked database. N: number of patients (total N=68); events shown occurred in ≥10% of patients; numbers indicate number of patients experiencing the event, (regardless of causality); each patient is only counted once and only for the highest grade of a given event. TEAEs: Treatment Emergent Adverse Events; TOTAL shows the absolute # of patients and (%) of the population. COVID, as an AE, is not included as that data is still under review and being tabulated.

Onvansertib clinical development plan in mCRC

CLINICAL FINDINGS FROM 2L Ph 1b/2 TRIAL

SCIENTIFIC BASIS FOR CLINICAL FINDINGS

CLINICAL DEVELOPMENT PATH FORWARD

We've discovered a scientific basis for our bev naïve clinical finding

Our findings establish the scientific basis of our bev naïve clinical finding

Reduction in tumor growth	Onvansertib plus bev inhibits tumor growth greater than either agent alone
PLK1 and hypoxia	Onvansertib inhibits the hypoxia signaling pathway by downregulating HIF1a expression
Onv + bev anti-angiogenesis	Onvansertib plays an independent role in anti-angiogenesis that complements bev
Prior bev treatment	Prior bev treatment modulates gene pathways that confer resistance to bev and onvansertib

Onvansertib + bev inhibits tumor growth greater than either agent alone

The combination had significant superior anti-tumor activity compared to the single agents



Three KRAS-mutant xenograft models were treated with vehicle (control), onvansertib, bevacizumab or the combination of onvansertib and bev. 8-9mice/ group. Mean ± SEM are represented on graphs. An unpaired t-test was used to test the difference in tumor volume change on the last day of treatment between the combination treatment and the most effective control arm. *p<0.05, ***p<0.0001

Onvansertib plays an independent role in anti-angiogenesis that complements bev

 KRAS-mut tumors from mice teated with one + bev spaller and pale (less vascularized)

 LoVo (KRAS G13D)*
 SW620 (KRAS G12V)*

 Control (venice)
 Image: Im

* Two KRAS-mutant xenograft models were treated with control (vehicle), onvansertib, bevacizumab or the combination of onvansertib and bev. 8-9mice / group. Tumors were removed and photographed at the end of the study. Representative photographs from three mice from each group are shown.

Onv+Bev

Hypoxia: a hallmark of cancer

In response to hypoxia, cancer cells activate the hypoxiainducible factor (HIF) pathway, which can promote tumorigenesis through multiple means:

- Angiogenesis
- Cell proliferation and survival
- Highly immunosuppressive and invasive tumor microenvironment
- Hypoxia-induced EMT and acquisition of cancer cell stemness in turn driving metastasis
- Reprogrammed cancer cell metabolism and increased glycolysis
- Delivery of anti-cancer agents rendered more intractable



Onvansertib inhibits the hypoxia signaling pathway by downregulating HIF1a expression

In 4 RAS-mutant CRC cell lines*, onvansertib inhibited hypoxia-induced HIF1a expression



PLK1 inhibition using siRNA against PLK1 (siPLK1) prevented hypoxia-induced HIF1a expression



* Four KRAS-mutant CRC cell lines were cultured under normoxia (20%02, Nx) or hypoxia (1%02, Hx), in the presence (+) or absence (-) of onvansertib. HIF1a expression was strongly induced under hypoxia

Onvansertib and bev are complementary inhibitors of the hypoxia signaling pathway

This new MOA, which inhibits a "survival switch" of tumorigenesis, may underlie the increased efficacy observed clinically



In the low oxygen tumor microenvironment (hypoxia), HIF1a is induced by tumors to increase vascularization by secreting VEGF, and to promote proliferation and survival

Prior bev treatment modulates gene pathways that can confer resistance to bev and onvansertib

- Aim: to identify potential mechanisms of treatment resistance in bev exposed KRAS-mutant mCRC patients
- Method:



- Bev exposed tumors showed up-regulation of pathways associated with:
 - Hypoxia
 - G2/M checkpoint and mitosis
- Up-regulation of these pathways may drive resistance to onvansertib and bev
- Additionally, modulation of oncogenic signatures associated with angiogenic factors (PIGF, VEGFA) were observed in bev exposed tumors and may drive treatment resistance



GSEA Hallmarks of Cancer

In collaboration with Tempus

Oncogenic Signatures

Our work supports the hypothesis of a 3rd MOA for PLK1 inhibition



1. Jones R et al. Br J Cancer. 2017 Mar 28;116(7):923-929

Onvansertib clinical development plan in mCRC

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SCIENTIFIC BASIS FOR CLINICAL FINDINGS

CLINICAL DEVELOPMENT PATH FORWARD



FDA suggested we consider moving to a 1st line clinical development path...



FDA commented:

Allows all patients with RAS-mut tumors to benefit from treatment with onvansertib rather than only the 2nd line bev naïve population ...and FDA agreed with Cardiff Oncology's proposed 1st line clinical program

CRDF-004

1st line RAS-mutated mCRC trial

- Obtain signal of safety and efficacy
- Select the dose for registrational trial

CRDF-005

1st line registrational RAS-mutated mCRC trial

 Seamless trial designed to support BOTH accelerated approval (ORR) and full approval (PFS/OS trend)

Factors driving our move into 1st line from 2nd line RAS-mut mCRC

Clinical	 All patients in 1st line are bev naïve No new therapies in 20 years No competing trials in RAS-mut 1st line mCRC speeds enrollment 	Regulatory	 FDA suggested we consider moving into 1st line to increase number of patients that could benefit from treatment Validated path to accelerated approval from CRDF-005 objective response rate
Commercial	 Large 1st line patient population and market opportunity 1st line trial is funded through data with existing cash 	Transition from 2L to 1L	 ONSEMBLE (2nd line) trial tests same hypothesis as 1st line trial Bev naïve patients in 1st line provide the strongest opportunity for clinical efficacy to support accelerated approval

Trial design of CRDF-004: 1st line RAS-mutated mCRC Ph 2 trial



In CRDF-004, each arm will have an equal number of FOLFIRI/bev and FOLFOX/bev patients.

ORR/PFS for bev naïve patients exceeds 1st and 2nd line historical controls



Historical controls reflect RAS-WT and RAS-mut patients

2008: Bennouna et al., Lancet Oncol 2013; 14: 29–37; 2013: Giessen et al., Acta Oncologica, 2015, 54: 187-193; 2017: Cremolini et al., Lancet Oncol 2020, 21: 497–507; and Antoniotti et al., Correspondence Lancet Oncol June 2020. J. Clin. Med. 2020, 9, 3889; doi:10.3390/jcm9123889. ORR ad PFS data are interim data from an ongoing trial and unlocked database. Historical controls are from studies in similar anti-angiogenic drugs and restricted geographical areas, and do not all represent purely comparable 2nd line mCRC patient populations.

Pfizer will support clinical execution of 1st line mCRC trial

PFIZER BREAKTHROUGH GROWTH INITIATIVE

November 2021

- \$15M investment
- Adam Schayowitz, Ph.D., MBA, Vice President & Medicine Team Group Lead for Breast Cancer, Colorectal Cancer and Melanoma at Pfizer joins Scientific Advisory Board
- Right of first access to data

PFIZER Ignite

August 2023

- Pfizer Ignite will be responsible for the clinical execution of 1st line mCRC trial (CRDF-004), including development capabilities, scale and expertise
- Cardiff Oncology retains full economic ownership and control of onvansertib

We have multiple near-term clinical data read outs

2023				2024				2025
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
mPDAC data readout			TNBC data readout		1 st line rando data r	1 st line mCRC randomized data readout		
	SC data re	CLC eadout						
June 30, 2023 cash and investments						\$89.4N	1	
Net cash used in Operating Activities (Rolling two-quarter period ending June 30, 2023)						\$15.8N	1	

We are advancing our RAS-mutated mCRC program to the 1st line setting

We expect clinical data from our 1st line RAS-mutated mCRC trial in mid-2024



images: Flaticon.com





Appendix: Additional Ph 1b/2 Clinical Data

Expansion cohort patients replicated the prior bev naïve finding

Best Radiographic Response* – 18 expansion cohort patients (as of June 16, 2023)

As an independent cohort in the Ph 1b/2 trial, the expansion cohort replicated the finding of improved responses from the bev naïve patients

	All patients	Bev naïve	Bev exposed
Ν	18	4	14
ORR	11% (2)	50% (2)	0%
Disease Control Rate	89%	100%	86%



* Radiographic response determined per RECIST 1.1. Waterfall plot and table reflect interim data as of June 16, 2023 from an ongoing trial and unlocked database

Bev naïve patients responded better than bev exposed

Swimmer plot* – 18 expansion cohort patients (as of June 16, 2023)

	All	Bev	Bev
	patients	naïve	exposed
Pursued surgery / ablation	17% (3/18)	50% (2/4)	7% (1/14)



* Swimmer plot / table reflect interim data as of June 16, 2023 from an ongoing trial and unlocked database.

Expansion cohort patients replicated the prior bev naïve finding

Progression free survival* - 18 expansion cohort patients (as of June 16, 2023)



* Onvansertib mPFS are interim data as of June 16, 2023 from an ongoing trial and unlocked database

* Bennouna et al., Lancet Oncol 2013; 14: 29–37; Giessen et al., Acta Oncologica, 2015, 54: 187-193; Cremolini et al., Lancet Oncol 2020, 21: 497–507; Antoniotti et al., Correspondence Lancet Oncol June 2020. Giantonio et al., 2007, J Clin Oncol 25:1539-1544; Moriwaki et al., Med Oncol, 2012, 29:2842–2848; Beretta et al, Med Oncol 2013, 30:486.

mCRC Ph 1b/2 trial subgroup data compares favorably to SoC

Objective response rates (%) and mPFS (mo) in our Ph1b/2 trial varied considerably by subgroup

	Ph1b/2 (N=48)	Ph2 Exp. (N=18)	Total (N=66)	Historical Control	ols*
Bev naïve	82% (9 of 11) 14.0 mo 23% of patients	50% (2 of 4) Not reached 22% of patients	73% (11 of 15) 15.0 mo 23% of patients	23-26% ORR 6.9 – 8.5 mo mF	PFS
Bev exposed	22% (8 of 37) 7.8 mo 77% of patients	0% (0 of 14) 7.8 mo 78% of patients	16% (8 of 51) 7.8 mo 77% of patients	5-13% ORR 4.5 – 6.7 mo mF	PFS
Total	35% (17 of 48) 9.3 mo 100% of patients	11% (2 of 18) 8.4 mo 100% of patients	29% (19 of 66) 9.3 mo 100% of patients		

* Bennouna et al., Lancet Oncol 2013; 14: 29–37; Giessen et al., Acta Oncologica, 2015, 54: 187-193; Cremolini et al., Lancet Oncol 2020, 21: 497–507; Antoniotti et al., Correspondence Lancet Oncol June 2020. Giantonio et al., 2007, J Clin Oncol 25:1539-1544; Moriwaki et al., Med Oncol, 2012, 29:2842–2848; Beretta et al, Med Oncol 2013, 30:486. mCRC: metastatic colorectal cancer

Bev naïve patients experienced deeper tumor regression

Change in tumor size from baseline* – all doses (as of June 16, 2023)



* Spider plots reflect interim data as of June 16, 2023 from an ongoing trial and unlocked database

ORR is consistently greater for bev naïve patients across characteristics

No single patient characteristic explains the difference in response rates by prior bev status



ORR (%) for Bevacizumab Naïve vs. Exposed Patients* – as of June 16, 2023

* Onvansertib ORR is interim data as of June 16, 2023 from an ongoing trial and unlocked database.





Appendix: Additional Preclinical Data

Onvansertib in combination with irinotecan in RAS-mutant CRC PDXs



Dosing schedule: onvansertib 60 mg/kg daily; irinotecan 40mg/kg weekly, for up to 21days. Mean + SD are represented. Unpaired t-test, **p<0.01, ***p<0.001, ****p<0.001

Onvansertib in combination with FOLFOX in RAS-mutant CRC PDXs

B8141 (NRAS Q61R) B8239 (KRAS G12C) The chemotherapeutics oxaliplatin+5FU had no C1143 (KRAS G12D) 800-800 or modest activity in the 6 RAS-mutant PDX 300 Fumor volume change (%) Tumor volume change (%) Vehicle Tumor volume change (%) models tested. 600 600 Onvansertib Oxa/5FU Conversely, the combination of onvansertib Onv/Oxa/5FU 400 400 with oxaliplatin+5FU was efficacious in all 6 models, resulting in tumor statis or tumor 200 200 regression. 5 10 15 20 0 5 10 15 20 0 5 10 15 20 In 5 of the 6 models, the combination had Treatment time (days) Treatment time (days) Treatment time (days) significantly superior activity than the single agent treatments. C1138 (KRAS G13D) B1008 (KRAS G12D) C1117 (KRAS G12D) 300 300-400 These data support the efficacy of onvansertib Tumor volume change (%) umor volume change (%) Tumor volume change (%) in combination with oxaliplatin+5FU in RAS-300-200 200 mutant CRC PDXs resistant or partially sensitive 200 to oxaliplatin+5FU. 100. 100 100

5 10 15 20

Treatment time (days)

0-

0

5 10 15 20

Treatment time (days)

In collaboration with Dr. Kopetz (MD Anderson)

Dosing schedule: onvansertib 45 mg/kg daily; oxaliplatin 10mg/kg weekly; 5-FU 25mg/kg 5times/week for up to 21days. Mean + SD are represented. Unpaired t-test, *p<0.05, **p<0.01, ***p<0.001, ****p<0.0001



5 10 15 20

Treatment time (days)

0

Onvansertib inhibits vascularization in vitro

<u>Tube formation assay</u>: HUVEC endothelial cells seeded onto a 3D extracellular matrix form tube-like structures upon stimulation with the angiogenic factor VEGFA, simulating the formation of new blood vessels

Treatment with onvansertib (25, 100 and 400nM) for 24h significantly reduced VEGFA-stimulated HUVECs tube formation in a dose-dependent manner, demonstrating that onvansertib inhibits angiogenesis *in vitro*

