immutep
LAG-3 IMMUNOTHERAPY

05

Investor Update

AUGUST 2020

IN THIS ISSUE:

MARC VOIGT

Message from the CEO

I hope that this newsletter finds you and your families safe and well.

All of us have been affected in some way by the current pandemic and it appears that the pandemic and global economic consequences are far from being over.

However, what I have found uplifting during this time is the global community and scientific response to the coronavirus pandemic. A renewed humanitarian motivation has prompted biotech and pharma companies, as well as academia from around the world, to contribute to a potential cure or treatment. In the frontline of fighting the disease have been the doctors and nurses in all the different affected countries. We all owe them so much for their tireless work.

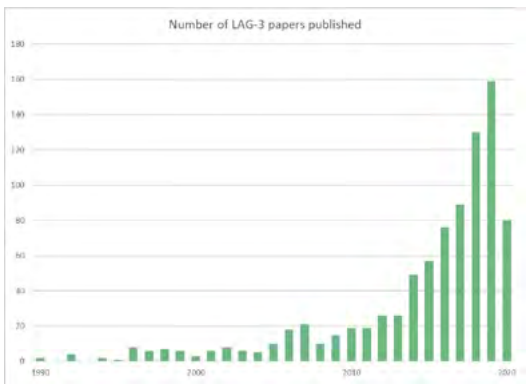
For me and the whole Immutep team, the pandemic has served as a reminder that we have an important role to play to improve the lives of patients, albeit cancer and autoimmune disease patients. It further motivates us to continue our efforts to develop LAG-3 technologies for patients and explore other potential areas, such as infectious disease where we feel efti could benefit patients by boosting their immune systems.

Celebrating 30 Years of LAG-3!

Did you know that the first paper identifying and describing the LAG-3 immune checkpoint was published in May 1990; as such, we recently marked its 30th anniversary!

The paper, entitled “LAG-3, a Novel Lymphocyte Activation Gene Closely Related to CD4” was written by Immutep’s CMO and CSO Prof Frédéric Triebel who pioneered LAG-3’s discovery, along with his colleagues at the Institut Gustave-Roussy in Paris, France. The paper was published in the peer-reviewed Journal of Experimental Medicine, a journal that has achieved a high Impact Factor in 2018 of 10.9, placing it in the top 2% of scientific journals by Impact Factor.

Since then, the literature and innovation around LAG-3 has accelerated substantially, with 784 papers now published worldwide.[1] 42 of these papers have been written by Prof Triebel and coworkers demonstrating his leadership in this emerging immunotherapy field.



Coincidentally, the first paper identifying and describing the PD-1 immune checkpoint was also published in the 1990s. MSD’s KEYTRUDA® (pembrolizumab) became the first PD-1 inhibitor to receive approval for patients with advanced or unresectable melanoma on September 4, 2014.[2]

[Continued on p. 3]

[1] https://pubmed.ncbi.nlm.nih.gov/?term=LAG-3&filter=years.1990-2020&timeline=expanded
[2] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5778665/

Message from the CEO

[Continued from p. 2]

Now in 2020, KEYTRUDA is approved for use in many other cancer indications[3] and, in 2019, KEYTRUDA generated approximately US$11 billion in revenues for MSD.[4] This is particularly encouraging for us given the data generated to date from combining our lead product candidate, eftilagimod alpha ("efti") with KEYTRUDA in our TACTI-mel and TACTI-002 clinical trials.

Great scientific and drug discoveries are often the result of many years, if not decades of hard work!

LAG-3 Landscape

Immutep is proud to be the worldwide leader in developing LAG-3 therapeutics, contributing four product candidates which are being evaluated in 13 clinical trials and almost 2,000 patients across the globe.

In addition, we have the only agonist LAG-3 products (efti and IMP761) being developed in the oncology and autoimmune fields. For insights into the key differences between an agonist and an antagonist, see the box on the right-hand side.

What is the difference between an agonist and an antagonist?

An agonist binds to the receptor and produces an effect within the cell. An antagonist may bind to the same receptor, but does not produce a response; instead, it blocks that receptor to its natural agonist.

Efti is an agonist. As such, it is an immune booster that has the versatility to be paired with antagonists in combination therapies, for example with Keytruda.

LAG-3 Therapeutic Landscape Overview

		Company	Program	Preclinical	Phase I	Phase II	Phase III	Total Trials	Patients
Oncology	Agonist	immutep	Eftilagimod Alpha		4	2		6	455
Oncology	Antagonist	BMS	Relatlimab		7	23	2	32	9,693
Oncology	Antagonist	NOVARTIS	LAG525 (IMP701)		1	4		5	1,104
Oncology	Antagonist	B.I.	BI754111		4	1		5	849
Oncology	Antagonist	Macrogenics	MGD013		2	2		4	854
Oncology	Antagonist	Merck & Co. Inc.	MK4280		2	1		3	940
Oncology	Antagonist	Incyte	INCAGN02385		1	1		2	92
Oncology	Antagonist	Symphogen A/S	SYM022		2			2	132
Oncology	Antagonist	Regeneron(1)	REGN3767		1			1	589
Oncology	Antagonist	Innovent	IBI110		1			1	268
Oncology	Antagonist	Xencor	XmAb-22841		1			1	242
Oncology	Antagonist	Tesaro(2)	TSR-033		1			1	200
Oncology	Antagonist	F-Star	FS-118		1			1	51
Oncology	Antagonist	H-L Roche	RG6139		1			1	200
Autoimmune	Agonist	immutep	IMP761					--	--
Autoimmune	Depleting Ab	gsk(3)	GSK2831781 (IMP731)		2	1		3	384

Notes:
Sources: Company websites, clinicaltrials.gov, and sec.gov, as of **August 2020.** The green bars above represent programs conducted by Immutep &/or its partners.
1) As of January 7, 2019 Regeneron is in full control of program and continuing development (https://www.sec.gov/Archives/edgar/data/872589/000110465919000977/a19-1325_18k.htm)
2) Tesaro was acquired by and is now part of GSK (https://www.gsk.com/en-gb/media/press-releases/gsk-completes-acquisition-of-tesaro-an-oncology-focused-biopharmaceutical-company/)
3) Includes two completed Phase I study (see clinicaltrials.gov)

[Continued on p. 4]

[3] Refer https://www.keytruda.com/ for details of the cancer indications where Keytruda is approved for use.
[4] https://investors.merck.com/news/press-release-details/2020/Merck-Announces-Fourth-Quarter-and-Full-Year-2019-Financial-Results/default.aspx

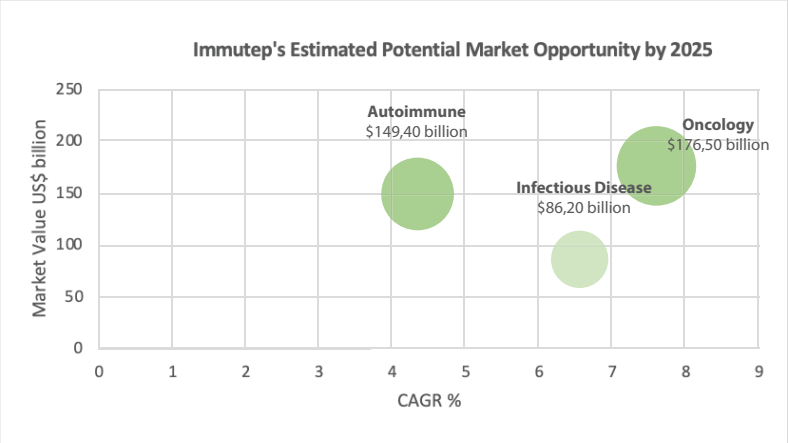
[Continued from p. 3]

Bristol Myers Squibb, the American pharmaceutical company, is also advancing rapidly in the LAG-3 space. It is expected to present data later this year or early next year from its Phase III clinical trials of relatlimab, a monoclonal antibody designed for the treatment of melanoma. If the results are positive, it would signal the validation of the whole LAG-3 space.

The LAG-3 opportunity & market size

Immutep is focused on developing LAG-3 therapies for:

- The **global oncology drugs market** which is expected to reach an **estimated US$176.5 billion by 2025, with a compund annual growth rate (CAGR) of 7.6% from 2018 to 2025**.[5]
- The global **autoimmune treatment market** which is expected to grow at a **CAGR of 4.34% between 2018 and 2025 to reach US$149.4 billion by 2025**.[6]



In addition, there is an opportunity to explore the use of Immutep's product candidates for the **global infectious diseases market** which is expected to reach **US$86.2 billion by 2025 and has a CAGR of 6.6% during 2018 – 2025**. Accordingly, Immutep is well positioned with exposure to three very large and growing pharmaceuticel markets.[7]

Immutep has previously tested efti in clinical research in infectious disease, including in influenza and hepatitis vaccine studies.[8] These studies showed that efti activates the body's innate immunity and, as a consequence, boosts adaptive immunity. (For an explanation of the difference, see the box on the right-hand side).

Immutep also has two patent families drawn to the use of efti in the treatment of infectious disease. For example, we announced the grant of a Japanese patent in September 2017 and the grant of a European patent in November 2018 with relevant claims in this field.

What's the difference between the body's innate immunity and adaptive immunity?

Innate immunity refers to the body's built-in defense mechanisms that start immediately or within hours of an antigen's appearance in the body.

Adaptive immunity, on the other hand, refers to a specific immune response that arises when the body is exposed to a foreign substance (antigen). Once activated against a specific type of antigen, this immunity remains throughout life.

[Continued on p. 5]

[5] https://www.prnewswire.com/news-releases/oncologycancer-drugs-market-to-reach-176-50-bn-globally-by-2025-at-7-6-cagr-alliedmarket-research-300937810.html
[6] https://www.prnewswire.com/news-releases/the-global-autoimmune-disease-therapeutics-market-size-is-expected-to-reach-149-4-billion-by-2025--rising-at-a-market-growth-of-4-34-cagr-during-the-forecast-period-300902336.html and www.kbvresearch.com/autoimmune-disease-therapeutics-market/
[7] Grand View Research: Infectious Disease Therapeutics Market Worth $86.2 Billion By 2025, published 2017. Infectious Disease Therapeutics Market Analysis By Disease Type (HIV infection, Influenza, Malaria, Tuberculosis, Hepatitis, and HPV infection), By Region, And Segment Forecasts, 2018 – 2025. Grand View Research. 2017.
[8] Brignone C, Grygar C, Marcu M, et al. IMP321 (sLAG-3) safety and T cell response potentiation using an influenza vaccine as a model antigen: a single-blind phase I study. Vaccine. 2007;25:4641-50 and Brignone C, Grygar C, Marcu M, et al. IMP321 (sLAG-3), an immunopotentiator for T cell responses against a HBsAg antigen in healthy adults: a single blind randomised controlled phase I study. J Immune Based Ther Vaccines. 2007;5:5.

[Continued from p. 4]

Efti in infectious diseases and COVID-19

While Immutep remains firmly focused on developing its product candidates for the oncology and autoimmune disease markets, we were approached by an investigator with an interest in funding and conducting a trial in COVID-19, as noted in our Investor Presentation released on 29 April 2020. These discussions are continuing but are not yet consummated, as the investigator is seeking the necessary approvals, including the relevant Competent Authority approval. We appreciate that investors are anxious to hear of any further developments and we will, of course, update the market as soon as we are in a position to provide further details.

In general, infectious diseases present an attractive opportunity for Immutep to consider, not least because of the team's previous experience in the field and the current global humanitarian efforts to find a treatment for COVID-19. However, we remain focused and excited about our progress in oncology with efti and autoimmune diseases with IMP761, along with the progress being made by our partners with our out-licensed candidates.

Recent Immunotherapy Deal Activity

Immunotherapy continues to attract strong interest from big pharma, with multiple deals announced in June 2020. CSL paid US$450 million upfront for a Phase III haemophilia asset from uniQure. Gilead invested US$275 million for a 49.9% share in immuno-oncology biotech Pionyr Immunotherapeutic and has the option to buy the balance of the outstanding shares, valuing the business at US$1.5 billion - the key assets being two preclinical myeloid tuning assets which can help predict checkpoint inhibitor responsiveness.

Lastly, Sosei inked a discovery collaboration and licensing deal with AbbVie for novel therapies that modulate G protein-coupled receptor (GPCR) targets with an initial focus on inflammatory and autoimmune diseases. AbbVie is paying Sosei $32 million in upfront and near-term milestone payments.

Financing Update

In April, we raised A$12 million via a Placement with new and existing institutional and sophisticated investors to support the development of our LAG-3 related clinical programs in immuno-oncology and autoimmune disease. We welcomed seven new institutions to our register through the Placement which extended our cash runway to the end of calendar year 2021.

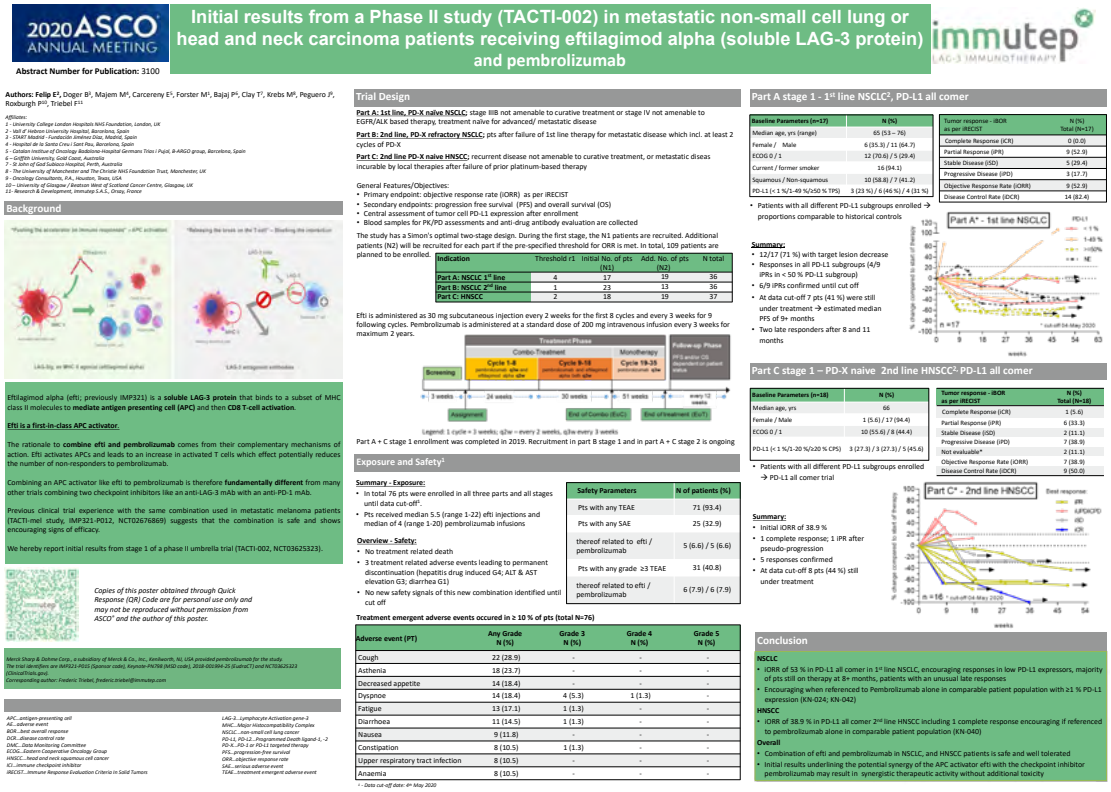
Our cash position was further bolstered in May 2020 as we received a €2,173,454 (~A$3,630,000) research and development (R&D) tax incentive payment in cash from the French Government under its Crédit d'Impôt Recherche scheme. We also received ~A$1.4 million in June 2020 from the Australian R&D tax incentive scheme.

INDUSTRY CONFERENCES AND POSTER PRESENTATIONS

Scientific conferences have taken on a virtual format since the COVID-19 pandemic and it has been good to be part of the industry's determination to push ahead with scientific innovation despite the challenges. The world needs new medicines now more than ever.

Immutep was pleased to announce new data at the **American Society of Clinical Oncology**'s (ASCO) Annual Meeting 2020 via two poster presentations at the end of May. ASCO is the leading global scientific meeting for oncology professionals and represents an important platform at which industry participants present clinical results.

At ASCO, we presented new and improving interim data from our ongoing Phase II TACTI-002 study which we are conducting in collaboration with Merck & Co., Inc., Kenilworth, NJ, USA (known as "MSD" outside the United States and Canada).



2020 ASCO ANNUAL MEETING

Abstract Number for Publication: 3100

Initial results from a Phase II study (TACTI-002) in metastatic non-small cell lung or head and neck carcinoma patients receiving eftilagimod alpha (soluble LAG-3 protein) and pembrolizumab

immutep LAG-3 IMMUNOTHERAPY

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Background

Eftilagimod alpha (efti; previously IMP321) is a **soluble LAG-3 protein** that binds to a subset of MHC class II molecules to **mediate antigen presenting cell (APC)** and then **CD8 T-cell activation**.

Efti is a first-in-class APC activator.

The rationale to **combine efti and pembrolizumab** comes from their complementary mechanisms of action. Efti activates APCs and leads to an increase in activated T cells which effect potentially reduces the number of non-responders to pembrolizumab.

Combining an APC activator like efti to pembrolizumab is therefore **fundamentally different** from many other trials combining two checkpoint inhibitors like an anti-LAG-3 mAb with an anti-PD-1 mAb.

Previous clinical trial experience with the same combination used in metastatic melanoma patients (TACTI-mel study, IMP321-P012, NCT02676869) suggests that the combination is safe and shows encouraging signs of efficacy.

We hereby report initial results from stage 1 of a phase II umbrella trial (TACTI-002, NCT03625323).

Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA provided pembrolizumab for the study.
The trial identifiers are IMP321-P015 (Sponsor code), Keynote-PA766 (MSD code), 2018-003994-25 (EudraCT) and NCT03625323 (ClinicalTrials.gov).
Corresponding author: Frederic Triebel, frederic.triebel@immutep.com

APC...antigen presenting cell
AE...adverse event
BOR...best overall response
DCR...disease control rate
DMC...Data Monitoring Committee
EACC...European Academy of Cancer Oncology Group
HNSCC...head and neck squamous cell cancer
ICI...immune checkpoint inhibitor
iRECIST...Immune Response Evaluation Criteria in Solid Tumors
LAG-3...Lymphocyte Activation gene-3
MHC...Major Histocompatibility Complex
NSCLC...non-small cell lung cancer
PD-L1, PD-L2...Programmed Death ligand-1, -2
PD-X...PD-1 or PD-L1 targeted therapy
PFS...progression free survival
ORR...objective response rate
SAE...serious adverse event
TEAE...treatment emergent adverse event

Trial Design

Part A: 1st line, PD-X naïve NSCLC: stage IIIB not amenable to curative treatment or stage IV not amenable to EGFR/ALK based therapy, treatment naïve for advanced/ metastatic disease

Part B: 2nd line, PD-X refractory NSCLC: pts after failure of 1st line therapy for metastatic disease which incl. at least 2 cycles of PD-X

Part C: 2nd line PD-X naïve HNSCC: recurrent disease not amenable to curative treatment, or metastatic diseas incurable by local therapies after failure of prior platinum-based therapy

General Features/Objectives:
- Primary endpoint: objective response rate (iORR) as per iRECIST
- Secondary endpoints: progression free survival (PFS) and overall survival (OS)
- Central assessment of tumor cell PD-L1 expression after enrollment
- Blood samples for PK/PD assessments and anti-drug antibody evaluation are collected

The study has a Simon's optimal two-stage design. During the first stage, the N1 patients are recruited. Additional patients (N2) will be recruited for each part if the pre-specified threshold for ORR is met. In total, 109 patients are planned to be enrolled.

Indication	Threshold r1	Initial No. of pts (N1)	Add. No. of pts (N2)	N total
Part A: NSCLC 1st line	4	17	19	36
Part B: NSCLC 2nd line	1	23	13	36
Part C: HNSCC	2	18	19	37

Efti is administered as 30 mg subcutaneous injection every 2 weeks for the first 8 cycles and every 3 weeks for 9 following cycles. Pembrolizumab is administered at a standard dose of 200 mg intravenous infusion every 3 weeks for maximum 2 years.

Legend: 1 cycle = 3 weeks; q2w = every 2 weeks, q3w every 3 weeks

Part A + C stage 1 enrollment was completed in 2019. Recruitment in part B stage 1 and in part A + C stage 2 is ongoing

Exposure and Safety[1]

Summary - Exposure:
- In total 76 pts were enrolled in all three parts and all stages until data cut-off[1].
- Pts received median 5.5 (range 1-22) efti injections and median of 4 (range 1-20) pembrolizumab infusions

Overview - Safety:
- No treatment related death
- 3 treatment related adverse events leading to permanent discontinuation (hepatitis drug induced G4; ALT & AST elevation G3; diarrhea G1)
- No new safety signals of this new combination identified until cut off

Safety Parameters	N of patients (%)
Pts with any TEAE	71 (93.4)
Pts with any SAE	25 (32.9)
thereof related to efti / pembrolizumab	5 (6.6) / 5 (6.6)
Pts with any grade ≥3 TEAE	31 (40.8)
thereof related to efti / pembrolizumab	6 (7.9) / 6 (7.9)

Treatment emergent adverse events occured in ≥ 10 % of pts (total N=76)

Adverse event (PT)	Any Grade N (%)	Grade 3 N (%)	Grade 4 N (%)	Grade 5 N (%)
Cough	22 (28.9)	-	-	-
Asthenia	18 (23.7)	-	-	-
Decreased appetite	14 (18.4)	-	-	-
Dyspnoe	14 (18.4)	4 (5.3)	1 (1.3)	-
Fatigue	13 (17.1)	1 (1.3)	-	-
Diarrhoea	11 (14.5)	1 (1.3)	-	-
Nausea	9 (11.8)	-	-	-
Constipation	8 (10.5)	1 (1.3)	-	-
Upper respiratory tract infection	8 (10.5)	-	-	-
Anaemia	8 (10.5)	-	-	-

[1] – Data cut-off date: 4th May 2020

Part A stage 1 - 1st line NSCLC[2], PD-L1 all comer

Baseline Parameters (n=17)	N (%)
Median age, yrs (range)	65 (53 – 76)
Female / Male	6 (35.3) / 11 (64.7)
ECOG 0 / 1	12 (70.6) / 5 (29.4)
Current / former smoker	16 (94.1)
Squamous / Non-squamous	10 (58.8) / 7 (41.2)
PD-L1 (< 1 %/1-49 %/≥50 % TPS)	3 (23 %) / 6 (46 %) / 4 (31 %)

Tumor response - iBOR as per iRECIST	N (%) Total (N=17)
Complete Response (iCR)	0 (0.0)
Partial Response (iPR)	9 (52.9)
Stable Disease (iSD)	5 (29.4)
Progressive Disease (iPD)	3 (17.7)
Objective Response Rate (iORR)	9 (52.9)
Disease Control Rate (iDCR)	14 (82.4)

- Patients with all different PD-L1 subgroups enrolled → proportions comparable to historical controls

Summary:
- 12/17 (71 %) with target lesion decrease
- Responses in all PD-L1 subgroups (4/9 iPRs in < 50 % PD-L1 subgroup)
- 6/9 iPRs confirmed until cut off
- At data cut-off 7 pts (41 %) were still under treatment → estimated median PFS of 9+ months
- Two late responders after 8 and 11 months

Part C stage 1 – PD-X naive 2nd line HNSCC[2] PD-L1 all comer

Baseline Parameters (n=18)	N (%)
Median age, yrs	66
Female / Male	1 (5.6) / 17 (94.4)
ECOG 0 / 1	10 (55.6) / 8 (44.4)
PD-L1 (< 1 %/1-20 %/≥20 % CPS)	3 (27.3) / 3 (27.3) / 5 (45.6)

Tumor response - iBOR as per iRECIST	N (%) Total (N=18)
Complete Response (iCR)	1 (5.6)
Partial Response (iPR)	6 (33.3)
Stable Disease (iSD)	2 (11.1)
Progressive Disease (iPD)	7 (38.9)
Not evaluable*	2 (11.1)
Objective Response Rate (iORR)	7 (38.9)
Disease Control Rate (iDCR)	9 (50.0)

- Patients with all different PD-L1 subgroups enrolled → PD-L1 all comer trial

Summary:
- Initial iORR of 38.9 %
- 1 complete response; 1 iPR after pseudo-progression
- 5 responses confirmed
- At data cut-off 8 pts (44 %) still under treatment

Conclusion

NSCLC
- iORR of 53 % in PD-L1 all comer in 1st line NSCLC, encouraging responses in low PD-L1 expressors, majority of pts still on therapy at 8+ months, patients with an unusual late responses
- Encouraging when referenced to Pembrolizumab alone in comparable patient population with ≥1 % PD-L1 expression (KN-024; KN-042)

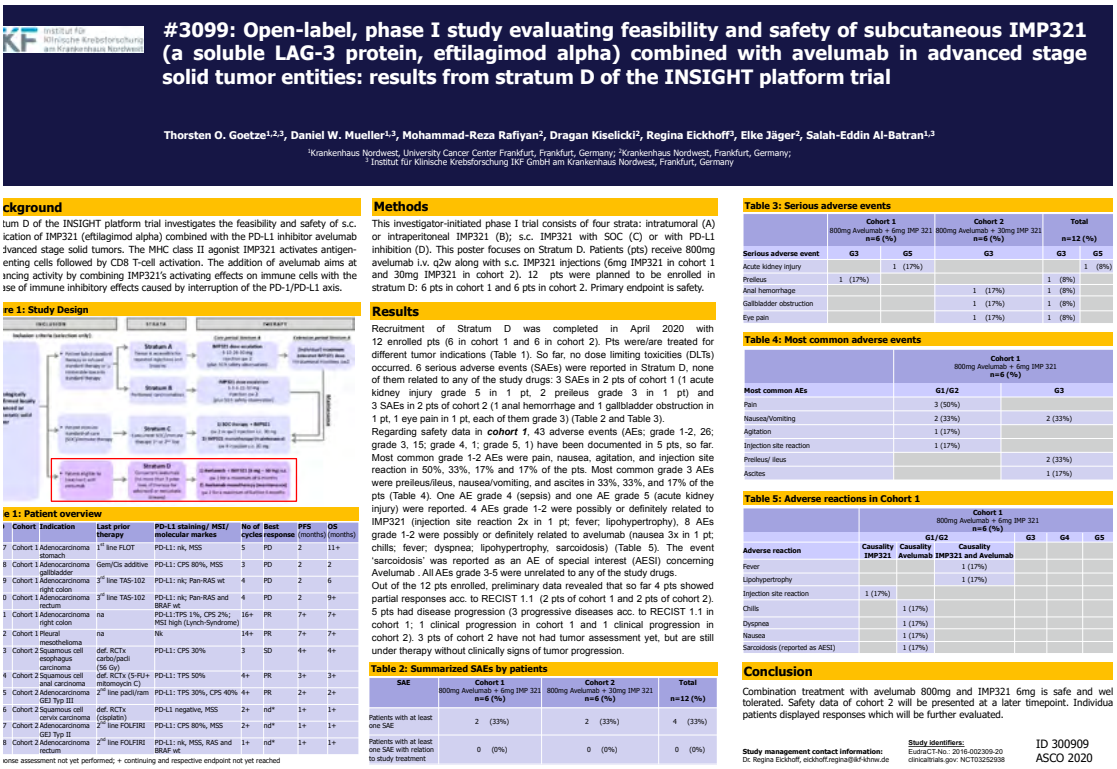
HNSCC
- iORR of 38.9 % in PD-L1 all comer 2nd line HNSCC including 1 complete response encouraging if referenced to pembrolizumab alone in comparable patient population (KN-040)

Overall
- Combination of efti and pembrolizumab in NSCLC, and HNSCC patients is safe and well tolerated
- Initial results underlining the potential synergy of the APC activator efti with the checkpoint inhibitor pembrolizumab may result in synergistic therapeutic activity without additional toxicity

[Continued on p. 7]

[Continued from p. 6]

The first interim results from our ongoing INSIGHT-004 Phase I clinical trial were also presented at ASCO 2020. INSIGHT-004 is the fourth arm of the investigator-initiated INSIGHT trial being conducted by the Institute of Clinical Cancer Research at Krankenhaus Nordwest in Frankfurt (IKF). It is being conducted under Immutep's collaboration with Merck KGaA, Darmstadt, Germany, and Pfizer Inc.



#3099: Open-label, phase I study evaluating feasibility and safety of subcutaneous IMP321 (a soluble LAG-3 protein, eftilagimod alpha) combined with avelumab in advanced stage solid tumor entities: results from stratum D of the INSIGHT platform trial

Thorsten O. Goetze[1,2,3], Daniel W. Mueller[1,3], Mohammad-Reza Rafiyan[2], Dragan Kiselicki[2], Regina Eickhoff[3], Elke Jäger[2], Salah-Eddin Al-Batran[1,3]

[1]Krankenhaus Nordwest, University Cancer Center Frankfurt, Frankfurt, Germany; [2]Krankenhaus Nordwest, Frankfurt, Germany;
[3] Institut für Klinische Krebsforschung IKF GmbH am Krankenhaus Nordwest, Frankfurt, Germany

ckground

tum D of the INSIGHT platform trial investigates the feasibility and safety of s.c. ication of IMP321 (eftilagimod alpha) combined with the PD-L1 inhibitor avelumab dvanced stage solid tumors. The MHC class II agonist IMP321 activates antigen- enting cells followed by CD8 T-cell activation. The addition of avelumab aims at ncing activity by combining IMP321's activating effects on immune cells with the se of immune inhibitory effects caused by interruption of the PD-1/PD-L1 axis.

re 1: Study Design

e 1: Patient overview

	Cohort	Indication	Last prior therapy	PD-L1 staining / MSI / molecular markes	No of cycles	Best response	PFS (months)	OS (months)
7	Cohort 1	Adenocarcinoma stomach	1st line FLOT	PD-L1: nk, MSS	5	PD	2	11+
8	Cohort 1	Adenocarcinoma gallbladder	Gem/Cis additive	PD-L1: CPS 80%, MSS	3	PD	2	2
9	Cohort 1	Adenocarcinoma right colon	3rd line TAS-102	PD-L1: nk; Pan-RAS wt	4	PD	2	6
0	Cohort 1	Adenocarcinoma rectum	3rd line TAS-102	PD-L1: nk; Pan-RAS and BRAF wt	4	PD	2	9+
1	Cohort 1	Adenocarcinoma right colon	na	PD-L1:TPS 1%, CPS 2%; MSI high (Lynch-Syndrome)	16+	PR	7+	7+
2	Cohort 1	Pleural mesothelioma	na	Nk	14+	PR	7+	7+
3	Cohort 2	Squamous cell esophagus carcinoma	def. RCTx carbo/paci (56 Gy)	PD-L1: CPS 30%	3	SD	4+	4+
4	Cohort 2	Squamous cell anal carcinoma	def. RCTx (5-FU+ mitomoycin C)	PD-L1: TPS 50%	4+	PR	3+	3+
5	Cohort 2	Adenocarcinoma GEJ Typ III	2nd line paci/ram	PD-L1: TPS 30%, CPS 40%	4+	PR	2+	2+
6	Cohort 2	Squamous cell cervix carcinoma	def. RCTx (cisplatin)	PD-L1 negative, MSS	2+	nd*	1+	1+
7	Cohort 2	Adenocarcinoma GEJ Typ II	2nd line FOLFIRI	PD-L1: CPS 80%, MSS	2+	nd*	1+	1+
8	Cohort 2	Adenocarcinoma rectum	2nd line FOLFIRI	PD-L1: nk, MSS, RAS and BRAF wt	1+	nd*	1+	1+

onse assessment not yet performed; + continuing and respective endpoint not yet reached

Methods

This investigator-initiated phase I trial consists of four strata: intratumoral (A) or intraperitoneal IMP321 (B); s.c. IMP321 with SOC (C) or with PD-L1 inhibition (D). This poster focuses on Stratum D. Patients (pts) receive 800mg avelumab i.v. q2w along with s.c. IMP321 injections (6mg IMP321 in cohort 1 and 30mg IMP321 in cohort 2). 12 pts were planned to be enrolled in stratum D: 6 pts in cohort 1 and 6 pts in cohort 2. Primary endpoint is safety.

Results

Recruitment of Stratum D was completed in April 2020 with 12 enrolled pts (6 in cohort 1 and 6 in cohort 2). Pts were/are treated for different tumor indications (Table 1). So far, no dose limiting toxicities (DLTs) occurred. 6 serious adverse events (SAEs) were reported in Stratum D, none of them related to any of the study drugs: 3 SAEs in 2 pts of cohort 1 (1 acute kidney injury grade 5 in 1 pt, 2 preileus grade 3 in 1 pt) and 3 SAEs in 2 pts of cohort 2 (1 anal hemorrhage and 1 gallbladder obstruction in 1 pt, 1 eye pain in 1 pt, each of them grade 3) (Table 2 and Table 3).

Regarding safety data in ***cohort 1***, 43 adverse events (AEs; grade 1-2, 26; grade 3, 15; grade 4, 1; grade 5, 1) have been documented in 5 pts, so far. Most common grade 1-2 AEs were pain, nausea, agitation, and injection site reaction in 50%, 33%, 17% and 17% of the pts. Most common grade 3 AEs were preileus/ileus, nausea/vomiting, and ascites in 33%, 33%, and 17% of the pts (Table 4). One AE grade 4 (sepsis) and one AE grade 5 (acute kidney injury) were reported. 4 AEs grade 1-2 were possibly or definitely related to IMP321 (injection site reaction 2x in 1 pt; fever; lipohypertrophy), 8 AEs grade 1-2 were possibly or definitely related to avelumab (nausea 3x in 1 pt; chills; fever; dyspnea; lipohypertrophy, sarcoidosis) (Table 5). The event 'sarcoidosis' was reported as an AE of special interest (AESI) concerning Avelumab . All AEs grade 3-5 were unrelated to any of the study drugs.

Out of the 12 pts enrolled, preliminary data revealed that so far 4 pts showed partial responses acc. to RECIST 1.1 (2 pts of cohort 1 and 2 pts of cohort 2). 5 pts had disease progression (3 progressive diseases acc. to RECIST 1.1 in cohort 1; 1 clinical progression in cohort 1 and 1 clinical progression in cohort 2). 3 pts of cohort 2 have not had tumor assessment yet, but are still under therapy without clinically signs of tumor progression.

Table 2: Summarized SAEs by patients

SAE	Cohort 1 800mg Avelumab + 6mg IMP 321 n=6 (%)	Cohort 2 800mg Avelumab + 30mg IMP 321 n=6 (%)	Total n=12 (%)
Patients with at least one SAE	2 (33%)	2 (33%)	4 (33%)
Patients with at least one SAE with relation to study treatment	0 (0%)	0 (0%)	0 (0%)

Table 3: Serious adverse events

	Cohort 1 800mg Avelumab + 6mg IMP 321 n=6 (%)		Cohort 2 800mg Avelumab + 30mg IMP 321 n=6 (%)		Total n=12 (%)	
Serious adverse event	**G3**	**G5**	**G3**		**G3**	**G5**
Acute kidney injury		1 (17%)				1 (8%)
Preileus	1 (17%)				1 (8%)	
Anal hemorrhage			1 (17%)		1 (8%)	
Gallbladder obstruction			1 (17%)		1 (8%)	
Eye pain			1 (17%)		1 (8%)	

Table 4: Most common adverse events

	Cohort 1 800mg Avelumab + 6mg IMP 321 n=6 (%)	
Most common AEs	**G1/G2**	**G3**
Pain	3 (50%)	
Nausea/Vomiting	2 (33%)	2 (33%)
Agitation	1 (17%)	
Injection site reaction	1 (17%)	
Preileus/ ileus		2 (33%)
Ascites		1 (17%)

Table 5: Adverse reactions in Cohort 1

	Cohort 1 800mg Avelumab + 6mg IMP 321 n=6 (%)					
				G1/G2	G3	G4	G5
Adverse reaction	**Causality IMP321**	**Causality Avelumab**	**Causality IMP321 and Avelumab**				
Fever			1 (17%)				
Lipohypertrophy			1 (17%)				
Injection site reaction	1 (17%)						
Chills		1 (17%)					
Dyspnea		1 (17%)					
Nausea		1 (17%)					
Sarcoidosis (reported as AESI)		1 (17%)					

Conclusion

Combination treatment with avelumab 800mg and IMP321 6mg is safe and wel tolerated. Safety data of cohort 2 will be presented at a later timepoint. Individua patients displayed responses which will be further evaluated.

Study management contact information:
Dr. Regina Eickhoff, eickhoff.regina@ikf-khnw.de

Study identifiers:
EudraCT-No.: 2016-002305-20
clinicaltrials.gov: NCT03252938

ID 300909
ASCO 2020

The new data presented at ASCO is summarised in the Operational Snapshot section of this newsletter. You can also listen to a webcast of the results presented at ASCO as well as our data presentations at other conferences mentioned below via the Presentations section of our website at

https://www.immutep.com/investors-media/presentations.html

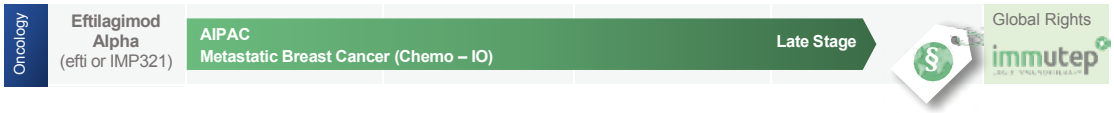
Immutep was also selected to present interim data from TACTI-002 via a poster short talk presentation as part of the high-impact paper presentation program at the **American Association for Cancer Research (AACR) Virtual Annual Meeting** held in a virtual format in April. Interim results from CYTLIMIC's YCP02 Phase I study, were also presented at AACR – see the Operational Snapshot.

Earlier interim data from TACTI-002 was also presented at the **34th German Cancer Congress** which was held in Berlin, Germany in February.

Another key industry conference for business development attended by Immutep was BIO, held vir-tually in June 2020. Immutep and efti attracted much interest at the digital conference with the team attending multiple virtual one to one meetings, along with panel discussions and interactive sessions.

OPERATIONAL SNAPSHOT

AIPAC – Phase IIb study in breast cancer



In March, Immutep reported supportive initial efficacy data including Progression-Free Survival (PFS) and Overall Response Rate (ORR) from its Phase IIb AIPAC trial evaluating efti in combination with chemotherapy in patients with HER2-negative / hormone receptor positive metastatic breast cancer. Efti provided an improvement for patients' PFS compared to the placebo group at the 6-month landmark and an increased ORR of 48.3% compared to 38.4% in the placebo group. Encouraging results were reported in multiple predefined patient subgroups which represent a meaningful percentage of patients. Overall Survival (OS) and immune monitoring results are expected to be reported by the end of calendar year 2020. Further analysis of the subgroup data, the anticipated OS and immune monitoring data, and accompanying interactions with regulatory authorities and our partners, will inform our next steps.

It is not unusual for a new cancer therapy to be more effective in certain patient subgroups and less effective in other subgroups, and so we look forward to keeping investors informed of our strategy as more data comes to hand and we have further interactions.

We also note that the encouraging subgroup data, taken with the positive data we have seen to date in the TACTI-mel, TACTI-002, INSIGHT and INSIGHT-004 trials, is all supportive of the mode of action of efti - an antigen presenting cell activator that "pushes the gas" on the body's immune response.

TACTI-002 – Phase II study in solid cancers

At this year's ASCO 2020 virtual event, Immutep announced new and improving data from TACTI-002. This included the first Complete Response from a patient with 2nd line head and neck squamous cell carcinoma (HNSCC), an improving Overall Response Rate in the same group (HNSCC) increasing to 38.9% (previously 33%), and an improving Progression Free Survival (PFS) estimate of more than 9 months in patients with 1st line non-small cell lung cancer (NSCLC). This built on previous data sets that we reported in April, February and January 2020. We expect to report further data throughout 2020.

INSIGHT-004 – Phase I trial in advanced solid cancers

In April, enrollment was completed for our INSIGHT-004 Phase I clinical trial and we reported first data at ASCO in May. This first data included encouraging early efficacy signals in a variety of cancer indications. Overall, 33% of patients showed a Partial Response to the combination therapy of efti and avelumab which, to date, is safe and well tolerated. Further data is expected to be reported throughout 2020.

[Continued on p. 9]

OPERATIONAL SNAPSHOT

[Continued from p. 8]

TACTI-mel – Phase I trial in melanoma

Preparations are continuing for the clinical study report for our TACTI-mel trial in patients with metastatic melanoma. This trial reported positive final efficacy data in late 2019, including deep and durable responses to the combination of efti and pembrolizumab. 12 patients (50%) reported a decrease of ≥ 75% in the target lesions and 9 patients (38%) were treated for ≥12 months.

CYTLIMIC – Phase I in solid tumours

Earlier this year, CYTLIMIC reported positive results from its YNP01 phase I clinical trial which is evaluating the combination immunotherapy of a HSP70 derived peptide, a GPC3 derived peptide, Immutep's IMP321 (efti) and Hiltonol in patients with advanced or metastatic solid cancer. The results showed that approximately 70% of patients showed an immune response to each peptide and were published in the scientific peer-reviewed journal, *Cancer Immunology, Immunotherapy*.

In addition, interim results from CYTLIMIC's YCP02 phase I study in hepatocarcinoma patients treated by a similar vaccine in a neoadjuvant setting before surgery, were presented at AACR2020 virtual meeting, showing a high degree of CD8 T cell infiltration in surgical specimens induced by the peptide vaccine compared to specimens from unvaccinated patients. This CD8 T cell influx at the tumor site could be seen as a direct proof of concept for the efficacy of the vaccine adjuvanted with efti and Hiltonol. In the trial, patients were treated with CYT001, a peptide vaccine that includes Immutep's lead product candidate, efti. CYTLIMIC reported tumor cell death and infiltration of T cells into tumor regions were observed in 6 out of 9 patients.

EOC Pharma – EFTI in China

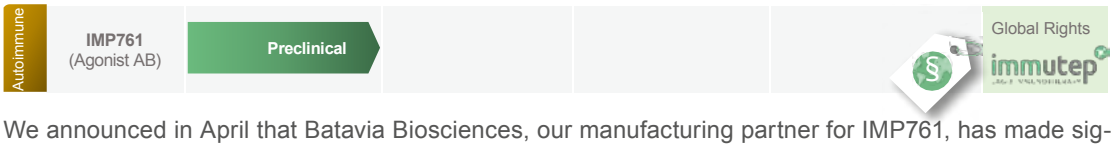
In March, EOC Pharma completed patient recruitment for its ongoing Phase I EOC202A1101 study in China, which is evaluating efti in patients with metastatic breast cancer. EOC Pharma also confirmed its plans to continue advancing efti (designated as EOC202 in China) following its analysis of the Progression Free Survival (PFS) data, including subgroup analysis, from Immutep's phase IIb AIPAC study.

[Continued on p. 10]

OPERATIONAL SNAPSHOT

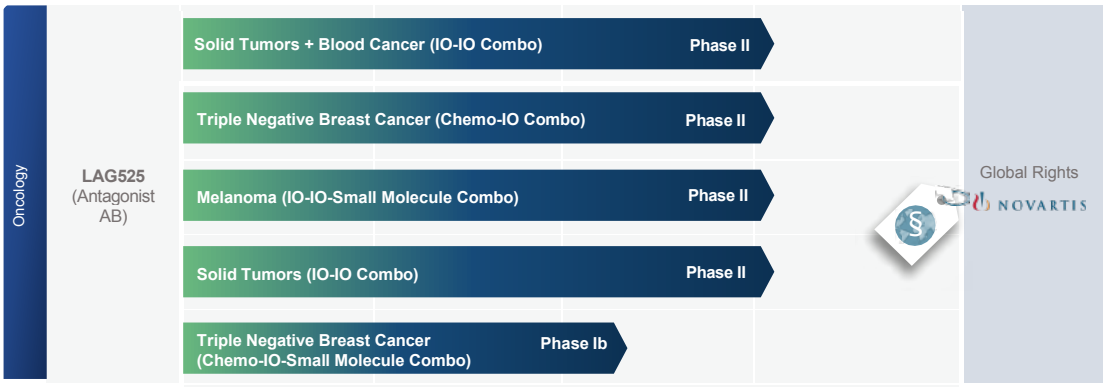
[Continued from p. 9]

IMP761 – Preclinical studies in autoimmune disease



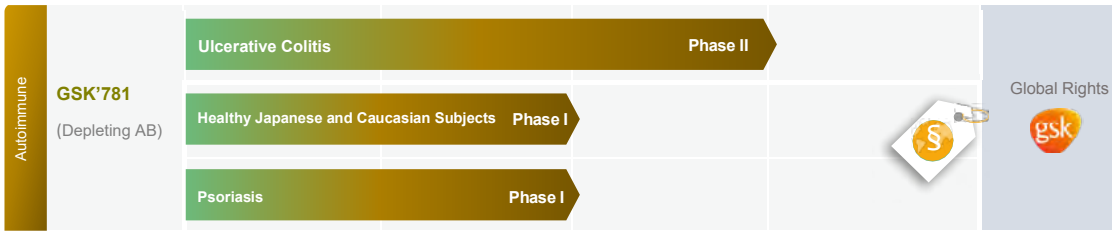
We announced in April that Batavia Biosciences, our manufacturing partner for IMP761, has made significant progress in cell line development, delivering a pharmaceutical-grade, stable CHO cell line that produces significantly high product yields of IMP761. The program is now focused on the preparations for the Good Manufacturing Practice (GMP) process compliance phase, before moving to clinical testing.

Novartis – LAG525



Novartis currently has five clinical trials ongoing for LAG525 in multiple cancer indications for over 1,100 patients.

GSK – GSK'781



GSK's ongoing Phase II clinical study is evaluating GSK'781 in ulcerative colitis and clinical Proof-of-Concept is expected H1 2021.

OUTLOOK

Throughout 2020, Immutep has continued to build a strong pool of data supporting the efficacy of efti in multiple cancer indications. We have committed partnerships in place with five of the world's largest pharmaceutical companies: Merck, Pfizer, Merck MSD, Novartis and GSK, plus our partner in China, EOC Pharma. Not only does this validate our technologies, but it also demonstrates our strong track record of developing our assets. We have a strong pipeline of news flow ahead, including reporting further clinical trial results from our Phase II TACTI-002 study of efti. In addition, we'll be announcing regulatory progress and updates from our partnered programs.

COMPANY CALENDER

What's next

SEPTEMBER 18TH 2020 - SEPTEMBER 22ND 2020

ESMO 2020 Congress - Virtual

Immutep will participate to the virtual ESMO 2020 conference.

https://www.esmo.org/meetings/esmo-congress-2020

OCTOBER 26TH 2020 - OCTOBER 29TH 2020

BIO-Europe® - 26th Annual International Partnering Conference

Venue: Messe München GmbH, Messegelände, 81823 Munich, Germany

https://messe-muenchen.de/en
https://informaconnect.com/bioeurope

NOVEMBER 2ND 2020 - NOVEMBER 4TH 2020

World Immunotherapy Congress 2020

Venue: Basel Congress Centre, Basel, Switzerland

https://www.terrapinn.com/conference/festival-of-biologics/World-Immunotherapy-Congress.stm

NOVEMBER 9TH 2020 - NOVEMBER 14TH 2020

35th Annual Meeting SITC 2020

Reimagined as a fully virtual experience
Immutep will participate to the virtual SITC 2020 conference.

https://www.sitcancer.org/2020/home

DECEMBER 8TH 2020 - DECEMBER 12TH 2020

San Antonio Breast Cancer Symposium 2020 (SABCS)

Venue: Henry B. Gonzalez Convention Center, 900 E Market St, San Antonio, Texas, USA

https://www.sabcs.org/

JANUARY 11TH 2021 - JANUARY 14TH 2021

39th Annual J.P. Morgan Health Care Investor Conference

Venue: Westin St. Francis Hotel | San Francisco, California, USA

IMMUTEP

Fast Facts

Listings
Australian Securities Exchange (ASX), NASDAQ

Stock Codes
ASX: IMM, NASDAQ: IMMP

Issued Capital – Ordinary Shares
487.63 million (as of August 14, 2020)

Market Capitalisation
A$87.8 million (US$62.8 million) (as of August 14, 2020)

Cash & Term Deposits
~A$26.32 million (~US$18.06 million) (as of June 30, 2020)

Board of Directors

Russell J Howard, PhD
Non-executive Chairman

Mr Marc Voigt
Executive Director and Chief Executive Officer

Mr Pete A Meyers
Non-executive Director

Grant Chamberlain
Non-executive Director

Senior Management

Prof Dr Frédéric Triebel
Chief Medical Officer and Chief Scientific Officer

Deanne Miller
Chief Operating Officer, General Counsel and Company Secretary

www.immutep.com

FOLLOW IMMUTEP'S PROGRESS

Immutep is dedicated to maintaining consistent and clear communications with our investors. In addition to our newsletter, we encourage our shareholders to continue following Immutep's progress in a number of ways:

www.immutep.com

Our website is a treasure trove for those in search of details about our company, our management team, and archived information. We encourage everyone to check it out regularly.

www.clinicaltrials.gov

Immutep registers all of our clinical trials, and the details of enrolling doctors, on the ClinicalTrials.gov website, a service of the United States National Institutes of Health. This register is the largest such repository of clinical trial information around the world.

Our ClinicalTrials.gov ID for our trials are as follows:
- TACTI-mel trial is NCT02676869
- AIPAC trial is NCT02614833

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This Investor Update was authorised for release by the board of Immutep Limited.