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LAG-3 IMMUNOTHERAPY

Unlocking the power of the immune system against cancer and autoimmune disease.

Forward-Looking Statements

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Immutep Highlights

Novel science and advanced pipeline

Pioneering LAG-3 immunotherapy in oncology & autoimmune diseases with three clinical-stage & two novel earlier stage assets.

Compelling clinical data

First-in-class eftilagimod alpha (efti) immunotherapy has generated compelling clinical efficacy with favourable safety profile across multiple cancers.

Validation through partnerships

Multiple partnerships & collaborations with large pharma, and increasing industry attention with oral presentations at ASCO & SITC in 2022.

MERCK · Merck KGaA Darmstadt, Germany · Pfizer · GSK · EDC · NOVARTIS · LabCorp

Global presence; strong balance sheet

Global presence and strong IP across diversified LAG-3 portfolio. Well funded with cash of A$68.4MM and runway to end of 1H of CY2024*

Substantial market opportunity

Efti has safely improved clinical outcomes for PD-L1 negative/low/high patients & may expand addressable populations for anti-PD-(L)1 therapies ($37BB ‘22 sales).

Key catalysts ahead

Topline readout from randomized Phase II trial in head & neck squamous cell carcinoma. Data updates from multiple clinical trials and trial starts.

*As reported in Quarterly Activities Report for quarter ended 31 December 2022 (Q2 FY23)

Pipeline

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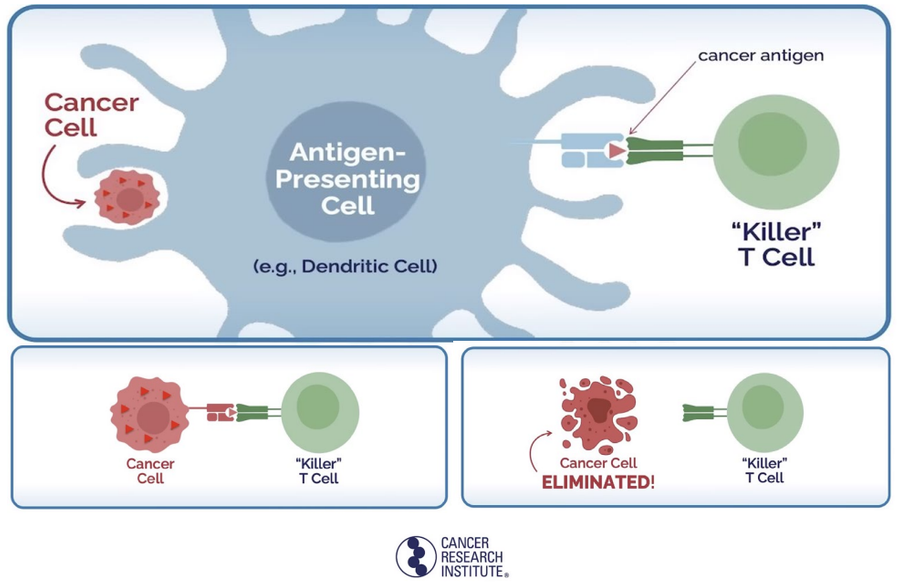
	Program	Indication	Preclinical	Phase I	Phase II	Late Stage*	Collaborations	Commercial Rights
ONCOLOGY	**Eftilagimod Alpha** Soluble LAG-3 Protein	1L Head & Neck Squamous Cell Carcinoma (HNSCC)	TACTI-003 | Efti+Pembrolizumab [a]				MERCK	Global Rights ex-China
		1L Non-Small Cell Lung Cancer (NSCLC), 2L HNSCC, PD-X Refractory 2L NSCLC	TACTI-002 | Efti+Pembrolizumab [a]				MERCK	
		Urothelial Cancer	INSIGHT-005 | Efti+Avelumab [§, b]				Merck KGaA Darmstadt, Germany / Pfizer	
		1L NSCLC	INSIGHT-003 | Efti+Pembro+Chemo [§]					
		Soft Tissue Sarcoma	EFTISARC-NEO | Efti+Pembro+Radiotherapy [§]				Narodowy Instytut Onkologii	
		HR+/HER2- Metastatic Breast Cancer & TNBC	AIPAC-003 | Efti+Paclitaxel					
		Metastatic Breast Cancer & Solid Tumours	Efti+Paclitaxel and Efti+Pembrolizumab [#]				EOC	EOC Efti China Rights
	Anti-LAG-3 Small Molecule	Undisclosed					CARDIFF UNIVERSITY	immutep Global Rights
	LAG525 Anti-LAG-3 Antibody	Solid Tumours & Blood Cancer					NOVARTIS	NOVARTIS Global Rights
		Triple Negative Breast Cancer						
		Melanoma						
		Solid Tumours						
		Triple Negative Breast Cancer						
AUTOIMMUNE DISEASE	**GSK'781** Depleting LAG-3 Antibody	Ulcerative Colitis					GSK	GSK Global Rights
		Psoriasis						
		Healthy Subjects						
	IMP761 Agonist LAG-3 Antibody	Undisclosed						immutep Global Rights

Information in pipeline chart current as of Jan 2023;AIPAC-003 Phase II/III trial expected to begin Q1'2023. For EOC's China rights, Immutep may receive undisclosed milestones plus royalties; LAG525 - ClinicalTrials.gov (for Novartis' global rights, Immutep may receive milestones plus royalties); GSK2831781 - ClinicalTrials.gov (for GSK's global rights, Immutep may receive milestones plus royalties); * Late stage refers to active Phase IIb clinical trials or more clinically advanced clinical trials; # Conducted by EOC in China. Immutep has no control over either the trials. § Investigator Initiated Trials controlled by lead investigator & therefore Immutep has no control over this clinical trial; [a] In combination with KEYTRUDA®; [b] In combination with BAVENCIO®.

Immuno-Oncology

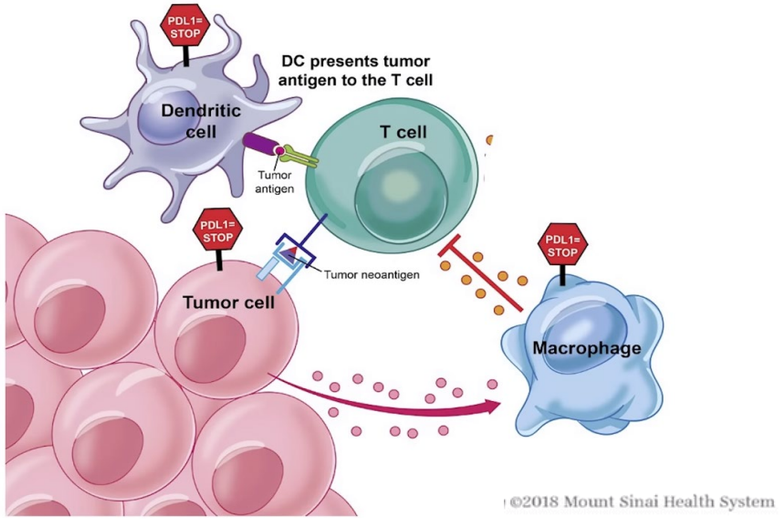
Our immune systems naturally protect us against cancer, yet cancers are adept at hiding to protect themselves. Cancer immunotherapy or Immuno-Oncology (IO) reverses that and restores the power of patients' own immune systems to prevent, control, and eliminate cancer. Today, IO is the leading treatment for many cancers.

How the Immune System Normally Responds to Cancer



CANCER RESEARCH INSTITUTE®

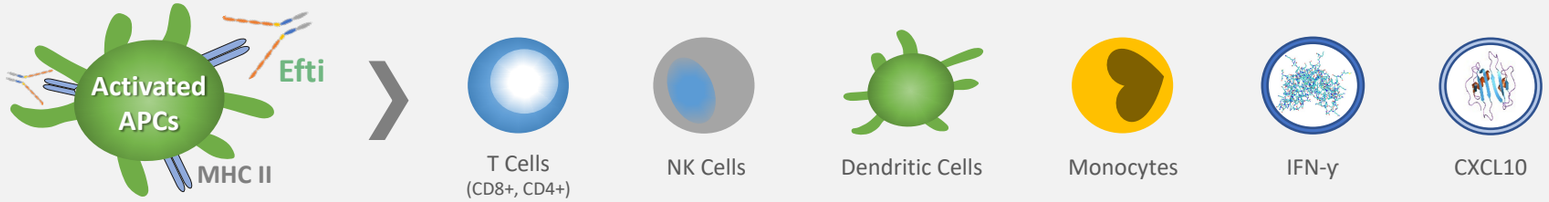
Cancer Evades the Immune System using Immune "Checkpoints" like PD-L1/PD-1, CTLA-4, LAG-3 to Shut Down T Cells



Empowering the Immune System to Fight Cancer with a First-in-Class Immunotherapy

Eftilagimod alpha's unlocking of broad immune system activation to fight cancer…

Subcutaneous injection of Eftilagimod alpha (efti)



Eftilagimod alpha, a first-in-class soluble LAG-3 immunotherapy, uniquely activates antigen-presenting cells (APCs) via a specific subset of MHC II ligands stimulating the adaptive & innate immune systems against cancer. In multiple clinical trials, including monotherapy and in combination with chemotherapy & anti-PD-(L)1 therapy, efti has driven statistically-significant increases of various anti-tumor cells and serum biomarkers.*

…is leading to strong efficacy & safety in clinical trials with anti-PD-(L)1 and/or chemotherapy

Efti + anti-PD-1 therapy *Phase II Trial in 1L NSCLC & 2L HNSCC*	**Efti + anti-PD-1 therapy** *Phase I Trial in metastatic melanoma*	**Efti + anti-PD-L1 therapy** *Phase I Trial in advanced solid tumours*	**Efti + chemotherapy** *Phase IIb Trial in metastatic breast cancer*	**Efti + anti-PD-1 + chemo** *Phase I Trial in 1L NSCLC*
Doubling overall response rates (ORR) of KEYTRUDA® in both indications	50% ORR at higher efti doses; target lesions disappeared in several patients	41.6% ORR with BAVENCIO® including I-O insensitive & PD-L1 low/neg tumours	Superior ORR, DCR, OS & QoL; significant OS improvement in all pre-specified subgroups	Promising initial efficacy (72.7% ORR & 90.9% DCR); triple combo well-tolerated

* [1] First-line chemoimmunotherapy in metastatic breast carcinoma: paclitaxel and IMP321 (LAG-3Ig) enhances immune responses and antitumor activity; *Journal Transl Med. 2010 Jul 23;8:71;* [2] Biomarker and multivariate analyses results from AIPAC: A phase IIb study comparing eftilagimod alpha (a soluble LAG-3 protein) to placebo in combination with weekly paclitaxel in HR + HER2 - metastatic breast carcinoma – ESMO 2022. [3] SITC 2022 Presentation: Data cut-off: July 1, 2022; Note: Plasma levels of IFN-g and CXCL10/IP10 are shown as mean of % change to baseline. [4] Brignone et al. A phase I pharmacokinetic and biological correlative study of IMP321, a novel MHC class II agonist, in patients with advanced renal cell carcinoma. *Clin. Cancer Res., 15 (2009)*

Pipeline in a Product

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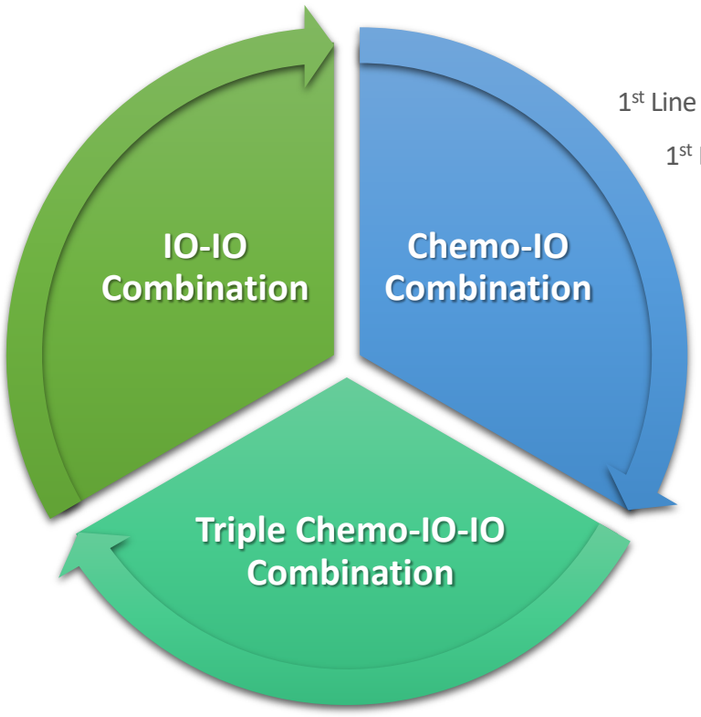
Efti Clinical Trials Confirm Broad Potential



	Preclinical	Phase I	Phase II	Late Stage*
1st Line Head & Neck Squamous Cell Carcinoma (HNSCC)			Efti + Pembrolizumab [a]	MERCK
1st Line Non-Small Cell Lung Cancer (NSCLC), 2nd Line HNSCC, PD-X Refractory 2nd Line NSCLC			Efti + Pembrolizumab [a]	MERCK
Metastatic Melanoma			Efti + Pembrolizumab [a]	
Urothelial Cancer			Efti + Avelumab [§, b]	Merck KGaA Darmstadt, Germany; Pfizer
Advanced Solid Tumours			Efti + Avelumab [§, b]	Merck KGaA Darmstadt, Germany; Pfizer
Soft Tissue Sarcoma			Efti + Pembrolizumab + Radiotherapy [§]	Narodowy Instytut Onkologii
HR+/HER2- MBC & TNBC			Efti + Paclitaxel	
1st Line NSCLC			Efti + Pembrolizumab + Chemo [§]	
Renal Cell Carcinoma			Efti Monotherapy [¥]	

Information in pipeline chart current as of December 2022. * Late stage refers to Phase IIb clinical trials or more clinically advanced clinical trials. § Investigator Initiated Trials controlled by lead investigator and therefore Immutep has no control over this clinical trial. [a] In combination with KEYTRUDA®. [b] In combination with BAVENCIO. ¥ First-in-man dose-escalation study of Efti monotherapy with doses ranging from 50µg, 250µg, 1.25mg, 6.25mg & 30mg given sub-Q every 2 weeks for 12 weeks in total.

Substantial Commercial Opportunity

Efti's ability to safely improve clinical outcomes across the entire PD-L1 spectrum in multiple solid tumors* may substantially expand the addressable patient populations for chemotherapy-free IO/IO combinations.

Efti + Anti-PD-(L)1

- **Doubled ORR of KEYTRUDA® in 1L NSCLC and in 2L HNSCC in all-comer PD-L1 trial**
- **Complete responses in PD-L1 low/neg patients with KEYTRUDA®**
- **Deep, durable responses with BAVENCIO® in PD-L1 low/neg patients with IO insensitive cancers**

Anti-PD-1

KEYTRUDA® (pembrolizumab) Injection 100 mg
~$20.9 billion

OPDIVO® (nivolumab)
~$8.3 billion

LIBTAYO® (cemiplimab-rwlc) Injection 350 mg
~$470 million

Jemperli® (dostarlimab-gxly) Injection 500 mg
~$25 million

$29.7 Billion
in 2022 sales

Anti-PD-L1

TECENTRIQ® atezolizumab
~$3.9 billion

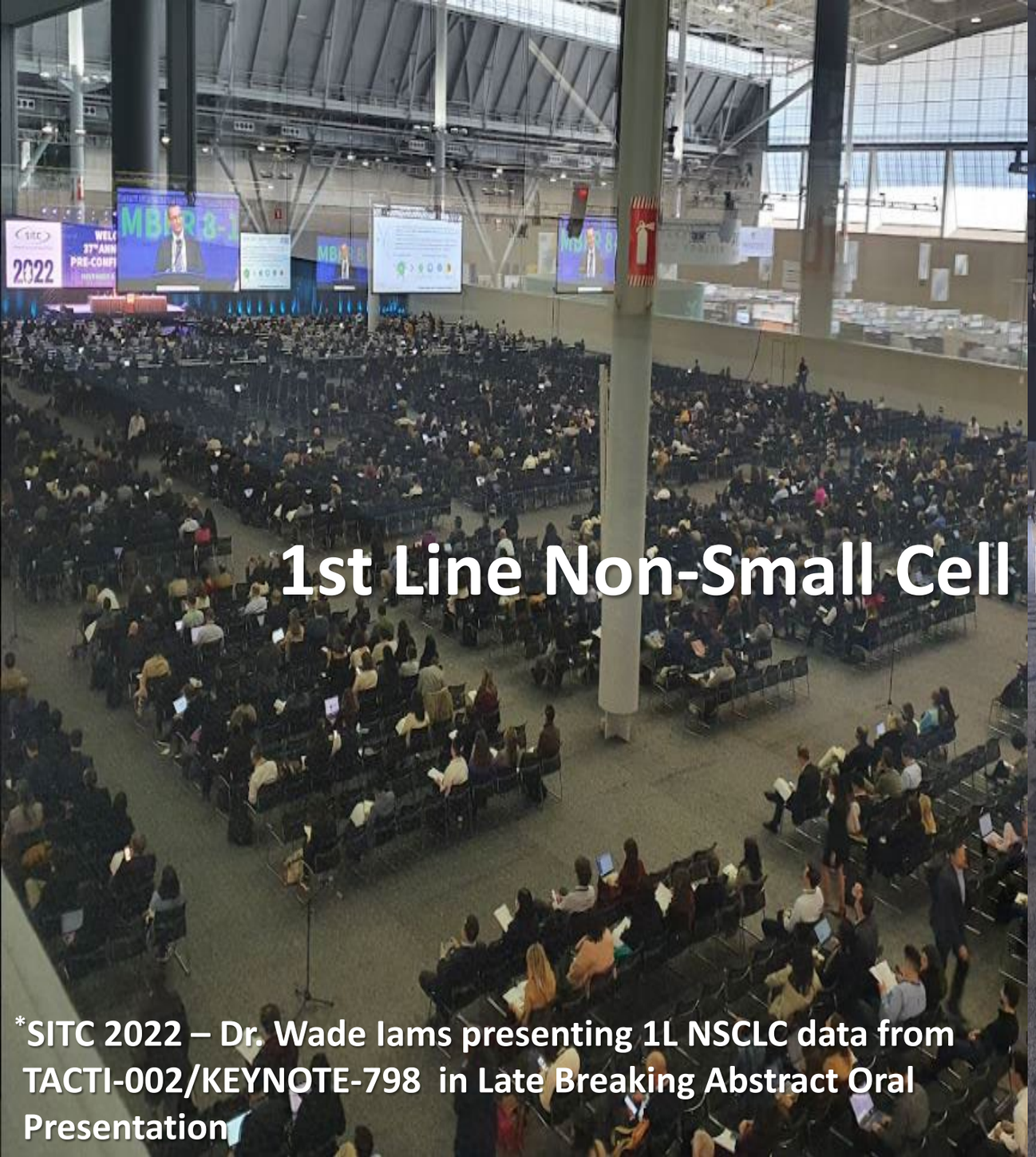
IMFINZI® durvalumab
~$2.8 billion

BAVENCIO® avelumab Injection 20 mg/mL
~$912 million

$7.6 Billion
in 2022 sales

Source of sales figures: Bloomberg and company reports. Approved anti-PD-1 therapies include pembrolizumab (KEYTRUDA®), nivolumab (OPDIVO®), cemiplimab (LIBTAYO®), dostarlimab (JEMPERLI®). Approved anti-PD-L1 therapies include atezolizumab (TECENTRIQ®), avelumab (BAVENCIO®), durvalumab (IMFINZI®). * Based upon clinical data from TACTI-002, INSIGHT-004, and TACTI-mel trials.

1st Line Non-Small Cell Lung Cancer (1L NSCLC)



*SITC 2022 – Dr. Wade Iams presenting 1L NSCLC data from TACTI-002/KEYNOTE-798 in Late Breaking Abstract Oral Presentation

*ASCO 2022 - Dr. Enriqueta Felip presenting 1L NSCLC data from TACTI-002/KEYNOTE-798 in Oral Presentation

Treatment Options in 1L NSCLC Limited by Durability & Tolerability

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1L NSCLC Epidemiology[1,2]

– 1.87 million NSCLC diagnoses per annum
– NSCLC is the highest cause of death among all cancers
– Immutep is focused on improving clinical responses for the 1.3 million patients that develop metastatic disease & are eligible to receive anti-PD-(L)1 therapy, e.g., pembrolizumab (KEYTRUDA®), nivolumab, cemiplimab, atezolizumab, etc.

Up to 80% patients do not respond to immune checkpoint inhibitor (ICI) monotherapy & **median OS still <24 months** for most patients

Patients with PD-L1 status <50%, representing **~70% of the NSCLC patient population**, have poorer responses to ICI therapy

ICI & chemo combinations have **limited Duration of Response** & **high discontinuation rates** due to toxicity

[1] Calculated from Global Cancer Observatory (WHO), 2020 data; [2] Informa Pharma Intelligence Report 2018 for US, Japan and EU5

PD-L1 Expression Matters in Solid Tumors such as 1L NSCLC from Treatment & Addressable Patient Population Perspective

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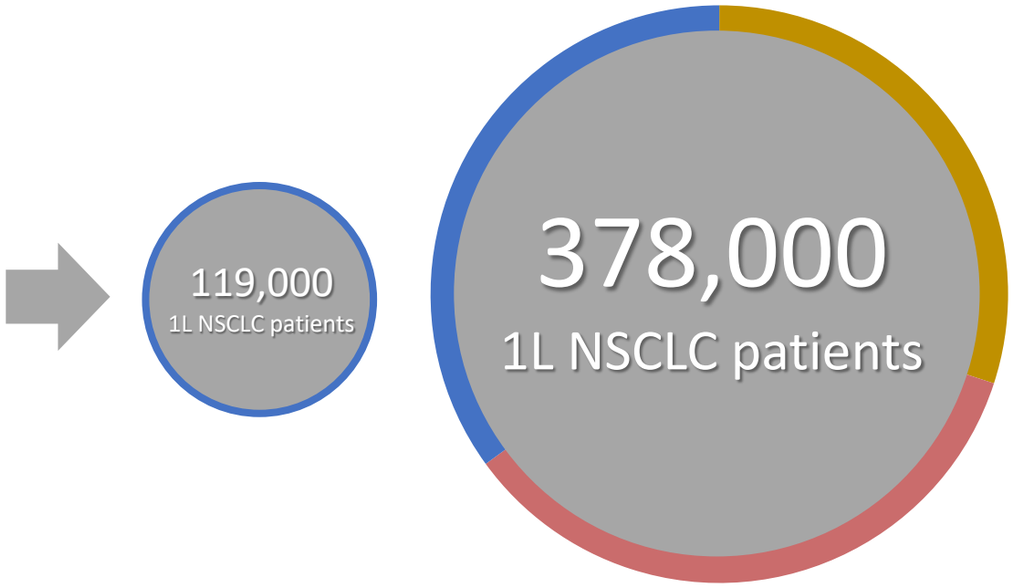
1L NSCLC Patient Population by PD-L1 Tumor Proportion Score (TPS) Score*

TPS Score of ≥50% represents ~30% of 1L NSCLC patients. These patients tend to respond best to anti-PD-(L)1 therapies.

TPS Score of 1-49% or lower represents ~35% of 1L NSCLC patients. These patients have suboptimal response to anti-PD-(L)1 therapies.

TPS Score of <1% or lower represents ~35% of 1L NSCLC patients. These patients have negligible response to anti-PD-(L)1 therapies.

Several IO/IO combo trials including Arcus/Gilead ARC-7 and Roche's CITYSCAPE are focused on this addressable 1L NSCLC patient population with PD-L1 TPS of ≥50%**



Immutep's IO/IO all-comer PD-L1 TACTI-002 Phase II trial is focused on this addressable 1L NSCLC patient population with PD-L1 TPS of <1%, 1-49%, and ≥50%**

>$10 Billion Addressable Market

Sources: * KN-189, KN-407, EMPOVER-Lung 3, TACTI-002 all comer trials. ** Addressable 1L NSCLC population by PD-L1 TPS reflects US, EU, Japan, Canada & Australia markets based on: [1] Global Cancer Observatory (2020) and Company estimates. [2] Informa Datamonitor Healthcare, NSCLC Epidemiology Forecast, 2018. [3] S Moore et al.: Survival Implications of De Novo Versus Recurrent Metastatic Non–Small Cell Lung Cancer. Am J Clin Oncol 2019;42:292–297. [4] H Sasaki et al.: Prognosis of recurrent non-small cell lung cancer following complete resection. ONCOLOGY LETTERS 7: 1300-1304, 2014. [5] H Uramoto et al.: Recurrence after surgery in patients with NSCLC. Transl Lung Cancer Res 2014;3(4):242-249

Phase II All-Comer PD-L1 Trial Evaluating Efti + Pembrolizumab (KEYTRUDA®) in 1L NSCLC

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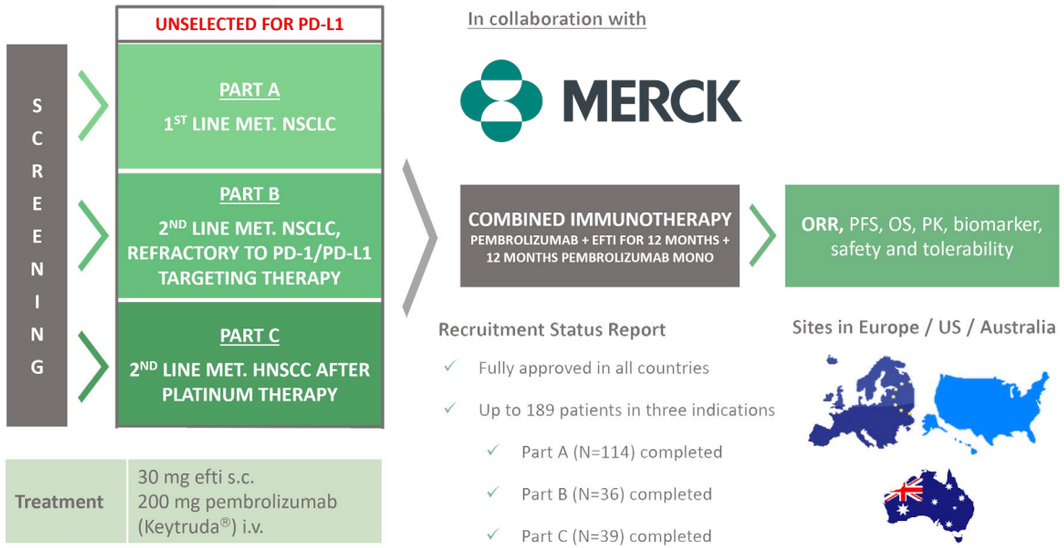
TACTI-002/KEYNOTE-798: 1st Line Non-Small Cell Lung Cancer (Part A)

TACTI-002: Two ACTive Immunotherapeutics in NSCLC & HNSCC



Treatment	30 mg efti s.c. 200 mg pembrolizumab (Keytruda®) i.v.

Baseline characteristics for PD-L1 All Comer Trial		Part A (N=114)	
Age, median (range), years		67 (44-85)	
Sex, n (%)	Female / Male	30 (26.3) / 84 (73.7)	
ECOG PS score, n (%)	0 / 1	43 (37.7) / 71 (62.3)	
Smoking status, n (%)	Current or Ex-smoker / Non-smoker	108 (94.7) / 6 (5.3)	
Histology, n (%)	Squamous / Non-squamous / Unknown	40 (35.1) / 72 (63.2) / 2 (1.8)	
Metastatic disease, n (%)	Yes / No	113 (99.1) / 1 (0.9)	
PD-L1 expression TPS, n[1] (%)		*Central only*	*Central + local*
	< 1%	32 (35.6)	37 (34.3)
	1-49%	38 (42.2)	42 (38.9)
	≥ 50%	20 (22.2)	29 (26.9)
Previous therapy, n (%)	Radiotherapy	38 (33.3)	
	Surgery	23 (20.2)	
	Systemic therapy for non-metastatic disease	26 (22.8)	

Efti + pembrolizumab received Fast Track Designation from FDA in ≥1% TPS in 1st Line NSCLC in October 2022

All-comer trial for 1L NSCLC patients with all levels of PD-L1 expression

- ~75% of patients have PD-L1 TPS of <50%
- ~34% of patients have PD-L1 TPS of <1%
- 99.1% had metastatic disease at study entry

Data cut-off July 1, 2022. [1] Central assessment of PD-L1 TPS using Dako PD-L1 IHC 22C3 pharmDx for 90 pts. For 18 pts, local assessment was used due to non-evaluable central assessment results. TPS: tumor proportion score.

Compelling Clinical Results

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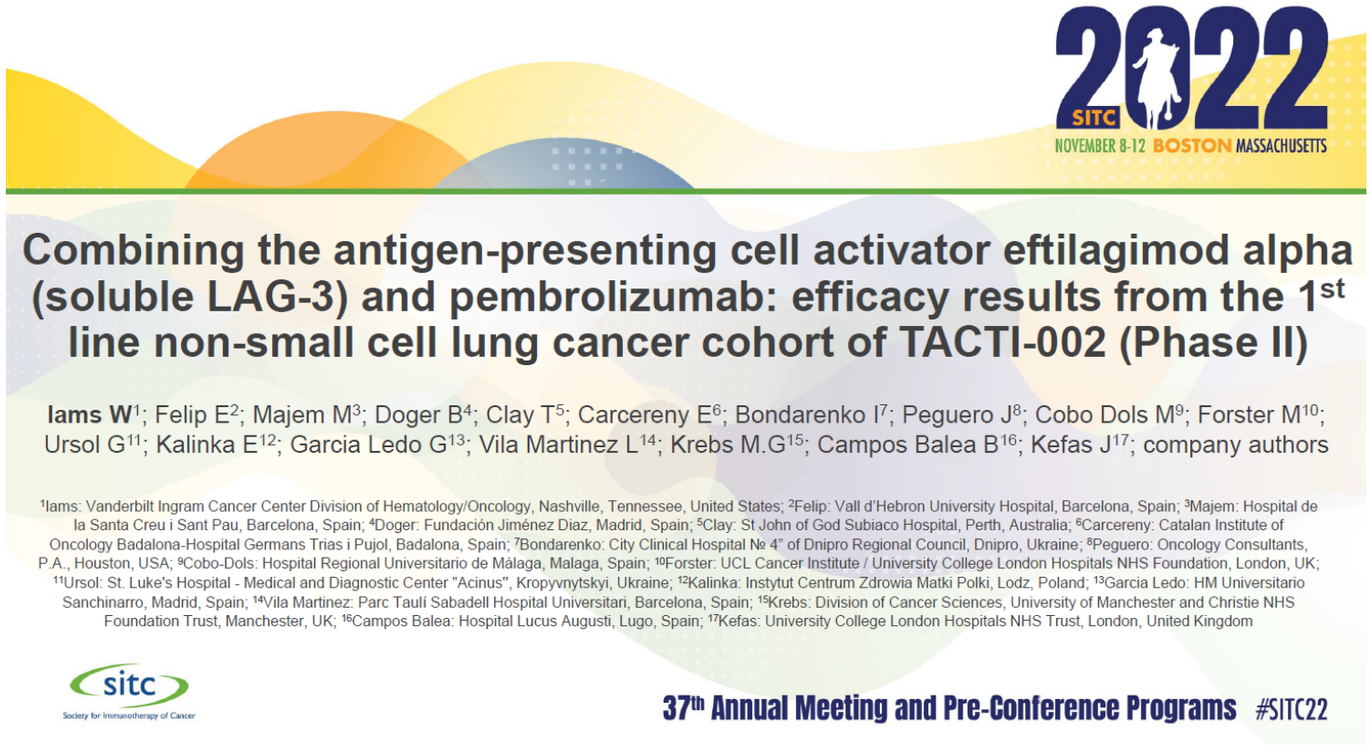
TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

TACTI-002 Phase II (1L NSCLC) Clinical Data and Key Takeaways

- Primary objective achieved with 40.4% Overall Response Rate
- Promising interim median Progression Free Survival
- Robust Interim mDoR 21.6 months
- Efti + pembrolizumab is well tolerated and safety profile is similar to pembrolizumab monotherapy
- Efti strengthens responses to anti-PD-1 therapy across entire PD-L1 spectrum, which may significantly increase the number of 1L NSCLC patients who respond well to anti-PD-1 therapy

SITC 2022 Oral Presentation (Late-Breaking Abstract was among nine abstracts, out of +1,500 submissions, to be showcased at the SITC press briefing)



SITC 2022
NOVEMBER 8-12 BOSTON MASSACHUSETTS

Combining the antigen-presenting cell activator eftilagimod alpha (soluble LAG-3) and pembrolizumab: efficacy results from the 1st line non-small cell lung cancer cohort of TACTI-002 (Phase II)

Iams W[1]; Felip E[2]; Majem M[3]; Doger B[4]; Clay T[5]; Carcereny E[6]; Bondarenko I[7]; Peguero J[8]; Cobo Dols M[9]; Forster M[10]; Ursol G[11]; Kalinka E[12]; Garcia Ledo G[13]; Vila Martinez L[14]; Krebs M.G[15]; Campos Balea B[16]; Kefas J[17]; company authors

[1]Iams: Vanderbilt Ingram Cancer Center Division of Hematology/Oncology, Nashville, Tennessee, United States; [2]Felip: Vall d'Hebron University Hospital, Barcelona, Spain; [3]Majem: Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; [4]Doger: Fundación Jiménez Diaz, Madrid, Spain; [5]Clay: St John of God Subiaco Hospital, Perth, Australia; [6]Carcereny: Catalan Institute of Oncology Badalona-Hospital Germans Trias i Pujol, Badalona, Spain; [7]Bondarenko: City Clinical Hospital № 4" of Dnipro Regional Council, Dnipro, Ukraine; [8]Peguero: Oncology Consultants, P.A., Houston, USA; [9]Cobo-Dols: Hospital Regional Universitario de Málaga, Malaga, Spain; [10]Forster: UCL Cancer Institute / University College London Hospitals NHS Foundation, London, UK; [11]Ursol: St. Luke's Hospital - Medical and Diagnostic Center "Acinus", Kropyvnytskyi, Ukraine; [12]Kalinka: Instytut Centrum Zdrowia Matki Polki, Lodz, Poland; [13]Garcia Ledo: HM Universitario Sanchinarro, Madrid, Spain; [14]Vila Martinez: Parc Taulí Sabadell Hospital Universitari, Barcelona, Spain; [15]Krebs: Division of Cancer Sciences, University of Manchester and Christie NHS Foundation Trust, Manchester, UK; [16]Campos Balea: Hospital Lucus Augusti, Lugo, Spain; [17]Kefas: University College London Hospitals NHS Trust, London, United Kingdom

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Society for Immunotherapy of Cancer

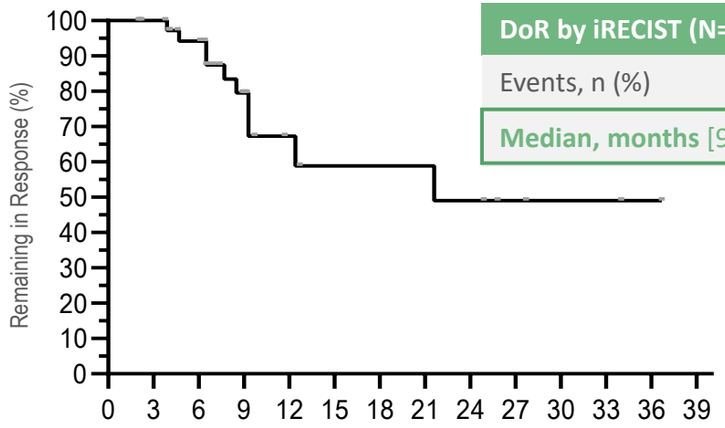
37th Annual Meeting and Pre-Conference Programs #SITC22

Source: SITC 2022 Late-Breaking Oral Presentation Abstract: Combining the antigen-presenting cell activator eftilagimod alpha (soluble LAG-3) and pembrolizumab: efficacy results from the 1st line non-small cell lung cancer cohort of TACTI-002 (Phase II) Link to poster
Note Immutep conducts this clinical trial and has a clinical trial collaboration and supply agreement with Merck & Co., Inc., Kenilworth, NJ, USA (known as MSD outside the US and Canada).

Strong, Differentiated Duration of Response

TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

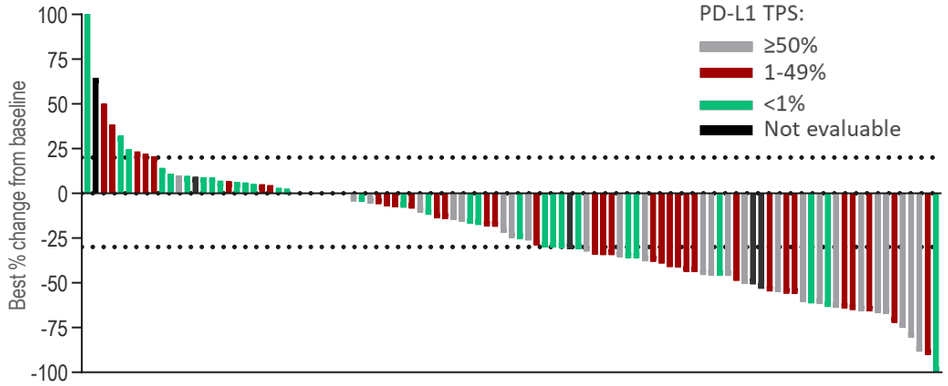
Interim Median Duration of Response (DoR)[2, 3]



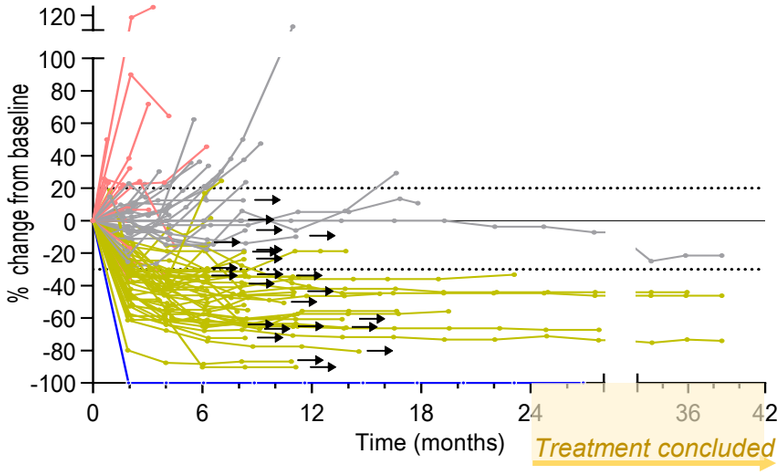
DoR by iRECIST (N=40)	
Events, n (%)	10 (25.0)
Median, months [95% CI][4]	**21.6** [17.3-30.0]

- **Strong Interim mDoR 21.6 months differentiates the chemo-free IO/IO combination of efti + anti-PD-1 therapy from IO/chemotherapy approaches that see declines in duration of response and added toxicity**
- **Responses are deep across all PD-L1 subgroups**

Tumor Burden Reduced in Majority of Patients



Change in Tumor Size Over Time[1]



Data cut-off July 1, 2022 [1] all pts with ≥1 post-baseline CT scan with evaluable response; N=101. Pts are listed with iPR / iCR response regardless if confirmed or unconfirmed. [2] by iRECIST. [3] all patients with confirmed response by iRECIST. [4] 95% confidence intervals calculated using Clopper-Pearson method

Benchmarking against Pembrolizumab Monotherapy: Robust ORR/PFS Across Entire PD-L1 Spectrum vs Pembrolizumab

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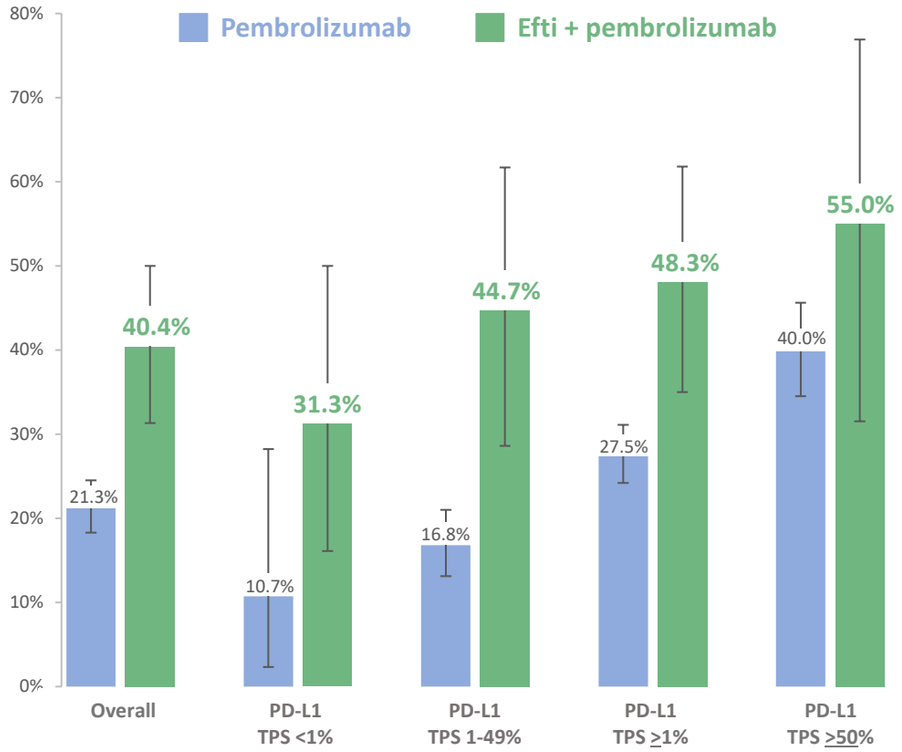
TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)

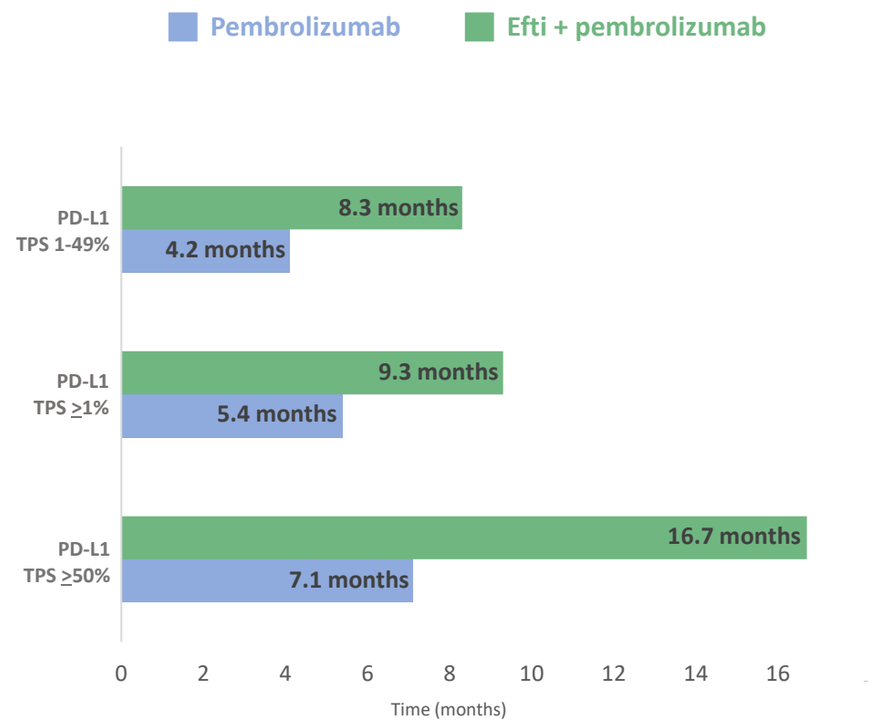
Overall Response Rate* (ORR)

(with 95% confidence interval)



Median Progression Free Survival# (PFS)

(by PD-L1 TPS Score)



* Efti + pembrolizumab ORR by iRECIST, unconfirmed, Total (N=114) and PD-L1 TPS subgroups (N=90). Data cut-off July 1, 2022. Pembrolizumab monotherapy efficacy used for benchmarking for ORR: Total calculation based on KN-001; KN-042 and on adjustment for the same PD-L1 subgroup distribution as in TACTI-002. < 1 % TPS: calculation based on limited data set from KN-001 (1st & 2nd line altogether). 1-49%, ≥ 50%, and ≥ 1 % TPS based on KN-001, KN-042. # PFS by PD-L1 status (N=90) using central assessment for 90 patients. Pembrolizumab monotherapy efficacy used for benchmarking: 1-49%, ≥ 50%, and ≥ 1 % TPS based on KN-001, KN-042. Lancet https://doi.org/10.1016/S0140-6736(18)32409-7, Oral Presentation 2018 ASCO, EPAR assessment report, N Engl J Med 2016; 375:1823-33; KN-024 update J Clin Oncol 2019, KN-024 J Clin Oncol 2021

Benchmarking against Pembrolizumab Monotherapy and Pembrolizumab-Chemotherapy Combination in 1L NSCLC

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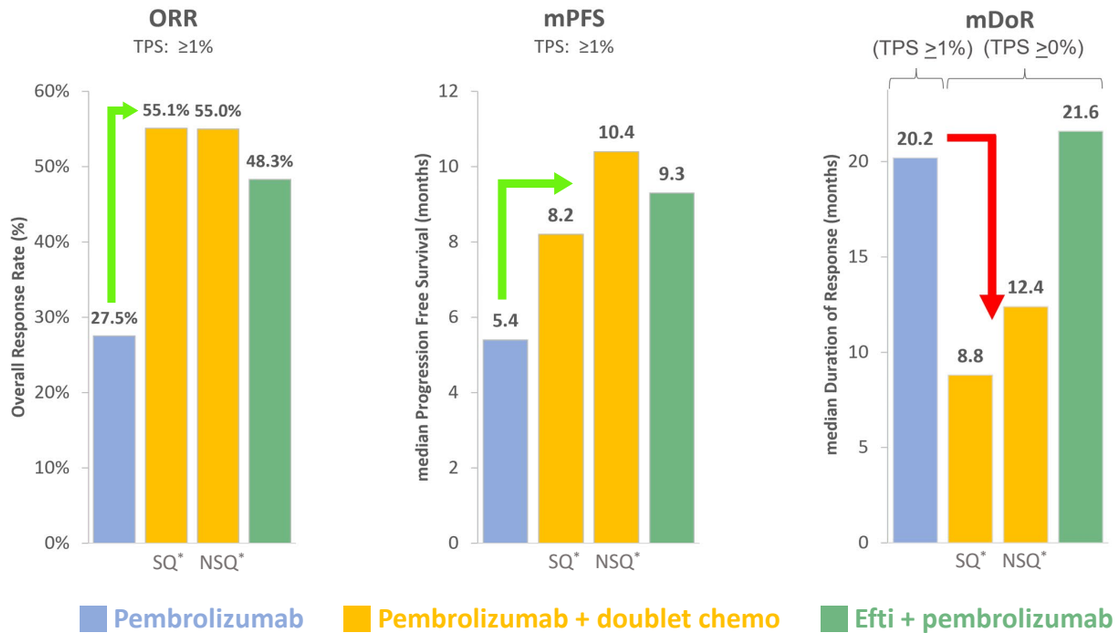
TACTI-002/KEYNOTE-798: 1L NSCLC (Part A)



	ORR	PFS	DoR
Efti + pembrolizumab	High	High	High*
Pembrolizumab	Low	Low	High*
Pembrolizumab + chemo	High	High	Low

*Note 34% patients in TACTI-002 have PD-L1 TPS <1% while all pembrolizumab monotherapy patients have PD-L1 TPS ≥1%

With high ORR/PFS, a differentiated DoR, and a favourable safety profile, efti + pembrolizumab has significant promise as a chemo-free therapy to positively impact 1L NSCLC patient outcomes across all PD-L1 expression levels.

* SQ = Squamous; NSQ = Non-squamous. ORR, mPFS and DoR data for pembrolizumab was derived from respective publications of KN-001; KN-042; KN-407; KN-189.

IO + IO + Chemo Combination Trial (INSIGHT-003)

INSIGHT-003: Phase I in Solid Tumors Focusing on NSCLC Adenocarcinomas

INSIGHT-003 - Third arm (Stratum C) of investigator-initiated study in metastatic 1st Line NSCLC patients

- Evaluating triple combination therapy consisting of efti in conjunction with carboplatin/pemetrexed & anti-PD-1 therapy to assess safety, tolerability and initial efficacy
- Triple combination well tolerated & appears to be safe
- Promising early results with **72.7% response rate** and **90.9% disease control rate** in evaluable (N=11) 1st line NSCLC patients. 81.8 % patients had PD-L1 TPS <50% with ORR of 66.7 %
- Reached enrolment target (N=20) in February 2023 and will have additional data updates this year

Initial Efficacy

Tumor Response according to RECIST 1.1 (N=11)	N, (%)
Complete Response (CR)	0 (0)
Partial Response (PR)	**8 (72.7%)**
Stable Disease (SD)	2 (18.2%)
Progressive Disease (PD)	1 (9.1%)
Objective Response Rate (ORR)	8 (72.7%)
Disease Control Rate (DCR)	**10 (90.9%)**

Interim Safety

Safety Parameter (N=14)	N, (%)
Most Frequent AEs	1 (9.1)
Neutrophil count decreased (grade 1-4)	11 (78.6)
White blood cell decreased (grade 1-4)	9 (64.3)
Platelet count decreased (grade 1-3)	8 (57.1)
Anemia (grade 1-3)	8 (57.1)
Patients with at least one SAE	4 (28.6)
Patients with at least one SAE related to study treatment	1 (7.1)

"Efti has accumulated an excellent safety profile to date, driving its high suitability for combination with standard of care therapies to address areas of unmet need for cancer patients. INSIGHT-003 represents the first triple combination therapy consisting of efti plus anti-PD-1 and chemo, and we are pleased with these promising, early results." - Prof. Dr. Salah-Eddin Al-Batran, Lead Investigator

Source: SITC 2022 Poster - Feasibility of eftilagimod alpha (soluble LAG-3 protein) combined with standard-of-care-therapy in advanced non-small-cell lung cancer (NSCLC). Initial results from INSIGHT 003". [1] 14th Oct 2022 data cut off.

Additional Clinical Indications with Efti and Anti-PD-(L)1 Therapy or Chemotherapy

Efti Late-Stage Clinical Development

Head and Neck Squamous Cell Carcinoma (HNSCC)

– There are ~900K cases and >400K deaths per annum in HNSCC[1]
– Pembrolizumab (KEYTRUDA®) with chemotherapy is approved for 1st line HNSCC and pembrolizumab monotherapy is approved for patients whose tumors express PD-L1 (CPS ≥1)[2]
– Immutep is focused on improving responses in 1L HNSCC patients where efti has received Fast Track designation from the FDA

HR+/HER 2- Metastatic Breast Cancer (MBC)

– In 2020, there were 2.3 million women diagnosed with breast cancer and 685,000 deaths globally[3]
– HR+/HER 2- is the most common type of breast cancer and accounts for ~68% of new cases[4]
– Immutep is focused on improving clinical responses for patients to SOC chemotherapy

Triple Negative Breast Cancer (TNBC)

– Clinically aggressive sub-type of breast cancer that accounts for ~15-20% of breast tumors[5]
– TNBC is more commonly diagnosed in women younger than 40 years[6]
– Immutep is focused on improving clinical responses for patients to SOC chemotherapy

Efti Earlier Stage Clinical Development

Urothelial Cancer, Soft Tissue Sarcoma, and other solid tumor indications

[1] Global Cancer Observatory. International Agency for Research on Cancer. World Health Organization. [2] FDA approval based on KN-048 (ORR, mOS, mDoR data from KN-048 trial). [3] World Health Organization; Breast Cancer Fact Sheet. [4]Cancer Stat Facts: Female Breast Cancer Subtypes - NCI SEER.
[5] Front. Mol. Biosci., 19 August 2022, Sec. Molecular Diagnostics and Therapeutics https://doi.org/10.3389/fmolb.2022.903065. [6] The epidemiology of triple-negative breast cancer, including race. Cancer Causes Control. 2009 Sep;20(7):1071-82. doi: 10.1007/s10552-009-9331-1.

Ongoing Randomized Phase IIb Trial in 1L HNSCC (Fast Track Status)

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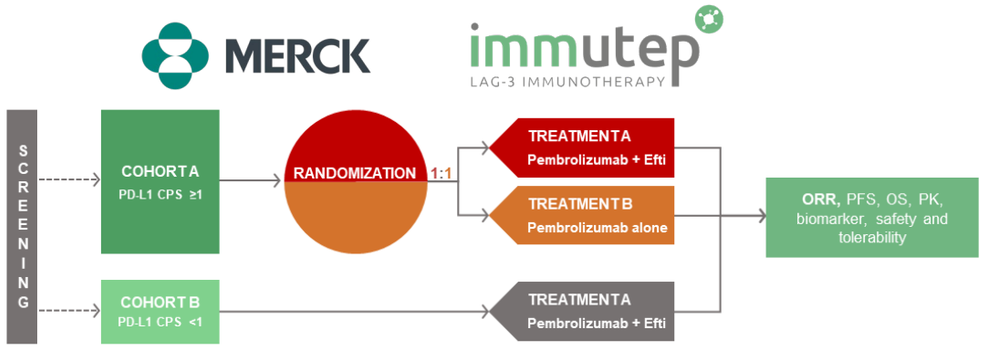
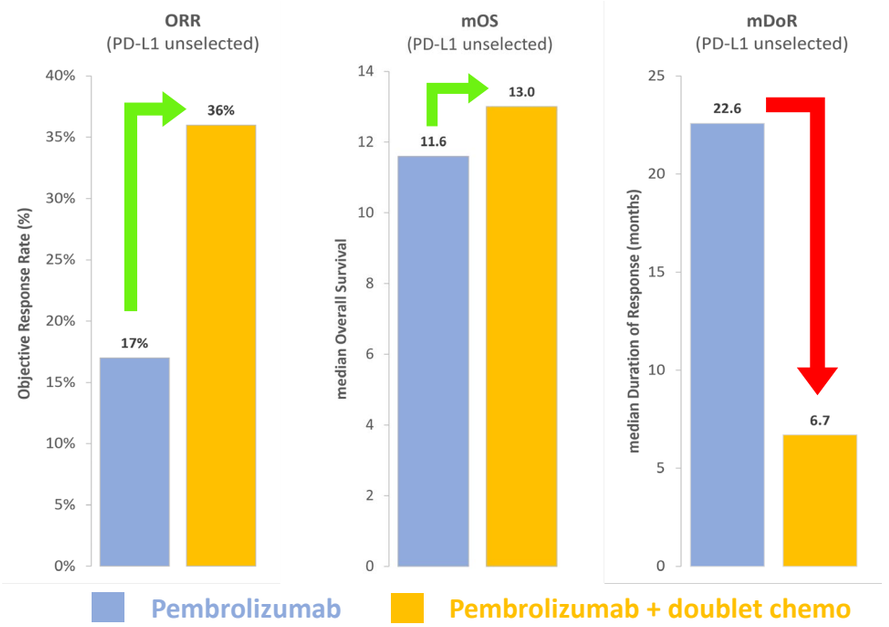
TACTI-003: Phase IIb in 1st Line Head and Neck Squamous Cell Carcinoma (1L HNSCC)

TACTI-003 - Randomized Phase IIb Trial in 1L HNSCC patients utilizing Efti + pembrolizumab vs. pembrolizumab (KEYTRUDA®)

- Efti received FDA Fast Track designation in 1L HNSCC on strength of the clinical results from TACTI-002 trial (Part C) in 2L HNSCC including:
  - ✓ Encouraging 30% ORR in patients unselected for PD-L1 according to iRECIST and more than double ORR across all PD-L1 levels vs pembrolizumab
  - ✓ 5 Complete Responses for a CR rate of 13.5% vs 1.6% for pembrolizumab
  - ✓ Durable, deep responses with median DoR not yet reached and minimum duration of 9+ months
- Independent Data Monitoring Committee (IDMC) recommended continuing TACTI-003 trial with no modifications after review of initial safety data; IDMC also reviewed efficacy data yet was not primary focus of analysis
- Recruiting: +50% enrolled; >25 sites activated; expect to complete enrolment by mid-2023 and have top line readout by year end



Large Potential Opportunity for Chemo-Free Therapy with High ORR/PFS & Differentiated Duration of Response



Adding doublet-chemotherapy to pembrolizumab in 1st line HNSCC* drives a higher ORR & mOS, but negatively impacts duration of response (DoR) and adds toxicity. Therefore, efti + pembrolizumab has significant potential as a *chemo-free treatment* to drive higher ORR & mOS in 1L HNSCC without adding toxicity or sacrificing DoR.

Note Immutep conducts this clinical trial and has a clinical trial collaboration and supply agreement with Merck & Co., Inc., Kenilworth, NJ, USA (known as MSD outside the US and Canada)

* Pembrolizumab with chemo approved for 1st line HNSCC & pembrolizumab monotherapy approved for patients whose tumors express PD-L1 (CPS ≥1). FDA approval based on KN-048 (ORR, mOS, mDoR data from KN-048 trial).

Phase II/III Trial Underway in Metastatic Breast Cancer (MBC): Efti Well Positioned to Enhance Standard-of-Care Chemotherapy

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AIPAC: Active Immunotherapy PAClitaxel in HER2–/ HR+ MBC Phase IIb Trial

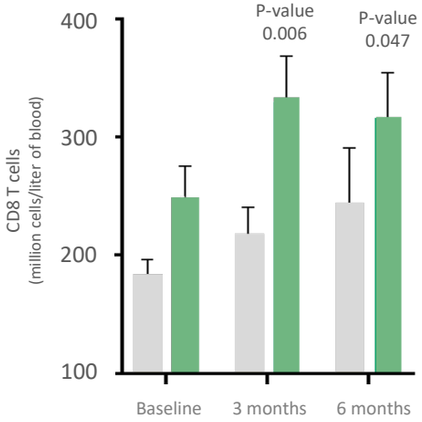
AIPAC: Multicenter, placebo-controlled, double-blind, 1:1 randomized Phase IIb study; 226 HER2–/ HR+ MBC patients randomized to efti (N=114) or placebo (N=112)

- Efti + paclitaxel had ORR & DCR of 48.3% / 85.1% vs placebo 38.4% / 75.9% with a +2.9-month OS improvement and superior Quality of Life (QoL). Significant OS improvement in pre-specified subgroups:
  - ✓ Low monocytes: +19.6 months mOS, HR 0.44, P-value=0.008
  - ✓ Under 65 years: +7.5 months mOS, HR 0.66, P-value=0.017
  - ✓ Luminal B: +4.2 months mOS, HR 0.67, P-value=0.049

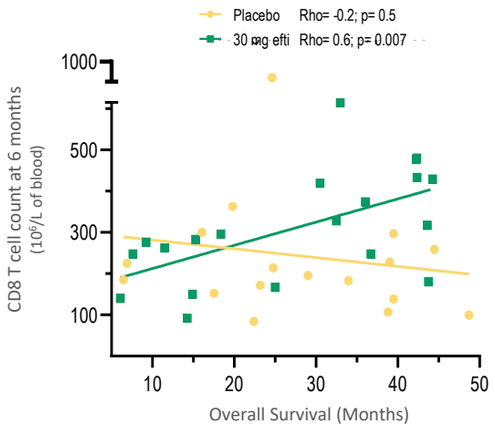
AIPAC-003: Phase II/III trial initiated in March 2023

- Integrated Phase II/III trial design incorporates feedback from FDA & EMA and will help inform a BLA & MAA; provides risk-balanced approach in MBC
- HR+/HER2-neg/low MBC patient population has been expanded to include triple-negative breast cancer (together account for ~78% of breast cancer cases)
- Unlike previous AIPAC Phase IIb trial, AIPAC-003 patients will receive efti & paclitaxel on same day, efti & paclitaxel treatment can continue until disease progression, and the primary endpoint will be OS for Phase III portion of trial
- First patient expected to be enrolled in early Q2 CY2023

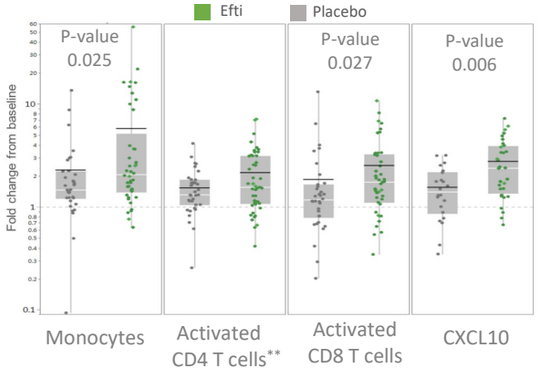
Statistically-Significant Increase of Cytotoxic CD8⁺ T Cell Count



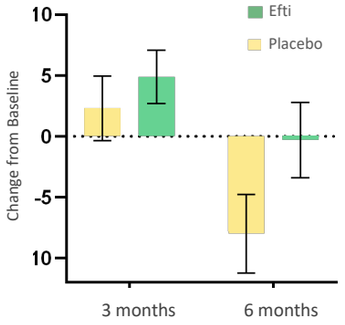
Statistically-Significant Correlation: OS & Cytotoxic CD8⁺ T cell count



Statistically-Significant Increase in Monocytes, CD8⁺ T Cells & CXCL10



Sustained Quality of Life*



Biomarker and multivariate analyses results from AIPAC: A phase IIb study comparing eftilagimod alpha (a soluble LAG-3 protein) to placebo in combination with weekly paclitaxel in HR + HER2 - metastatic breast carcinoma – ESMO 2022; *Quality of Life (QoL) as measured by Global Health Status/ QoL QLQC30-B23; ** As announced on 23 December 2022 in 'Immutep Announces Successful Meeting with the FDA on Eftilagimod Alpha plus Chemotherapy for the Treatment of Metastatic Breast Cancer' press release

Efti + Anti-PD-L1 (Avelumab) in Urothelial Cancer & Advanced Solid Tumors

INSIGHT-004: Phase I in Various Advanced Solid Tumors & INSIGHT-005: Phase I in Metastatic Urothelial Cancer

INSIGHT-004 – Phase I dose escalation study in advanced solid tumors

- Efti in combination with avelumab (BAVENCIO®) safe with promising signals of efficacy
- Deep & durable responses in patients with low/no PD-L1 expression and in non-immunogenic tumors
- 5/12 partial responses (42%) in different solid tumors**

INSIGHT-005 - Phase I study in metastatic urothelial cancer

- Investigator-initiated, open-label study evaluating safety & efficacy of efti in combination with avelumab (BAVENCIO®) in up to 30 patients with metastatic urothelial cancer
- Study is jointly funded by Immutep and Merck KGaA, Darmstadt, Germany
- Expansion into urothelial cancer builds on core strategy to increase target indications to exploit efti's full potential
- First patient expected to be enrolled & dosed in first half of CY2023

*ASCO 2021: J Clin Oncol 39, 2021 (suppl 15; abstr 2518); DOI 10.1200/JCO.2021.39.15_suppl.2518. **(1) MSI high colorectal cancer; (2) pleural mesothelioma; (3) after radio-chemo in squamous anal cell; (4) pre-treated squamous cervical cancer (PD-L1 TPS < 1%) carcinoma; (5) gastroesophageal junction

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LAG-3 Immunotherapy for Autoimmune Diseases

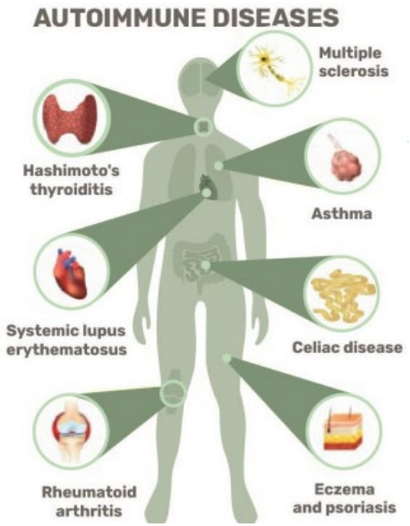
Targeting the Causes of Autoimmune Diseases

Current Opinion in Immunology
Volume 67, December 2020, Pages 1-9

Inhibitory receptor agonists: the future of autoimmune disease therapeutics?

Stephanie Grebinoski [1 2], Dario AA Vignali [1]

Central and peripheral tolerance both contribute to protection against autoimmunity. The pathogenesis of autoimmunity, however, can result from critical deficits or limitations in peripheral and/or central tolerance mechanisms, presenting an opportunity for therapeutic intervention. Recent advances highlight the substantial impact of inhibitory receptors (IRs), which mediate peripheral tolerance, in autoimmunity. Deletion and blockade studies in mice, IR disruption in humans, and correlation with positive disease outcomes all highlight potential clinical benefits of enhancing IR signaling (agonism)—specifically CTLA4, PD1, LAG3, TIM3 and TIGIT—to treat autoimmune disease. Although critical questions remain, IR agonists represent an unappreciated and untapped opportunity for the treatment of autoimmune and inflammatory diseases.



Present Approaches Target Symptoms of Autoimmune Diseases

Corticoids, methotrexate, TNF & interleukin inhibitors (anti-TNF-α,-IL-6, -IL-17, -IL-23 mAbs)

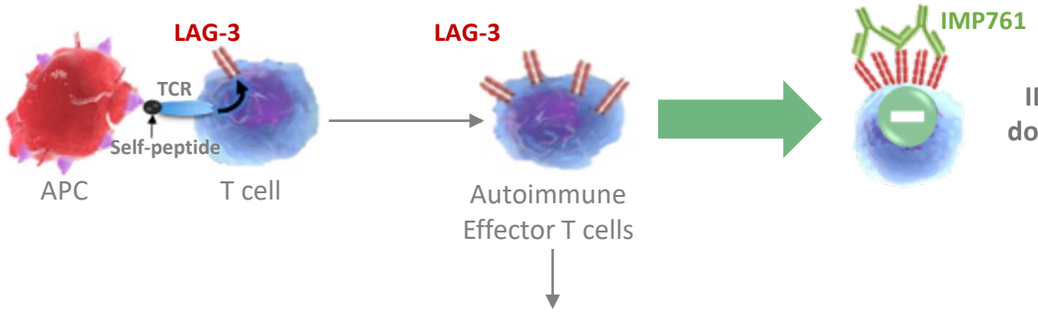
Future Approaches Target Causes of Autoimmune Diseases

Targeting autoimmune memory T cells with LAG-3 antibodies

Stephanie Grebinoski, Dario AA Vignali, Inhibitory receptor agonists: the future of autoimmune disease therapeutics?, Current Opinion in Immunology, Volume 67, 2020, Pages 1-9, ISSN 0952-7915, https://doi.org/10.1016/j.coi.2020.06.001.

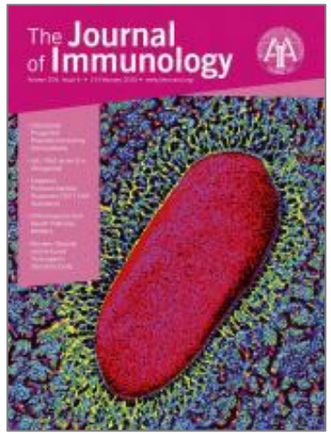
IMP761: First-in-Class LAG-3 Agonist is Potential Game-Changer

As the world's first immunosuppressive agonist antibody to LAG-3 acting upstream on activated T cells, IMP761 targets the root cause of many autoimmune diseases and represents a potential game-changer in the treatment landscape. Initiating IND-enabling studies in 1H'2023.



Epigenetic reprogramming leads to T cell helper (Th) induced AI diseases: Th1 (e.g., Rheumatoid Arthritis), Th2 (e.g., Allergic Asthma), Th17 (e.g., IBS), etc.

IMP761 increases the natural LAG-3-mediated down-regulation of auto-reactive memory T cells (root cause of many autoimmune diseases)



*A LAG-3-Specific Agonist Antibody for the Treatment of T Cell-Induced Autoimmune Diseases**

IMP761 significantly inhibits T cell infiltration of an antigen-specific intradermal reaction in vivo in an Ag-specific delayed-type hypersensitivity (DTH) model in non-human primate study.

*Juvenile idiopathic arthritis: LAG-3 is a central immune receptor in children with oligoarticular subtypes***

Pre-clinical testing of IMP761 in oligoarticular juvenile idiopathic arthritis model showed decreased secretion of mostly all measured cytokines (IL-10, IL-12, IL-1β, IL-4, IL-6 = p-value < 0.01)

* Angin M, Brignone C, Triebel F. A LAG-3-Specific Agonist Antibody for the Treatment of T Cell-Induced Autoimmune Diseases. J Immunol. 2020 Feb 15;204(4):810-818. doi: 10.4049/jimmunol.1900823. Epub 2020 Jan 6. PMID: 31907283.
** Sag, E., Demir, S., Aspari, M. et al. Juvenile idiopathic arthritis: lymphocyte activation gene-3 is a central immune receptor in children with oligoarticular subtypes. Pediatr Res 90, 744–751 (2021). https://doi.org/10.1038/s41390-021-01588-2;

Board and Management

Dr Russel Howard
Non-Executive Chairman

Dr Howard has over 45 years experience in Australian & US biotech sectors, including the Walter & Eliza Hall Institute, Schering-Plough, GSK and as Maxygen CEO. He currently is Chairman of NeuClone Pty Ltd and a former Director of Circadian Technologies Ltd.

Pete Meyers
Deputy Chairman

Mr Meyers spent 18 years in health care investment banking before taking on CFO roles in biotechnology, including Eagle Pharmaceuticals, Inc, TetraLogic Pharmaceuticals Corp, and Motif BioSciences Inc. Based in New York, he is currently CFO of Slayback Pharma.

Lucy Turnbull, AO
Non-Executive Director

Lucy Turnbull is a distinguished businesswoman, philanthropist and former politician with a background in commercial law and investment banking. She has served on the boards of the NSW Cancer Institute, the Sydney Children's Hospital Foundation, and the Sydney Cancer Centre.

Marc Voigt
Executive Director & CEO

Mr Voigt has over 25 years of experience in the corporate and biotechnology sectors, including Deutsche Life Science, Revotar Biopharmaceuticals AG, Medical Enzymes AG and Allianz. He was appointed as CEO and Executive Director in July 2014. Mr Voigt is based in Berlin.

Prof. Frédéric Triebel, MD Ph.D.
Executive Director, CSO & CMO

Prof Triebel discovered the LAG-3 gene while working at the Gustave Roussy Institute and is a pioneer in the LAG-3 field of immuno-oncology. He was the founder of Immutep S.A., which was acquired by the Company in 2014. Based in Paris, he holds a Ph.D. in immunology (Paris University).

Deanne Miller
COO, General Counsel

Ms Miller has broad commercial experience having held legal, investment banking, regulatory compliance and tax advisory positions at RBC Investor Services, Westpac Group, Macquarie Group, the Australian Securities and Investment Commission, and KPMG.

Christian Mueller
VP, Strategic Development

Mr Mueller has +10 years of clinical development experience in oncology, including at Medical Enzymes AG focusing on therapeutic enzymes for cancer treatment and at Ganymed Pharmaceuticals AG developing ideal mAbs in immune oncology.

Claudia Jacoby, Ph.D.
Director of Manufacturing

Dr Jacoby has +15 years of biotech industry experience with extensive skills in protein expression and purification as well as in analytical and preclinical development from her various positions at pre-clinical and clinical-stage pharmaceutical companies.

James Flinn, Ph.D.
IP & Innovation Director

Dr Flinn is an Australian Patent Attorney with +20 years of professional experience in building and managing IP portfolios, including GSK, two US-based pharmaceutical companies, a major Australian retailer, and a Melbourne Patent Attorney firm.

David Fang
Finance Director

Joining Immutep in 2018, Mr Fang has over 12 years' accounting and auditing experience across various industries including biotechnology, manufacturing and healthcare including Group Finance Manager of Kazia Therapeutics Limited and auditor at PWC.

Chrystelle Brignone Ph.D.
Preclinical Development Director

Dr Brignone joined Immutep in 2004 and has more than 20 years' experience in the field of Immunology and Immune monitoring of clinical studies. As Principal Scientist since 2014, she is leading the R&D in the Immutep laboratory in France.

Katja Pruessing, Ph.D.
Senior Quality Assurance Mgr.

Dr Pruessing has +10 years of sector-specific experience and is leading quality assurance strategy and implementation, for clinical trials managed by Immutep. She has a Diploma in Biology and completed her PhD at the RWTH Aachen University, Germany.

Achievements & Upcoming Milestones

2022

- Fast Track designation granted in 1L NSCLC
- Industry conference presentations on efti trials:
  - ASCO - Oral Presentation in 1L NSCLC
  - SITC - Late-Breaking Abstract & Oral Presentation in 1L NSCLC
  - SITC - Initial results from triple-combination trial
  - SITC - Trial in progress poster on randomized 1L HNSCC trial
  - ELCC & WCLC - PD-X refractory data in 2L NSCLC
- Expansion of existing programs (e.g., new sarcoma trial, new collaboration with Merck KGaA & Pfizer in urothelial cancer)
- Efti manufacturing scaled up to 2,000L with WuXi Biologics
- IP expansion for eftilagimod alpha and LAG525
- IP expansion for IMP761
- GMP manufacturing process developed for IMP761; 200L scale

2023

- Top-line readout from randomized TACTI-003 Phase IIb trial and data updates during 2023
- Data updates from TACTI-002 Phase II trial during 2023
- Data updates from triple combination INSIGHT-003 PI trial with efti + anti-PD-1 + chemotherapy during 2023
- Initiated AIPAC-003 PII/PIII trial of efti + chemo in MBC/TNBC
- Expansion of clinical trial pipeline with:
  - Phase II/III trial planning in 1L NSCLC
  - Investigator-initiated soft tissue sarcoma PII study
  - Jointly-funded INSIGHT-005 with Merck KGaA, Darmstadt, Germany
- IND-enabling studies of IMP761, world's first agonist LAG-3 antibody targeting autoimmune diseases, in 1H'2023
- Updates from partnered programs

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Thank You