immutep
LAG-3 IMMUNOTHERAPY

Unlocking the power of the immune system to fight cancer and autoimmune disease

Forward-Looking Statements

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Immutep Highlights

Novel science and advanced pipeline

Pioneering LAG-3 immunotherapy in cancer & autoimmune diseases. Three clinical assets and two earlier stage programs.

Compelling clinical data

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

Validation through partnerships

Multiple partnerships and collaborations with large pharma.

MERCK
Merck KGaA Darmstadt, Germany
GSK
EOC
NOVARTIS
LabCorp

Global presence; strong balance sheet

Global presence and strong IP across diversified LAG-3 portfolio. Well-funded with cash runway to early 2026.

Substantial market opportunity

Efti has safely improved clinical outcomes for cancer patients with anti-PD-(L)1 therapies as well as chemo creating large opportunity.

*(1) 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) – SITC 2022 Oral Presentation; (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 - May 2022; (3) Results from a Phase II study of eftilagimod alpha (soluble LAG-3 protein) and pembrolizumab in patients with PD-L1 unselected metastatic 2nd line head and neck squamous cell carcinoma (HNSCC) SITC 2021.

Deep Pipeline

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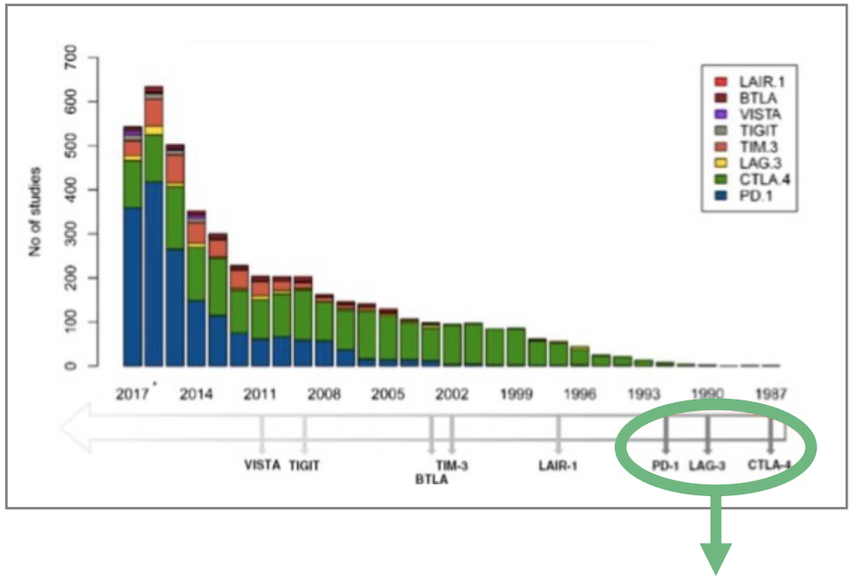
	Program	Indication	Preclinical	Phase I	Phase II	Late Stage*	Collaborations	Commercial Rights
ONCOLOGY	**Eftilagimod Alpha** Soluble LAG-3 Protein	1L Head & Neck Squamous Cell Carcinoma (HNSCC)	TACTI-003 | Efti+Pembrolizumab [a]				MERCK	immutep Global Rights ex-China
		1L Non-Small Cell Lung Cancer (NSCLC), 2L HNSCC, PD-X Refractory 2L NSCLC	TACTI-002 | Efti+Pembrolizumab [a]				MERCK	
		Urothelial Cancer	INSIGHT-005 | Efti+Avelumab [§, b]				Merck KGaA Darmstadt, Germany	
		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 Tumors	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 Tumors & Blood Cancer					NOVARTIS	NOVARTIS Global Rights
		Triple Negative Breast Cancer						
		Melanoma						
		Solid Tumors						
		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 May 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), Phase II in Ulcerative Colitis discontinued. * 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®.

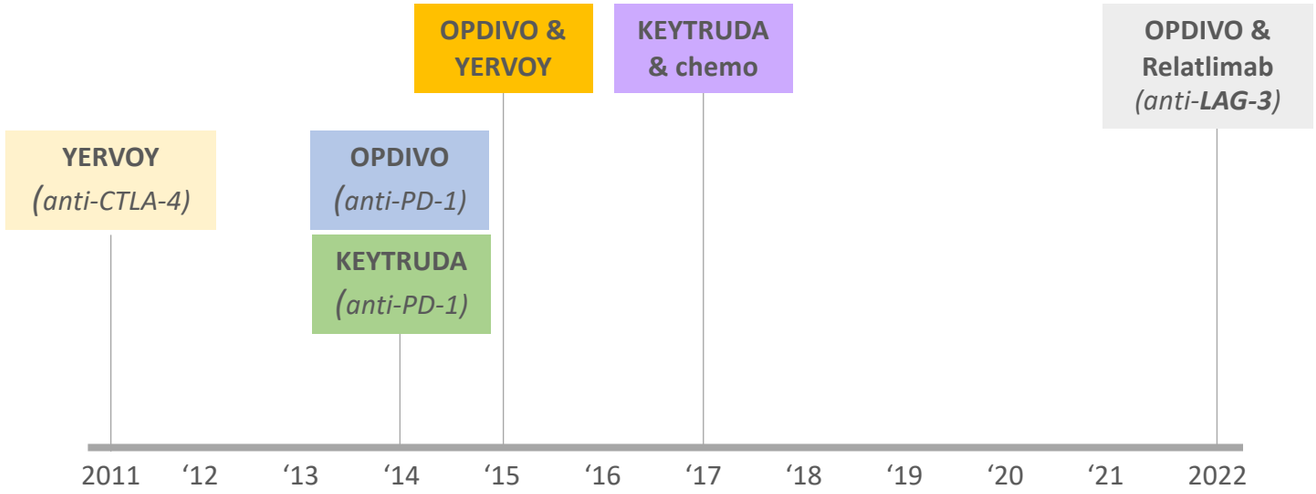
Immuno-Oncology (IO) Landscape

LAG-3 is one of three immune checkpoints with regulatory approvals

Timeline of Immune Checkpoint Discovery*



Evolution of Immuno-Oncology Therapies**

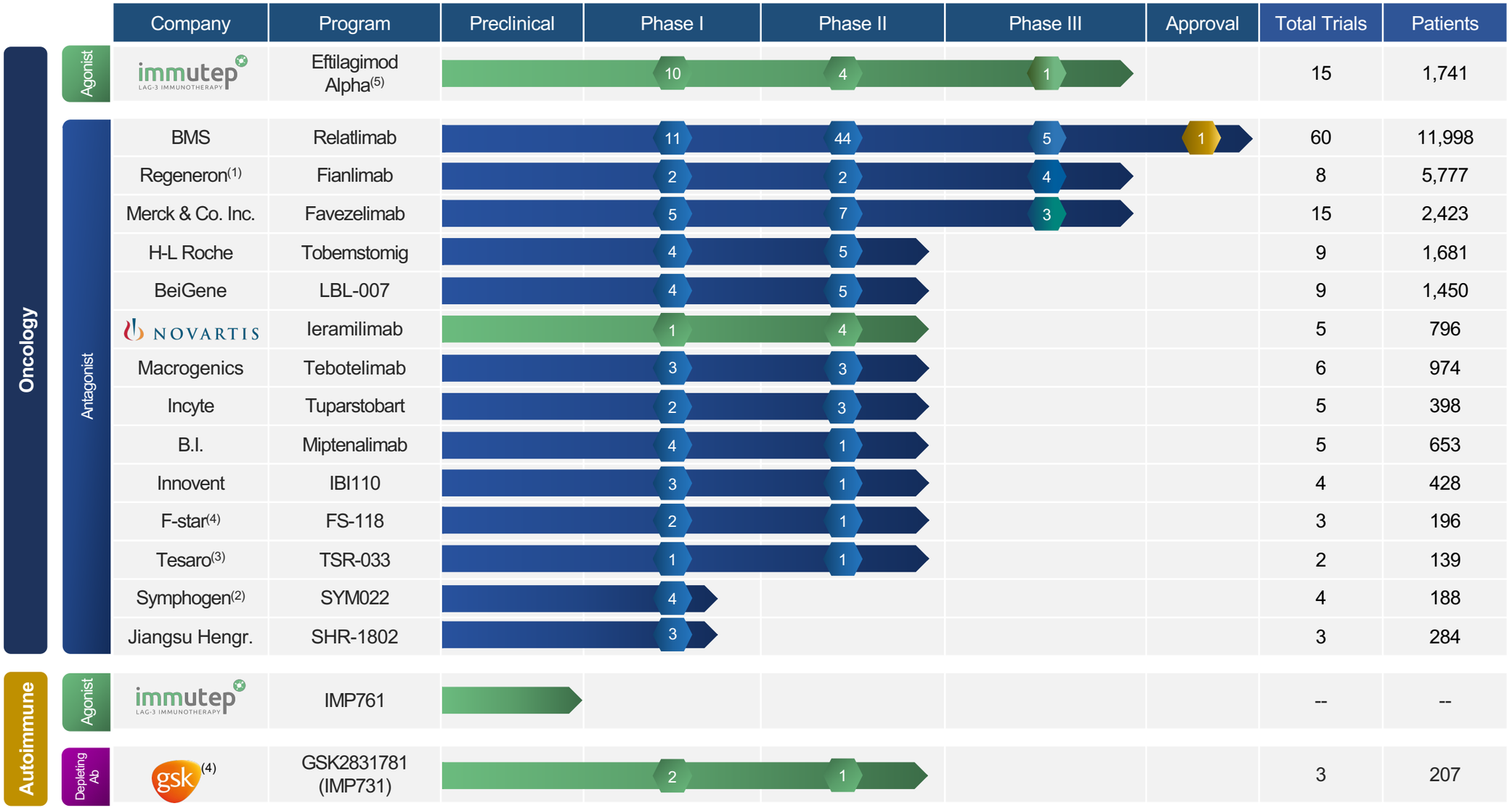


The immune system's role in fighting cancer has led to regulatory approval of immuno-oncology therapies targeting the immune checkpoints **CTLA-4**, **PD-1**, and **LAG-3**

LAG-3 is unique in that its (1) inhibition on T cells receptor signalling and (2) activation of dendritic cells both engage the immune system to fight cancer

*Checkpoint Inhibitors: Applications for Autoimmunity, Springer, September 2017Current Allergy and Asthma Reports 17(10) DOI:10.1007/s11882-017-0740-z. ** Yervoy (ipilimumab), OPDIVO (nivolumab), KEYTRUDA (pembrolizumab), Opdualag (nivolumab + relatlimab)

LAG-3 Therapeutic Landscape Overview



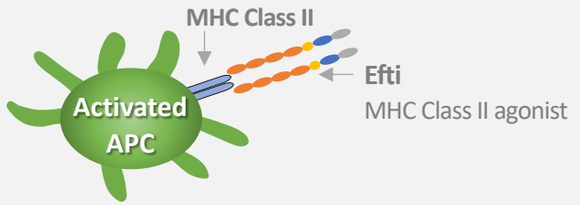
Sources: GlobalData, Company websites, clinicaltrials.gov, and sec.gov as of Aug. 22nd, 2023. The green bars above represent programs conducted by Immutep &/or its partners. Total trials includes all active, completed &/or inactive trials. Patient totals are based on estimated total enrolled &/or to be enrolled. Not a complete list of currently existing LAG-3 products.

1) As of January 7, 2019 Regeneron is in full control of program and continuing development
2) On April 3, 2020 Les Laboratoires Servier acquired Symphogen
3) Tesaro was acquired by and is now part of GSK
4) F-star was acquired by InvoX Pharma, a wholly-owned subsidiary of Sino Bioph. Ltd.
5) Includes two completed Phase I studies and one discontinued Phase 2 study
6) Including IITs, one planned trials (MBC trial by EOC)

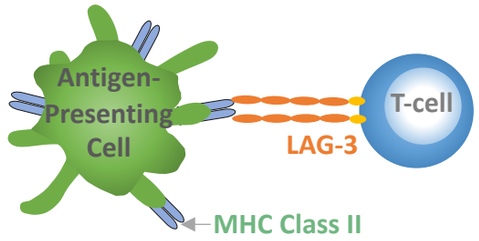
Immutep's Pioneering Immunotherapies

Only company with multiple therapeutic approaches around LAG-3 / MHC Class II interaction

Targeting MHC Class II on APCs with Soluble LAG-3 Protein (Efti)

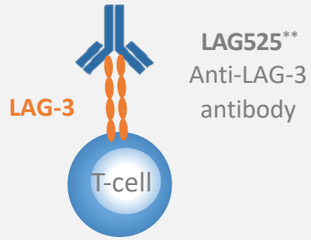


Activating APC with efti leads to a broad immune response to fight cancer including large increase of anti-tumor cells (T Cells, NK Cells, monocytes, etc.) and biomarkers (IFN-γ and CXCL10)*



Binding of LAG-3 on T cells to MHC Class II molecules on antigen-presenting cells (APC) leads to inhibition of T cell receptor signaling#. Additionally, soluble LAG-3 eftilagimod alpha is a unique APC activator.

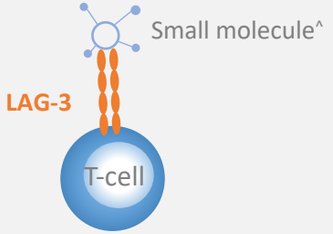
Targeting LAG-3 on T cells with an Antagonist Antibody



LAG525** Anti-LAG-3 antibody

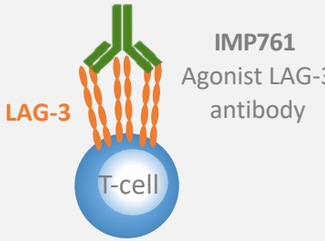
Blocking LAG-3 on T cells prevents LAG-3-mediated co-inhibitory signaling, allowing T cells to see and attack cancer

Targeting LAG-3 on T cells with Small Molecules



Small molecules blocking LAG-3 could offer convenience of an oral pill at a fraction of the cost of biologics

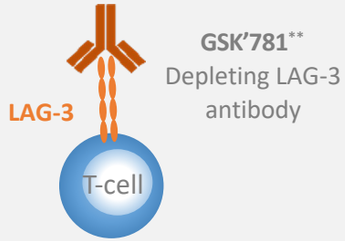
Targeting LAG-3 on T cells with an Agonist Antibody



IMP761 Agonist LAG-3 antibody

Increasing LAG-3's natural down-regulation of auto-reactive memory T cells may address autoimmune diseases

Targeting LAG-3 on T cells with a Depleting Antibody



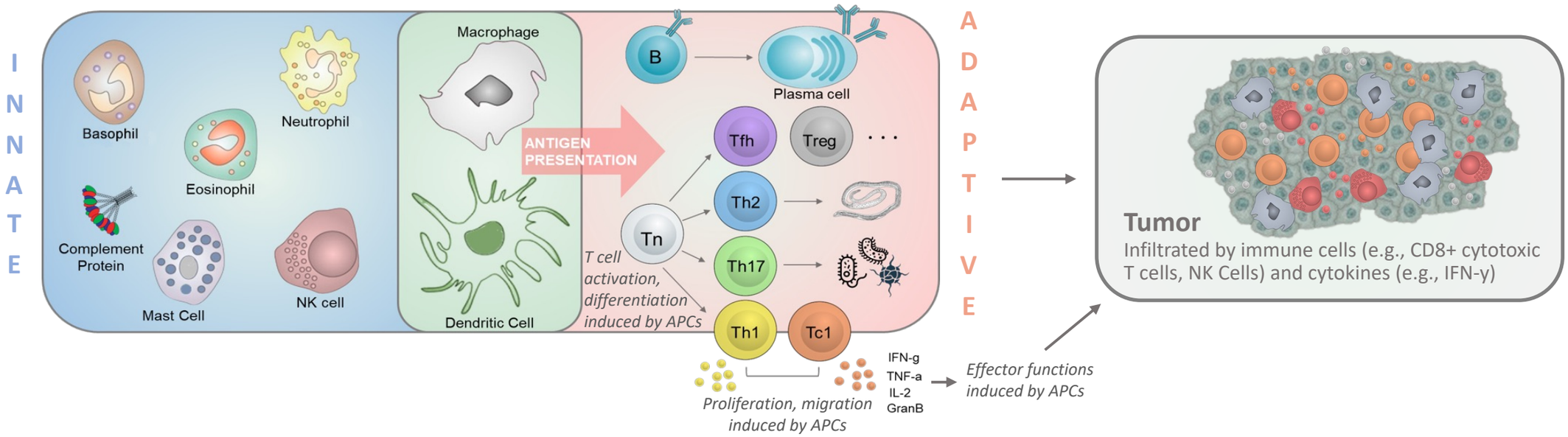
GSK'781** Depleting LAG-3 antibody

Depleting LAG-3 T cells can suppress immune system's response, enabling treatment of autoimmune diseases

* 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. # MHC Class II = Major Histocompatibility Complex Class II. ** LAG525 (leramilimab) is out-licensed to Novartis and GSK'781 is out-licensed to GSK. ^ The anti-LAG-3 small molecule is an early development-stage project at Immutep.

Efti Activates the ‘Generals of the Immune System’

Unique activation of APCs (dendritic cells) via MHC Class II leads to systemic anti-cancer immune response



<u>Efti activates Antigen Presenting Cells (APCs) that play key role in tumor response:</u>

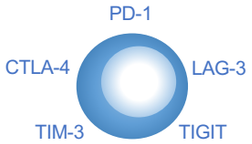
- APCs (e.g., dendritic cells) are a central hub that orchestrate the immune response
  - Initiate CD8+ T cell activation and proliferation
  - Induce required immune weaponry (IFN-y, granzyme, perforin, etc.)
  - Provide immune system target identification and location
  - Provide the “license to kill” to cytotoxic CD8+ T cells
- There is no successful tumor response without type 1 immunity (CD8+ T cells, IFN-y, etc.) and there is no type 1 immunity without functioning APCs

Image adapted from Figure 2 in Yamauchi, T.; Moroishi, T. Hippo Pathway in Mammalian Adaptive Immune System. *Cells* 2019, *8*(5), 398; https://doi.org/10.3390/cells8050398

Efti Brings A Complementary Approach to IO-IO Combinations

Adaptive Immunity

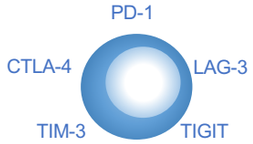
Many IO-IO combinations focus solely on T cells yet target different immune checkpoints on that cell. Can generally only work well in “hot” tumour environments.



T Cells

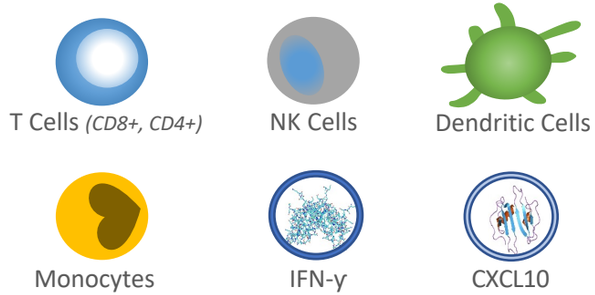
Adaptive and Innate Immunity

Immutep's complementary IO-IO approach focuses on targeting both T cells & antigen-presenting cells (APC), whose activation mediates multiple facets of the immune system to fight cancer. Can work well in “hot”, “tepid”, and “cold” tumour environments.



T Cells

Activated Dendritic Cells



Substantial Commercial Opportunity

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Encouraging Clinical Data with Chemo-free Efti + Anti-PD-(L)1 Combinations and Efti + Chemo

- **Doubling of Overall Response Rate** of KEYTRUDA® (anti-PD-1) monotherapy in 1st line non-small cell lung cancer (NSCLC) and in 2nd line head & neck cancer in all-comer PD-L1 Phase II trial
- **Initial median Overall Survival of 25 months** in 1st line NSCLC patients with >1% PD-L1 expression, above reported rates of anti-PD-1 monotherapy, IO-IO, and IO-chemo combinations
- **Deep, durable responses in negative & low PD-L1 expressing patients** with both KEYTRUDA® (anti-PD-1) and with BAVENCIO® (anti-PD-L1) across multiple indications
- Subcutaneous delivery of efti leads to **systemic anti-tumor effect** and strong synergies with standard-of-care chemotherapy
- Efti has **favorable safety profile** and is well-tolerated

Anti-PD-1**

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

OPDIVO® (nivolumab) — ~$8.2 billion

LIBTAYO® (cemiplimab-rwlc) Injection 350 mg — ~$468.9 million

Jemperli (dostarlimab-gxly) Injection 500 mg — ~$26 million

$29.6 Billion
in 2022 sales

Anti-PD-L1**

TECENTRIQ® atezolizumab — ~$3.9 billion

IMFINZI® durvalumab — ~$2.8 billion

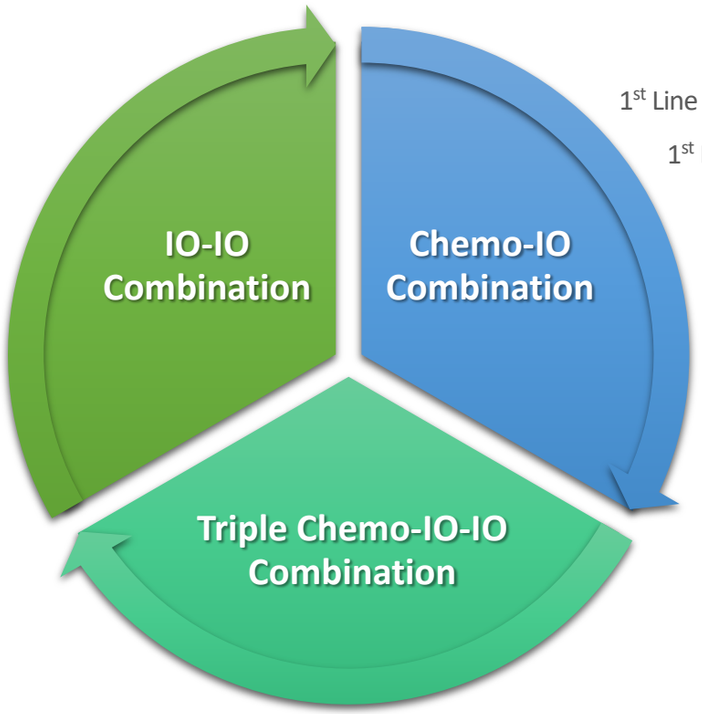
BAVENCIO® avelumab Injection 20 mg/mL — ~$914.6 million

$7.6 Billion
in 2022 sales

* Based upon clinical data from TACTI-002, INSIGHT-004, and TACTI-mel trials. Source of sales figures: 1. Bloomberg and company reports; Currency: USD. 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®).

Pipeline in a Product

With clinical data showing broad potential to safely improve anti-PD-(L)1 therapies, standard-of-care chemotherapy, and/or both together, efti defines a "pipeline in a product"



	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
Advanced Solid Tumours				Efti + Avelumab [§, b]	Merck KGaA Darmstadt, Germany
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 [¥]	

* 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.

Late-Stage Clinical Development of Efti

Combination Trials with Anti-PD-(L)1 Therapy and/or Chemotherapy Focused on Large Indications

Late-Stage Clinical Development of Efti

Non-Small Cell Lung Cancer (NSCLC) – Planning Registrational Trial in 1st line NSCLC w efti + KEYTRUDA®

– Efti + KEYTRUDA® has FDA Fast Track designation in 1st line NSCLC
– 1.87 million NSCLC diagnoses per annum; highest cause of death among all cancers[1]
– NSCLC drug market will nearly double to $48 billion in 2031 and immune checkpoint inhibitors expected to generate $26 billion[2]

Head & Neck Squamous Cell Carcinoma (HNSCC) – Ongoing Phase IIb evaluating efti + KEYTRUDA® in 1st line HNSCC

– Efti has FDA Fast Track designation in 1st line HNSCC
– 900K cases and >400K deaths per annum in HNSCC[1]
– Global head and neck cancer market size is projected to hit $3.5 billion by 2025[3]

Metastatic Breast Cancer (MBC) including Triple Negative Breast Cancer (TNBC) – Initiated Phase II/III AIPAC-003 Trial

– HR+/HER2-neg/low MBC and TNBC patients which AIPAC-003 trial is targeting equates to ~78% of breast cancer cases[4]
– 2.3 million women diagnosed with breast cancer and 685,000 deaths globally in 2020[5]
– Metastatic breast cancer market to reach $12.7 billion by 2024[6]

Earlier Stage Clinical Development of Efti

– Urothelial Cancer *(Phase I),* Soft Tissue Sarcoma *(Phase II, investigator-initiated),* and other solid tumor indications

[1] Global Cancer Observatory. International Agency for Research on Cancer. World Health Organization. [2] Nature Reviews Drug Discovery 22, 264-265 (2023) doi: https://doi.org/10.1038/d41573-023-00017-9 [3] GlobalData (from May 2023) [4] Cancer Stat Facts: Female Breast Cancer Subtypes - NCI SEER.
[5] World Health Organization; Breast Cancer Fact Sheet. [6] Estimation of Datamonitor Healthcare, Informa Pharma Intelligence for US, Jap, EU

Non-Small Cell Lung Cancer (NSCLC)

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

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

Efti Uniquely Positioned in 1st line Non-Small Cell Lung Cancer

Large potential opportunity for efti with both chemo-free IO-IO and IO-IO-chemo combinations

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

PD-1 expression levels have substantial impact on clinical outcomes for anti-PD-(L)1 therapies

TPS ≥50% = ~30% population

- Best responders to anti-PD-(L)1 therapies
- PD-1 alone efficacious yet most effective in NSCLC patients with very high PD-L1 expression[2]
- More efficacious chemo-free options needed

TPS 1-49% = ~35% population

- Suboptimal responses to anti-PD-(L)1 therapies
- No chemo-free IO therapy approved for these patients in Europe
- PD-1 alone is 'NCCN Category 2B' therapy in US
- High unmet need for chemo-free IO therapies and to increase % of long-term survivors

TPS <1% = ~35% population

- Negligible response to anti-PD-(L)1 therapies
- IO-chemo combo not always better than chemo alone (e.g., Empower Lung-3)
- High unmet need for better therapies for this patient population

Efti + anti-PD-(L)1 may offer 1L NSCLC patients with ≥1% PD-L1 TPS* (~65% population) an effective, chemo-free IO-IO therapy.

Efti has Fast track designation here & opportunity substantiated by compelling data from TACTI-002 Phase II.

Efti + anti-PD-(L)1 + chemo may establish a new gold standard for 1L NSCLC patients with TPS <1% and TPS 1-49% (~70% population).

Initial data from INSIGHT-003 Phase I evaluating this triple IO-IO-chemo combo encouraging.

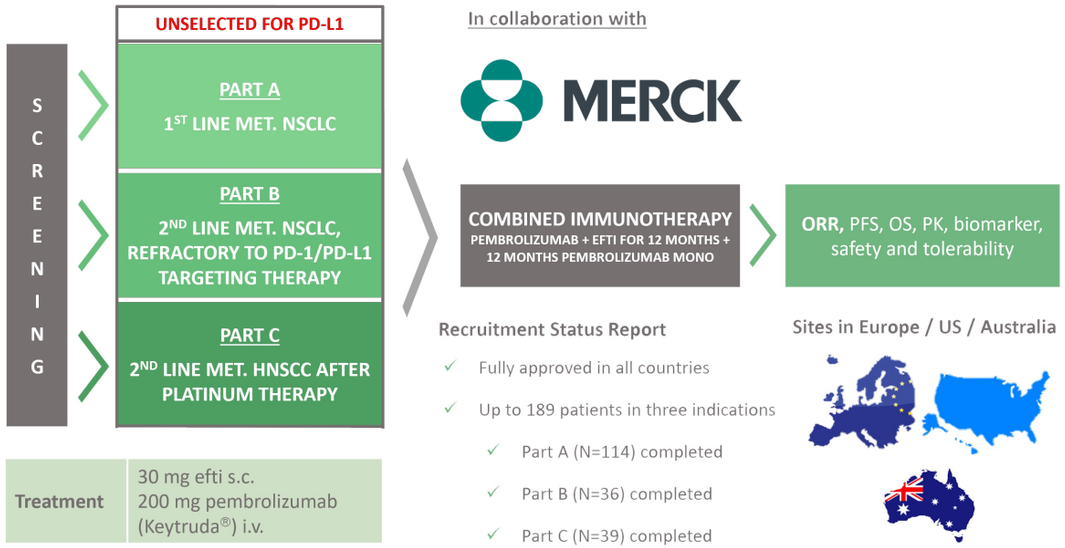
(1) Patient population estimates by PD-L1 expression: based on publications of registrational trials KN-001, KN-189, KN-407, EMPOWER-Lung 3 and TACTI-002 all comer Phase II trial. (2) Aguilar et al. Ann. Onc. 2019, 1;30(10):1653-1659. DOI: 10.1093/annonc/mdz288

* Efti + pembrolizumab has Fast Track Designation in >1% TPS in 1L NSCLC

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

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.

Recruitment Status Report

- ✓ Fully approved in all countries
- ✓ Up to 189 patients in three indications
  - ✓ Part A (N=114) completed
  - ✓ Part B (N=36) completed
  - ✓ Part C (N=39) completed

Sites in Europe / US / Australia

Baseline characteristics		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)	

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%

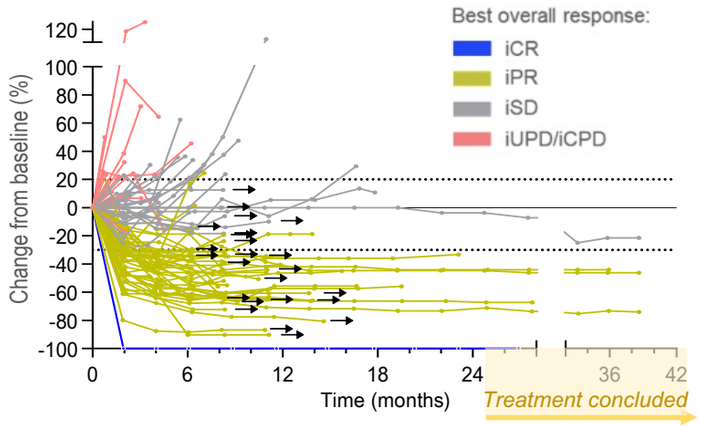
Data cut-off July 1, 2022. [1] Central assessment of PD-L1 TPS using Dako PD-L1 IHC 22C3 pharmDx for 90 pts. For 18 pts, local assessment was used due to non-evaluable central assessment results. TPS: tumor proportion score.

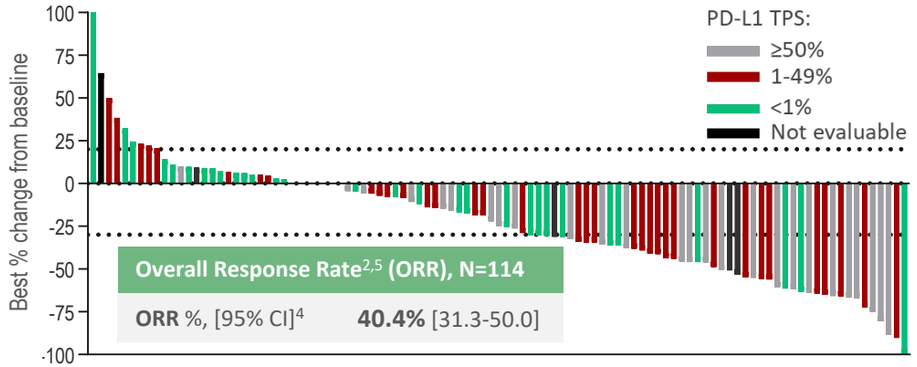
Deep and Durable Responses Translating Into Overall Survival

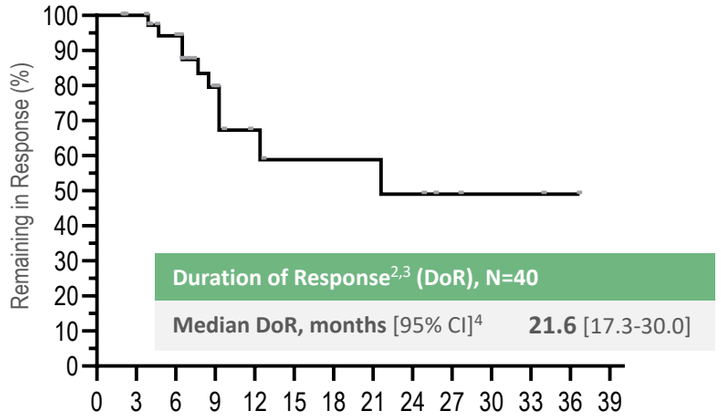
TACTI-002/KEYNOTE-798: 1st Line Non-Small Cell Lung Cancer (Part A)

PD-L1 TPS 0 – 100%

Deep and durable responses across all PD-L1 expression levels[1]; interim median Duration of Response of 21.6 months







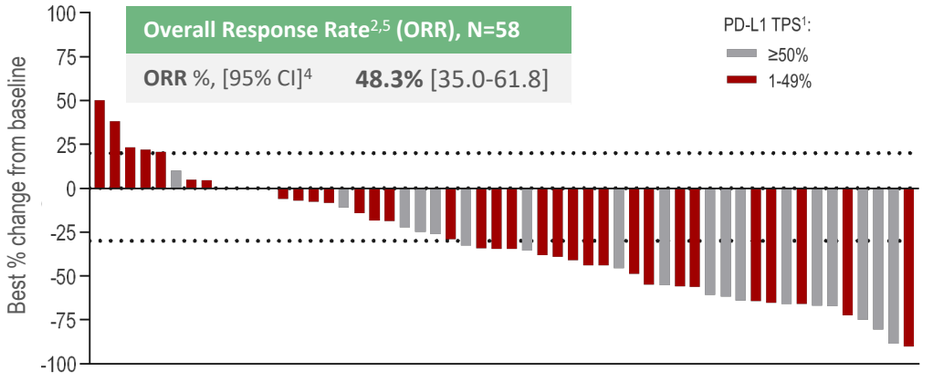
PD-L1 TPS ≥1% (FDA Fast Track designation)

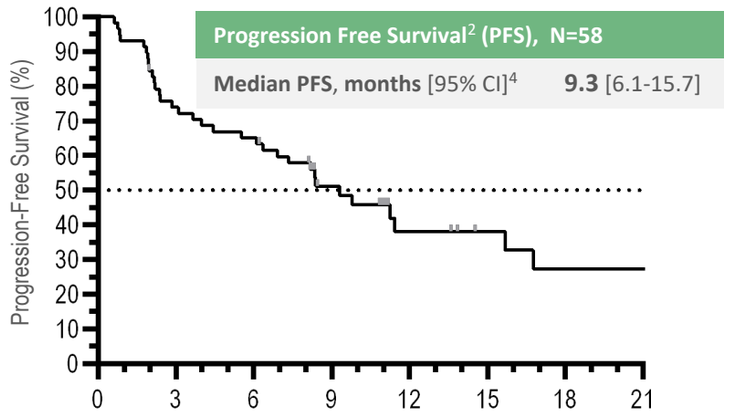
Strong ORR, DoR and PFS translating into

25.0 months

Interim median Overall Survival

new data cut-off Mar 2023





Data cut-off July 1, 2022, except for interim mOS. [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. *mPFS of central (N=90) & local assessment (N=18) was 9.8 months for PD-L1 TPS ≥1%, 8.3 months for PD-L1 TPS 1-49%, 11.8 months for PD-L1 ≥50%, and 4.2 months for PD-L1 <1%. 5. Central assessment of PD-L1 TPS using Dako IHC 22C3 pharmDx for 58 pts; pts with ≥1 post-baseline CT scan . Note: figures have been cropped for visualization purposes. Data except median OS derived from 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) SITC - November 2022.

Safety

General overview of AEs

Safety parameter[1]	n (%)
Adverse reactions with fatal outcome[2]	3 (2.6)
Serious adverse reactions[2]	*12 (10.5)*
Grade ≥3 adverse reactions[2]	*14 (12.3)*
Adverse reactions leading to discontinuation of treatment[2]	*11 (9.6)*

[1]AEs rated according to NCI CTCAE (v5.0)
[2]relationship to efti and/or pembrolizumab could not be ruled out

Frequent AEs (incidence ≥10%) related to study treatment[2]

Adverse event (PT)[1]	Any grade N (%)	Grade 3 N (%)	Grade 4/5 N (%)
Pruritus	23 (20.2)	*N/A*	*N/A*
Asthenia	22 (19.3)	*N/A*	*N/A*
Rash	15 (13.2)	*N/A*	*N/A*
Diarrhoea	12 (10.5)	*1 (0.9)*	*N/A*
Fatigue	12 (10.5)	*1 (0.9)*	*N/A*

[1] AEs rated according to NCI CTCAE (v5.0)
[2] relationship to efti and/or pembrolizumab could not be ruled out

- Treatment with efti plus pembrolizumab is safe and very well-tolerated
- Rate of discontinuation due to drug related adverse events less than 10% and comparable to pembrolizumab monotherapy*

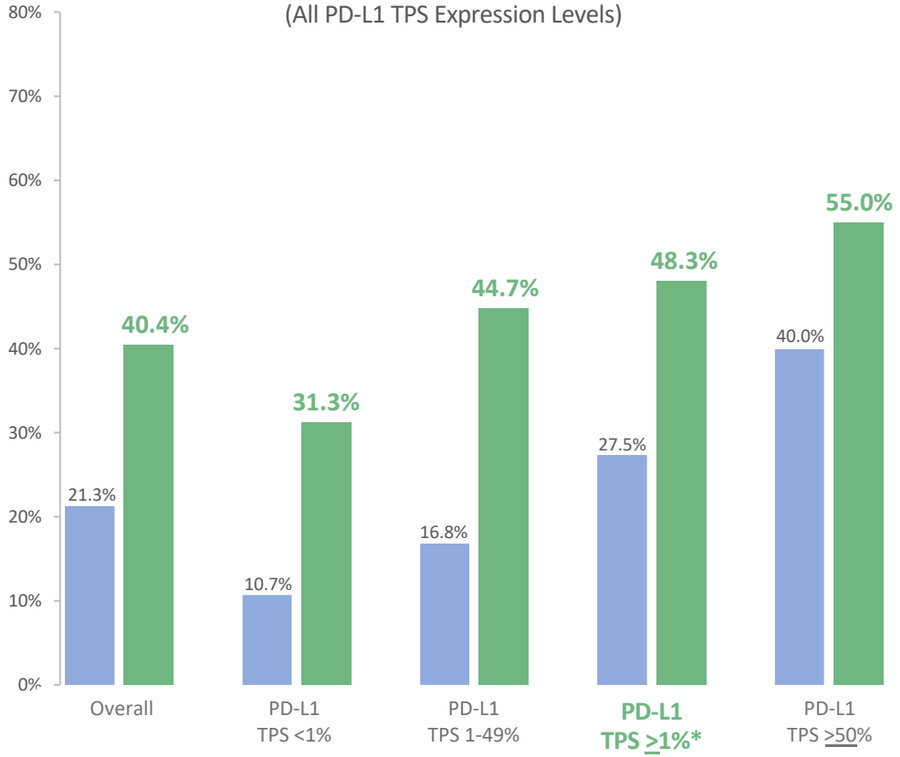
Source: Combining the antigen-presenting cell activator eftilagimod alpha (soluble LAG-3) and pembrolizumab: efficacy results from the 1st line non-small cell lung cancer cohort of TACTI-002 (Phase II) - SITC Late-breaking Abstract Oral Presentation - November 2022.
*Pooled data from KN-042 and KN-024 for pembrolizumab monotherapy show treatment-related Adverse Events that led to treatment discontinuation was 9.9%.

Benchmarking against Pembrolizumab Monotherapy

Robust Overall Response Rates, Overall Survival, and Progression-Free Survival

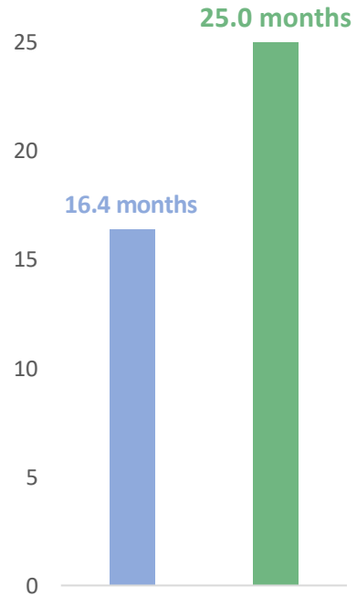
Overall Response Rate (ORR)

(All PD-L1 TPS Expression Levels)



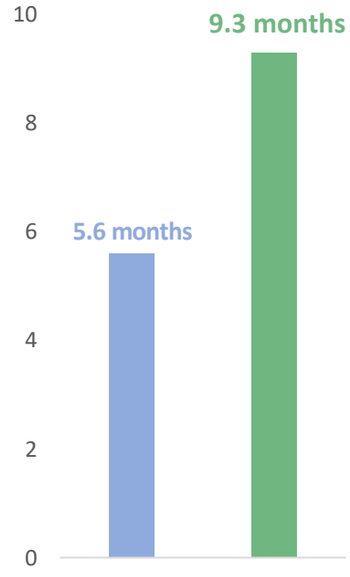
Overall Survival (mOS)

(PD-L1 TPS ≥1%)*



Progression Free Survival (mPFS)

(PD-L1 TPS ≥1%)*



Pembrolizumab Efti + pembrolizumab

*Efti + pembrolizumab has Fast Track Designation in ≥1% TPS in 1L NSCLC

Efti + pembro ORR by iRECIST, unconfirmed, Total (N=114) and PD-L1 TPS subgroups (N=90). 95% Confidence Interval. Data cut-off July 1, 2022. Efti + pembro mOS data cut-off March 2023. Efti + pembro PFS by PD-L1 status (N=90) using central assessment for 90 patients. Pembrolizumab monotherapy efficacy used for benchmarking for ORR: Overall ORR 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. Pembrolizumab monotherapy efficacy for mOS and mPFS from KN-042.

Benchmarking against Standard-of-Care in 1L NSCLC

Efficacy & safety of efti + pembro vs. IO, IO-chemo, and IO-IO-chemo in patients with PD-L1 TPS ≥1%

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Therapy	Response Rate	Progression Free Survival	Duration of Response[2]	TRAEs Leading to Discontinuation[3]	Median Overall Survival[4]
Efti + Pembro	**48.3%**	**9.3 months**	**21.6 months**	**9.6%**	**25.0 months**
Pembro + Doublet Chemo (NSQ)	55.8%	10.4 months	12.4 months	20.5%	23.3 months
Pembro + Doublet Chemo (SQ)	59.1%	8.2 months	8.8 months	16.8%	18.9 months
Ipi + Nivo[1]	35.9%	5.1 months	19.6 months	18.1%	17.1 months
Pembro monotherapy[1]	27.3%	5.6 months	26.5 months[2]	9.9%	16.4 months
Ipi + Nivo + 2 cycles of Doublet Chemo	43.3%	7.0 months	11.3 months	22.1%	15.8 months

NSQ = Non-squamous; SQ = Squamous

Efti + Pembro in 1L NSCLC, PD-L1 TPS ≥1% population compared to other published data:

- **strong ORR, PFS, DoR** and **longer OS**
- **excellent safety profile** comparable to pembrolizumab monotherapy

Efti + Pembro data: Data cut-off July 1, 2022, for Response Rate, Progression Free Survival, Duration of Response, and March 31, 2023, for median OS. (1) Ipi + Nivo approved in US for 1L NSCLC PD-L1 TPS>1% but not in EU; Pembro mono not approved in Europe for TPS 1-49%. (2) Duration of Response data is for all-comer PD-L1 patient populations for all listed therapies except pembro mono, which has data for PD-L1 TPS ≥1% in 1L NSCLC. (3) TRAE = Treatment related adverse events leading to discontinuation taken from publications/EPAR assessments of respective trials (KN-042, KN-024, KN-189, KN-021, KN-407, CM-227, CM-9LA). (4) Arrow lengths are proportional representations of Overall Survival data. Data for standard-of-care therapies taken from publications of respective registrational trials (e.g., KN-042, KN-189, KN-407, CM-227, CM-9LA), and comparison of data is from different clinical trials.

IO-IO-Chemo Combination Trial (INSIGHT-003) in 1L NSCLC

Promising initial efficacy & safety from first-in-human study evaluating efti + anti-PD-1 + doublet chemo[1]

INSIGHT-003 - Third arm (Stratum C) of investigator-initiated study in metastatic 1st Line NSCLC patients evaluating triple combination therapy of efti in conjunction with doublet chemo & anti-PD-1 therapy

- Promising **67% overall response rate** (ORR) and **91% disease control rate** (DCR) in evaluable 1st line non-squamous NSCLC patients (N=21) despite 81% of patients having PD-L1 TPS <50%.[1]
- The **triple combination's 65% ORR** in patients with PD-L1 TPS <50% (N=17) **compares favourably to 40.8% ORR** in patients with PD-L1 TPS <50% reported in a registrational trial of anti-PD-1 & doublet chemo.[2]
- Triple combination **well tolerated** & appears to be safe. Trial has been expanded to 50 patients and will have additional data updates in H2 CY2023.

INSIGHT-003 Study Design – Stratum C

Inclusion	Treatment
Histologically confirmed advanced non-squamous 1st line non-small cell lung cancer	Efti 30mg Sub-Q plus standard of care IO-chemo (pembrolizumab + carboplatin AUC5 + pemetrexed) Induction: Efti qw2 (up to 24 weeks); Maintenance: Efti qw 2 or qw 3*

(1) Based on published interim results provided on 24 May 2023 press release, "Immutep Announces Promising New Clinical Data from Triple Combination Therapy in INSIGHT-003 Trial"; (2) Historical data of anti-PD-1 and doublet chemotherapy from KN-040. * Dependent on the maintenance schedule of SoC

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Head & Neck Cancer and Metastatic Breast Cancer

Efti + Pembro in 2nd Line Head & Neck Squamous Cell Carcinoma

Strong, long-lasting efficacy and favorable safety; positive benchmarking to pembro monotherapy

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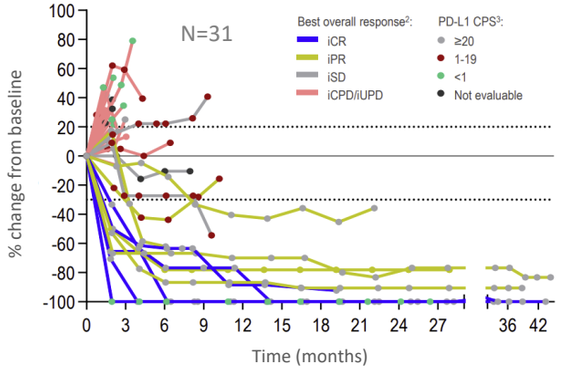
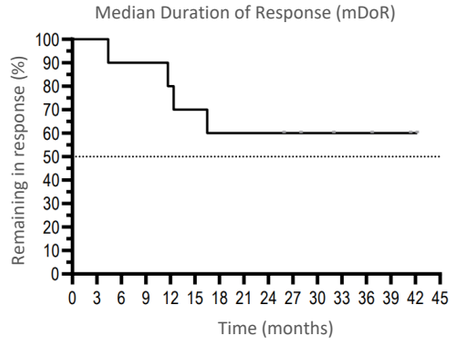
TACTI-002/KEYNOTE-798: 2nd Line Head & Neck Squamous Cell Carcinoma (Part C)

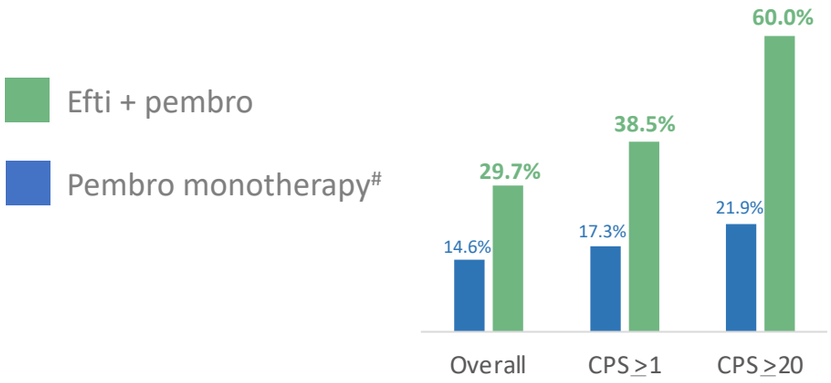
Deep, durable responses from efti + pembro across all PD-L1 levels including 5 Complete Responses[1]



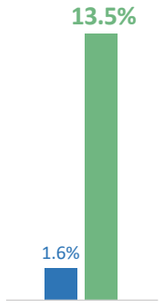
Median DoR Not Reached* (efti driving durable responses)



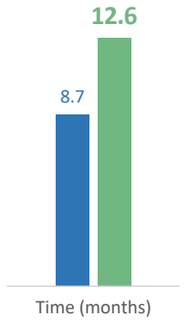
More than double Overall Response Rates



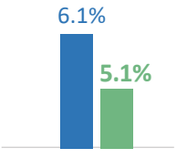
8X increase in Complete Response rate



~50% increase in Overall Survival in CPS ≥1*



Discontinuation due to treatment related AEs

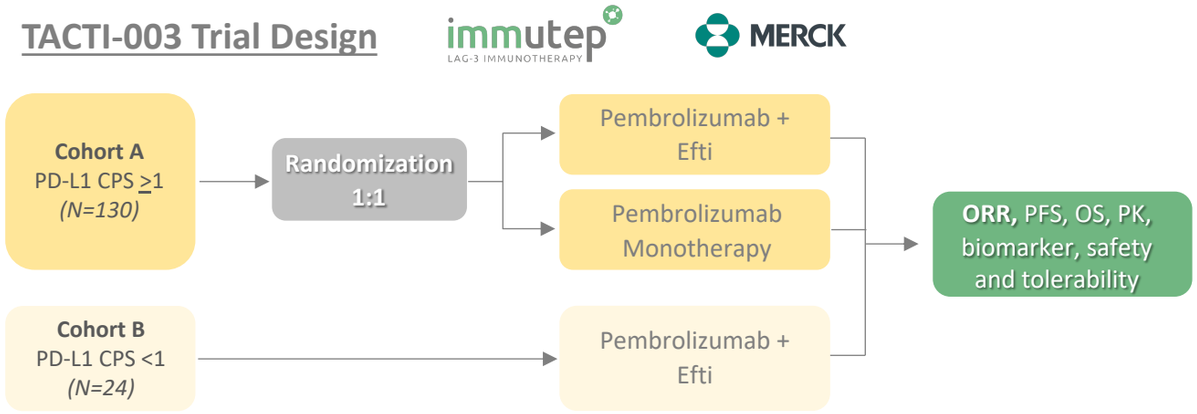


*ASCO 2023. Final results from TACTI-002 Part C: A Phase II study of eftilagimod alpha (soluble LAG-3 protein) and pembrolizumab in patients with metastatic 2nd line head and neck squamous cell carcinoma unselected for PD-L1 (Data cut-off March 31, 2023) #Data for Keytruda (pembrolizumab monotherapy or 'pembro mono') derived from KN-040 trial. [1] All pts with ≥1 post-baseline CT scan with evaluable response; n=31. Pts listed with iPR/iCR whether confirmed or unconfirmed. [2] Best overall response by iRECIST (local assessment). [3] Central PD-L1 assessment with Dako kit.

TACTI-003 Phase IIb in 1st Line Head & Neck Squamous Cell Carcinoma (Fast Track Designation)

TACTI-003 - Randomized Phase IIb Trial in 1L HNSCC patients utilizing efti + pembrolizumab versus pembrolizumab (KEYTRUDA®) monotherapy*

- Efti has FDA Fast Track designation in 1L HNSCC based on strength of data from TACTI-002 trial in 2L HNSCC
- TACTI-003 has multiple shots on goal: CPS ≥1, CPS 1-19, CPS ≥20, and CPS <1
  - In Cohort A (N=130), trial design includes 1L HNSCC patients whose tumours express PD-L1 (CPS ≥1) with CPS 1-19 and CPS ≥20 used as stratification factors
  - In Cohort B (N=24), patients with negative PD-L1 expression (CPS <1) only receive efti plus KEYTRUDA® because anti-PD-1 monotherapy is ineffective in this patient population
- ~91% enrolled and expect top line results in 2H of CY2023**



* Pembrolizumab monotherapy approved for 1st line HNSCC patients whose tumors express PD-L1 (CPS ≥1) and pembrolizumab with chemo approved for 1st line HNSCC in all-comer PD-L1 population. FDA approval based on KN-048. ** As reported in Immutep Quarterly Activities Report on 31 July 2023. 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).

Efti + Chemo in Randomized Phase IIb in Metastatic Breast Cancer

Efti drove broad anti-cancer immune response & synergies with chemo led to encouraging efficacy/safety

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AIPAC (Active Immunotherapy and PAClitaxel) Phase IIb in Metastatic Breast Cancer (MBC) – Strong results from double blind, 1:1 randomized Phase IIb study with 226 patients testing efti + paclitaxel (N=114) against paclitaxel + placebo (N=113)

Positive trends in ORR, DCR and OS

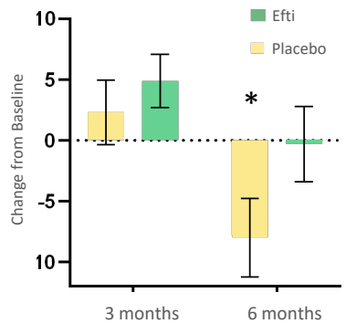
	Efti + paclitaxel	Paclitaxel	Differential
Overall Response Rate	48.3%	38.4%	+9.9%
Disease Control Rate	85.1%	75.9%	+9.2%
Overall Survival	20.4 months	17.5 months	+2.9 months

Significant OS improvement in 3 pre-specified subgroups

Pre-specified Subgroups	Median Overall Survival	Hazard Ratio	P-value
Low Monocytes	+19.6 months	HR 0.44	p=0.008
Under 65 Years	+7.5 months	HR 0.66	p=0.017
Luminal B	+4.2 months	HR 0.67	p=0.049

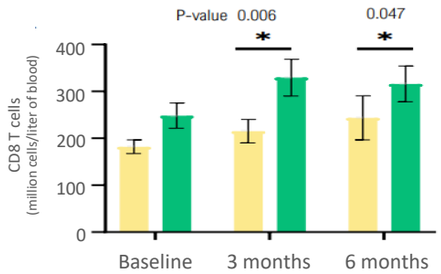
Sustained Quality of Life (QoL)

vs significant decline in placebo grp*

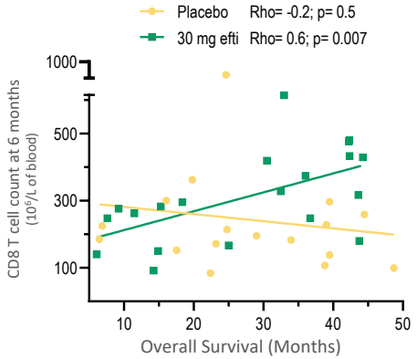


CD8⁺ T cell count increased significantly

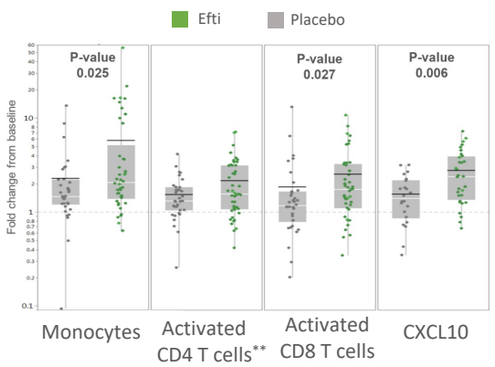
Blood samples taken before dosing ensuring only minimal residual effect was measured



Significant correlation between OS and Cytotoxic CD8⁺ T cell count



Significant increase in anti-tumor cells and biomarkers



Results published: 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 Breast 2022, Database cut-off date was May 14, 2021; *Quality of Life (QoL) as measured by Global Health Status / QoL QLQC30-B23; ** Increase in activated CD4 T cells but not statistically significant. Further results derive from published poster at SITC 2021 in November 2021, Database cut-off date was May 14, 2021.

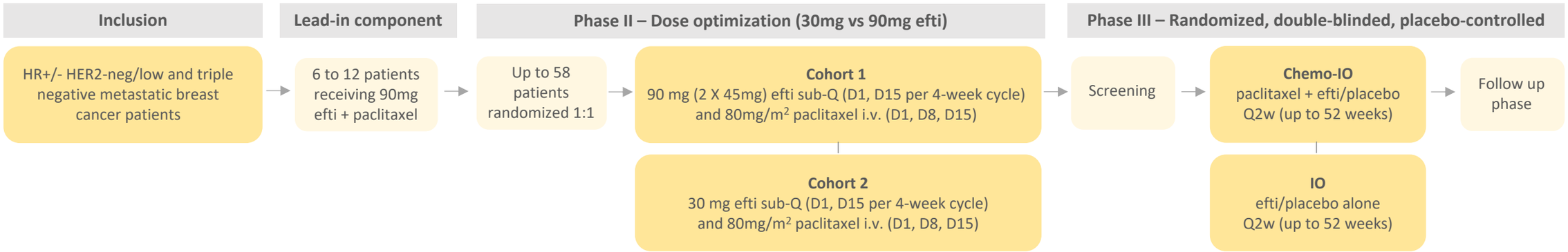
AIPAC-003 Phase II/III Trial Underway in Metastatic Breast Cancer

AIPAC-003: **A**ctive **I**mmunotherapy (Eftilagimod Alpha) and **PAC**litaxel

AIPAC-003: Integrated Phase II/III trial in Metastatic Breast Cancer (MBC)

- Trial design provides risk-balanced approach and incorporates feedback from FDA & EMA, including expansion of HR+/- HER2-neg/low and triple negative MBC patient population that together account for ~78% of breast cancer cases[1]
- Unlike previous trial that administered efti + paclitaxel on different days and ceased paclitaxel at six months, AIPAC-003 patients will receive both on same day and efti + paclitaxel treatment can continue until disease progression.
- First patient enrolled May 2023*

AIPAC-003 Study Design



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; * As reported on 25 May 2023, Immutep Doses First Patient in AIPAC-003 Phase II/III Trial for Metastatic Breast Cancer. ** Subject to results and resources. [1] Cancer Stat Facts: Female Breast Cancer Subtypes - NCI SEER. [2] World Health Organization; Breast Cancer Fact Sheet. [3] Estimation of Datamonitor Healthcare, Informa Pharma Intelligence for US, Jap, EU

Additional Oncology Indications

Efti + Anti-PD-L1 (Avelumab) in Metastatic Urothelial Cancer

INSIGHT-005 – Phase I study evaluating efti + avelumab (anti-PD-L1) in metastatic urothelial cancer*

- Investigator-initiated study evaluating safety & efficacy of efti and avelumab (BAVENCIO®) in 30 patients
- Jointly funded by Immutep & Merck KGaA, Darmstadt, Germany
- Expansion into urothelial cancer builds on core strategy to increase target indications to exploit efti's full potential
- In INSIGHT-004 trial, efti + BAVENCIO® was safe and showed promising signals of efficacy with a PR rate of 42% (5/12)** in patients with various advanced solid tumors#. Deep & durable responses seen in patients with low/no PD-L1 expression and in non-immunogenic tumors.
- First patient expected to be enrolled & dosed in H2 CY2023

Merck KGaA
Darmstadt, Germany

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KRANKENHAUS NORDWEST

* Ongoing trial as of May 2023: Immutep Receives Approval to Initiate INSIGHT-005 Trial Evaluating Eftilagimod Alpha and Anti-PD-L1 Therapy BAVENCIO® **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.

Soft Tissue Sarcoma: Orphan Disease with High Unmet Need

Investigator-initiated trial studying novel triple combination of efti + radiotherapy + KEYTRUDA

EFTISARC-NEO: Open-label Triple Combination (Efti+Radiotherapy+Anti-PD-1) Phase II trial in Soft Tissue Sarcoma

- Novel triple combination of efti with radiotherapy and anti-PD-1 therapy KEYTRUDA® (pembrolizumab) has potential to generate a robust anti-tumor immune response
- First time efti will be studied in neoadjuvant, non-metastatic cancer setting, which importantly will provide access to tumor tissue prior to and after treatment, where the impact of this novel triple combination on the tumor microenvironment (TME) can be assessed
- Cost-efficient Phase II study predominantly funded by an approved grant from the Polish government
- First patient dosed in July 2023 and up to 40 patients will be enrolled

"We are excited to begin this chemotherapy-free study combining radiotherapy with the novel immunotherapy, eftilagimod alpha, and pembrolizumab. Given efti's synergistic effects with immune checkpoint inhibitors and its ability to arm, activate, and proliferate cytotoxic T cells with radiotherapy-induced cancer antigens, this combination has a strong foundation to drive effective immunity against soft tissue sarcoma, a rare and aggressive disease in immense need of new therapeutic approaches."

- Dr. Paweł Sobczuk, Maria Skłodowska-Curie National Research Institute of Oncology

Trial initiated in April 2023 as disclosed on 17 April 2023: Immutep Announces Initiation of Investigator-Initiated Phase II Trial in Soft Tissue Sarcoma in Neoadjuvant Setting

Preclinical Programs

Novel Small Molecule Anti-LAG-3 Collaboration

Collaboration established in 2019 combining Immutep's deep LAG-3 biology experience and expertise of world leading scientists at Cardiff University

"We are delighted to collaborate with Immutep on this important project to develop a **small molecule anti-LAG-3** treatment for cancer patients that could offer the **convenience of a tablet or capsule at a fraction of the cost of existing anti-LAG-3 candidates**."

Professor Andrew Godkin, Theme Lead in Immunology in the College of Biomedical Life Sciences, Cardiff University*

* 8 June 2021, Immutep Reveals a New anti-LAG-3 Research Program

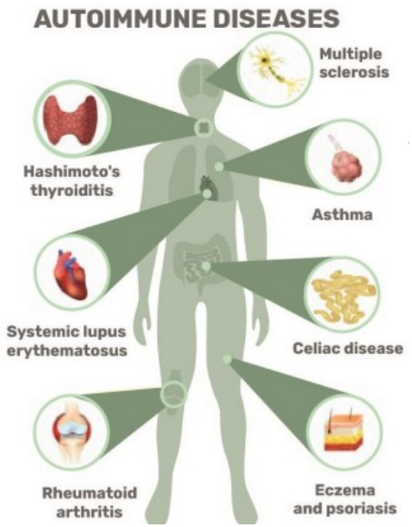
Targeting the Causes of Autoimmune Diseases

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)

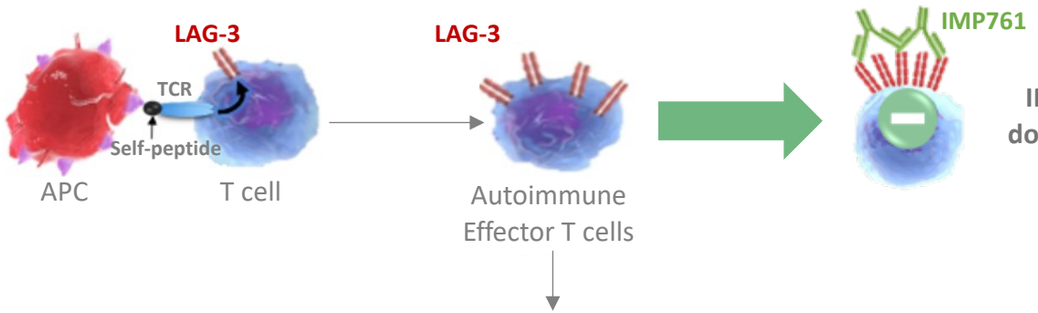
Future Approaches Target Causes of Autoimmune Diseases

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.

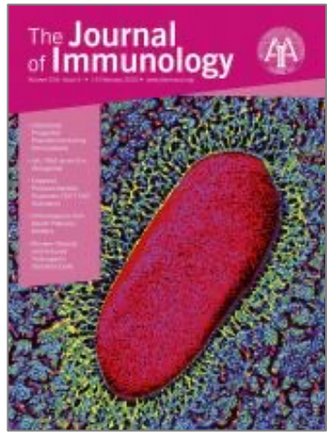
IMP761: First-in-Class LAG-3 Agonist is Potential Game-Changer

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. Expect to enter clinic by mid-2024.



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.

Lis Boyce

Non-Executive Director

Lis Boyce has over 30 years' experience as a corporate lawyer and is a partner at Piper Alderman. She has a strong focus on Life Sciences and Healthcare, and is deputy chair of AusBiotech's AusMedtech Advisory Group, as well as a member of AusBiotech's State Committee for NSW.

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, PhD

Executive Director, CSO

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.

Florian Vogl, MD, PhD

Chief Medical Officer

Dr Vogl is a board-certified MD and has over 13 years in the biopharmaceutical industry with extensive clinical development expertise in the field of oncology in the Europe and the US through roles at Cellestia Biotech, Rainier Therapeutics, Novartis and Amgen.

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, PhD

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, PhD

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 of 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, PhD

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.

Strong Balance Sheet & Significant Milestones Ahead in 2023

- ✓ Strong cash position of A$123.4m as of 30 June 2023 post A$80m capital raise providing cash runway to early CY2026*
- ✓ Initiated AIPAC-003 PII/PIII trial of efti + chemo in MBC
- ✓ Commenced cost-efficient investigator-initiated chemo-free EFTISARC-NEO PII study in soft tissue sarcoma
- ✓ Presented final data from TACTI-002 (Part B) in anti-PD-(L)1 refractory 2L NSCLC
- ✓ Presented final data from TACTI-002 (Part C) in 2L HNSCC
- ✓ Received regulatory approval for initiation of jointly-funded INSIGHT-005 with Merck KGaA, Darmstadt, Germany

- Data updates, including Overall Survival, from TACTI-002 PII trial in 1L NSCLC at upcoming ESMO Congress 2023
- Complete enrolment (~91% enrolled) and expect top-line results from randomised TACTI-003 Phase IIb trial*
- Data updates from triple combination INSIGHT-003 PI trial with efti + anti-PD-1 + chemotherapy in 1st line NSCLC
- Updates from investigator-initiated INSIGHT-005 and EFTISARC-NEO studies
- IND-enabling studies of IMP761
- Updates from partnered programs
- Updates regarding expansion of clinical trial pipeline

* As reported in Immutep Quarterly Activities Report on 31 July 2023.

immutep

LAG-3 IMMUNOTHERAPY

Thank You