



The global leader in developing LAG-3 therapeutics

Jefferies Virtual Healthcare Conference
June 1 – June 4, 2021

(ASX: IMM, NASDAQ: IMMP)

Notice: Forward Looking Statements



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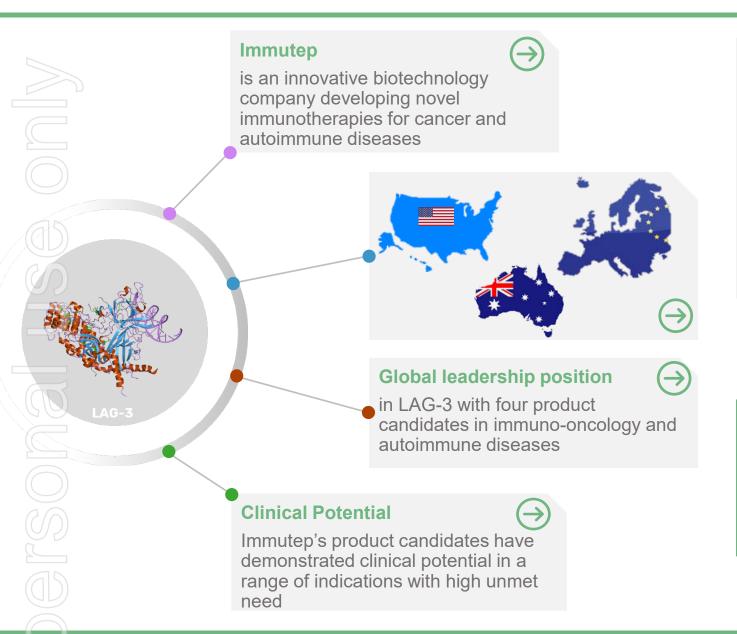
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Overview





Collaboration deals executed with industry leaders



















Corporate Strategy:

To develop product candidates to sell, licence or partner with large pharmaceutical companies at key value inflection points





LAG-3 Overview - The most promising immune checkpoint -

LAG-3 Therapeutic Landscape Overview



		Company	Program	Preclinical	Phase I	Phase II	Phase III	Total Trials	Patients
	Agonist	LAG-3 IMMUNOTHERAPY	Eftilagimod Alpha ⁽⁵⁾		10	4		14	940
		BMS	Relatlimab		7	32	2	41	9,509
		U NOVARTIS	leramilimab		1	4	Validation "demonstrate a benefit for	5	960
		Merck & Co. Inc.	Favezelimab		1	5	patients" ⁽⁶⁾	6	1066
		Macrogenics	Tebotelimab		3	3		6	1514
λ		H-L Roche	RO7247669		1	2		3	538
Oncology	रु	B.I.	BI754111		4	1		5	649
Ú	Antagonist	Regeneron ⁽¹⁾	Fianlimab		1	1		2	836
	Ā	Tesaro ⁽³⁾	TSR-033		1	1		2	139
		Incyte	INCAGN02385		1	1		2	74
		Symphogen ⁽²⁾	SYM022		3			3	169
		F-star	FS-118		2			2	102
) =	Innovent	IBI110		1			1	268
		Xencor	XmAb-22841		1			1	242
Autoimmune	Agonist	immutep [©]	IMP761						
	Depleting AB	gsk (4)	GSK2831781 (IMP731)		2	1		3	164

Sources: GlobalData, Company websites, clinicaltrials.gov, and sec.gov, as of 1 June 2021. 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

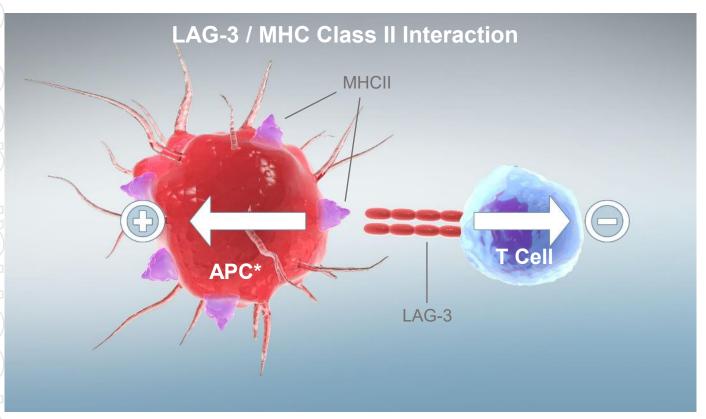
- 4) Includes two completed Phase I studies and one discontinued Phase 2 study (see slide 9)

LAG-3 as a Therapeutic Target



LAG-3, an immune checkpoint, is widely expressed on tumor infiltrating lymphocytes (TILs)

and cytotoxic T cells -> LAG-3 / MHC II interaction is a validated target for IO



→ Positive regulation of antigen presenting cells (APCs) → increase in antigen presentation to cytotoxic CD8⁺T cells



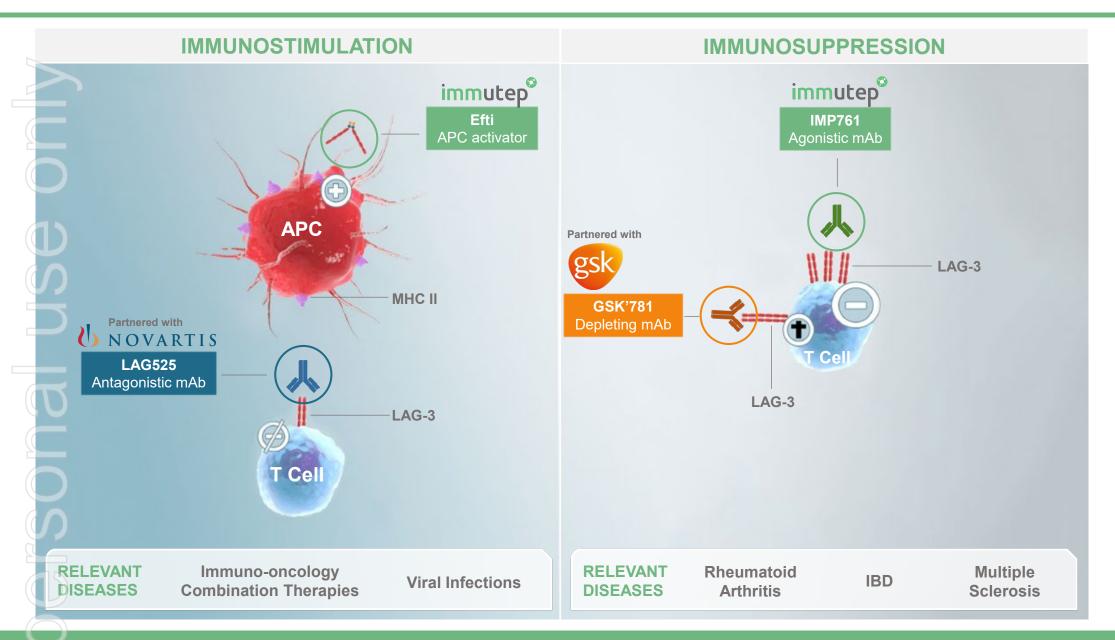
→ Negative regulation of LAG-3⁺ T Cells



Targeting LAG-3 / MHC II:

Multiple Therapeutics in Numerous Diseases





Immunotherapy Pipeline*



Metastatic Breast Cancer (Chemo – IO) AIPAC Non-Small-Cell Lung Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1) TACTI-003 Solid Tumors (IO – IO) (2), (3a) INSIGHT-004 Solid Tumors (IO – IO) (2), (3b) Merck KGaA, QSK Merck KGaA, QSK	JS\$29.9 billion JS\$22.6 billion US\$1.9 billion
AIPAC Non-Small-Cell Lung Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1b) TACTI-003 Solid Tumors (IO – IO) (2), (3a) INSIGHT-004 Merck KGaA, Darmstadt, Germany Merck KGaA, QSK MSD INVENTING FOR LIFE MSD INVENTING FOR LIFE Merck KGaA, Darmstadt, Germany Merck KGaA, QSK	JS\$22.6 billion
AIPAC Non-Small-Cell Lung Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1b) TACTI-003 Solid Tumors (IO – IO) (2), (3a) INSIGHT-004 Merck KGaA, Darmstadt, Germany Merck KGaA, QSK MSD INVENTING FOR LIFE Merck KGaA, Darmstadt, Germany Merck KGaA, QSK	JS\$22.6 billion
TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1) TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1b) TACTI-003 Eftilagimod Alpha (efti or IMP321) APC activating Solid Tumors (IO – IO) (2), (3a) INSIGHT-004 Merck KGaA, M	
Eftilagimod Alpha (efti or IMP321) APC activating TACTI-002 Head and Neck Squamous Cell Carcinoma (IO – IO) (1b) TACTI-003 Solid Tumors (IO – IO) (2), (3a) INSIGHT-004 Pfizer Merck KGaA, Darmstadt, Germany Merck KGaA, Merck KGAA	JS\$1.9 billion
Eftilagimod Alpha (efti or IMP321) APC activating Head and Neck Squamous Cell Carcinoma (IO – IO) (1b) TACTI-003 Solid Tumors (IO – IO) (2), (3a) INSIGHT-004 Pfizer Merck KGaA, Darmstadt, Germany Merck KGaA, QSK	1.9 Illilia e.1
(efti or IMP321) APC activating Solid Tumors (IO – IO) (2), (3b) Merck KGaA, Darmstadt, Germany Merck KGaA, Esk	
APC activating Solid Tumors (IO – IO) (2), (3b) Merck KGaA, QSK	
soluble LAG-3 INSIGHT-005 Darmstadt, Germany	
protein Melanoma (IO – IO) (1) TACTI-mel	US\$4.5 billion
Solid Tumors (In situ Immunization) (2) INSIGHT	
Solid Tumors (Cancer Vaccine)(4a) YNP01 / YCP02 / CRESCENT 1 CYTLING Cytetoxic T tymphocyte Immunotherapy in Cancer	
	US\$2.3 billion
COVID-19 disease (Monotherapy) ⁽⁷⁾	
Efti EAT-COVID EAT-COVID AGE-1-VALVOHILLAN EAT-COVID	
IMP761 (Agenist AP)	S\$149.4 billion (2025)
(Agoriist Ab)	(====)

Information in pipeline chart current as at June 2021

- (2) INSIGHT Investigator Initiated Trial ("IIT") is controlled by lead investigator and therefore Immutep has no control over this (6)

- https://www.kbvresearch.com/autoimmune-disease-therapeutics-market/)
 (7) IIT conducted by University Hospital Pilsen. Immutep has no control over this trial.

Immutep Out-Licensed Immunotherapy Pipeline*





- (3) Reflects completed Phase I study in healthy volunteers and in patients with plague psor

- https://clinicaltrials.gov/ct2/results?cond=&term=GSK2831781&cntry=&state=&city=&dist= and
- Discontinued in Jan 2021

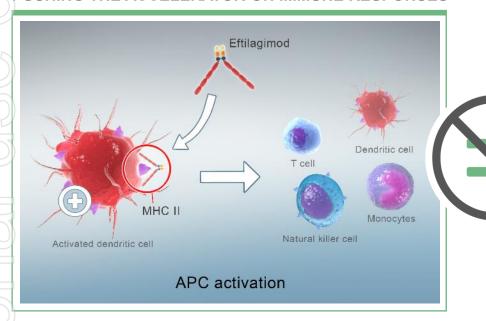


Eftilagimod Alpha (efti or IMP321)

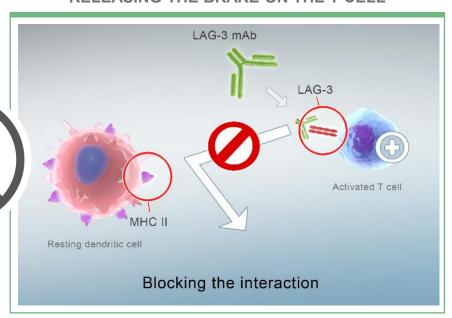
Efti: an Innovative LAG-3 IO Product Candidate



- > the only MHC II agonist (APC activator) product candidate currently in clinical development synergistic with other therapeutic agents and modalities e.g. IO agents or chemotherapy
- "PUSHING THE ACCELERATOR ON IMMUNE RESPONSES"



"RELEASING THE BRAKE ON THE T CELL"



Efti is an MHC II agonist

APC activator

- boosts and sustains cytotoxic T cell responses
- activates multiple immune cell subsets

LAG-3 antagonist (or LAG-3 blocking) antibodies

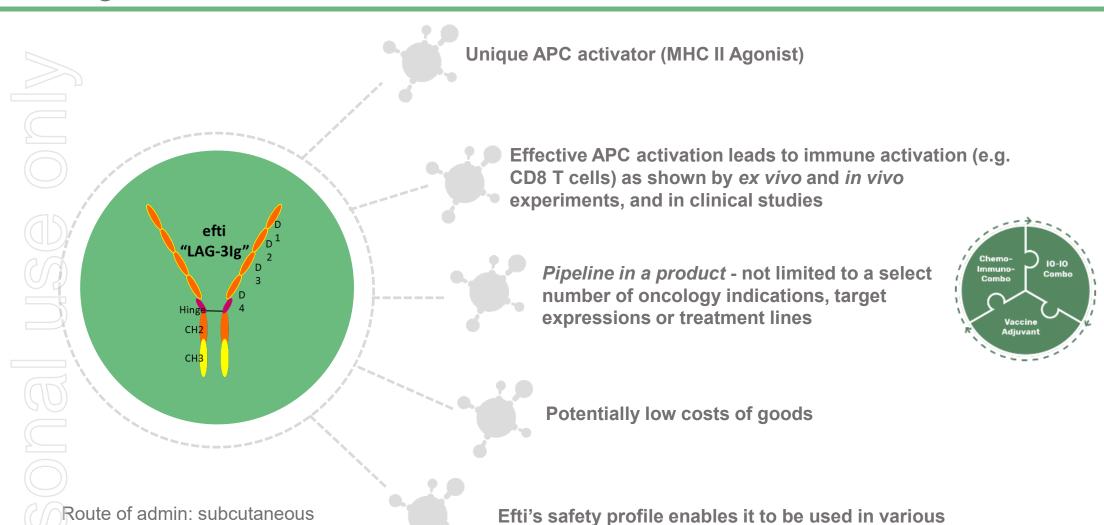
Immune checkpoint inhibitor

increases cytotoxicity of pre-existing CD8
 T cell response

Efti: Potential Pipeline in a Product

High intrinsic value





combination settings

* - can be extended to every 3 weeks after 6 months

Dose: 30 mg every 2 weeks*



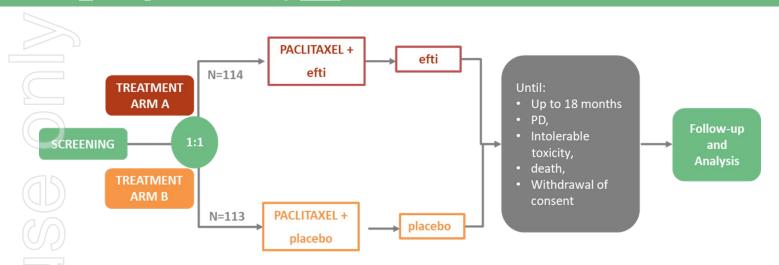
Efti + Chemo Combination:

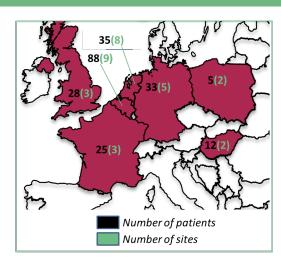
Exciting interim OS results
Presented at SABCS in December 2020

Efti: AIPAC (Phase IIb) design



AIPAC: Active Immunotherapy PAClitaxel in HER2-/ HR+ metastatic breast cancer (MBC)





Primary endpoint(*) (presented Mar. 2020) included:

Assessment of Progression-Free Survival (PFS)

Secondary endpoints(*) (presented Dec. 2020) included:

- Overall Survival (OS)
- Safety and tolerability
- Overall Response Rate (ORR) and other efficacy parameters
- Biomarker and Immune Monitoring

Fact sheet

- √ Conducted in 7 EU countries
- √ Local and blinded independent central read
- √ Last Patient In enrolled Jun. 2019
- ✓ Primary analysis PFS (immature OS) Mar. 2020
- √ Follow-up 1 analysis OS Sep. 2020 (SABCS Dec. 2020) ~60% OS events
- ❖ 2nd OS follow-up analysis planned H2 2021

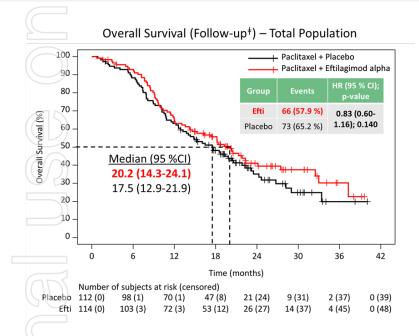
AIPAC Phase IIb Clinical Results

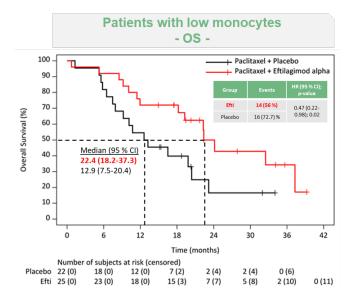


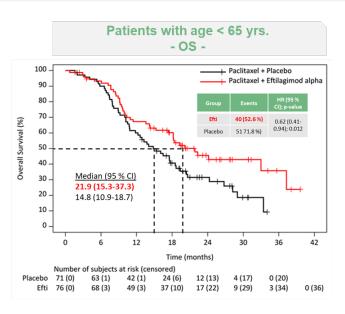


For predefined sub-groups:

Clinically meaningful absolute and relative improvement for efficacy parameters, significance for OS ESMO scale of magnitude* = level 4 (makes reimbursement very likely)







+9.1 months median OS

+7.1 months median OS

Quality of Life (QLQ-C30)

Significant deterioration of overall QoL in the placebo group at week 25, which was <u>not</u> observed in the efti group Very important for reimbursement → favorably for efti

Prior CDK 4/6

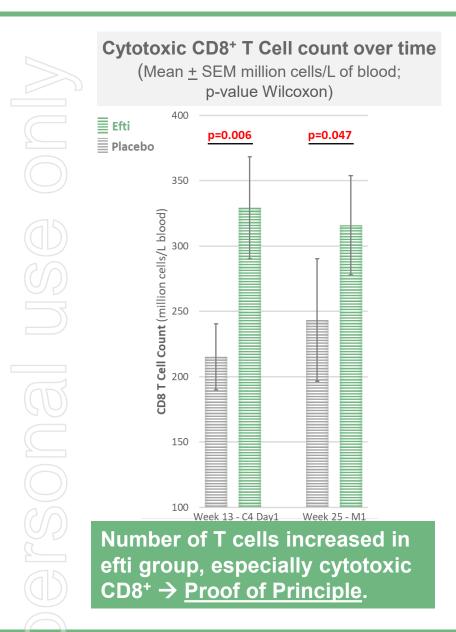
have negative impact on OS in placebo group (median reduced from 20.0 to 14.9 months), but <u>not</u> in the efti group (median OS 20.9 vs. 20.4 months)

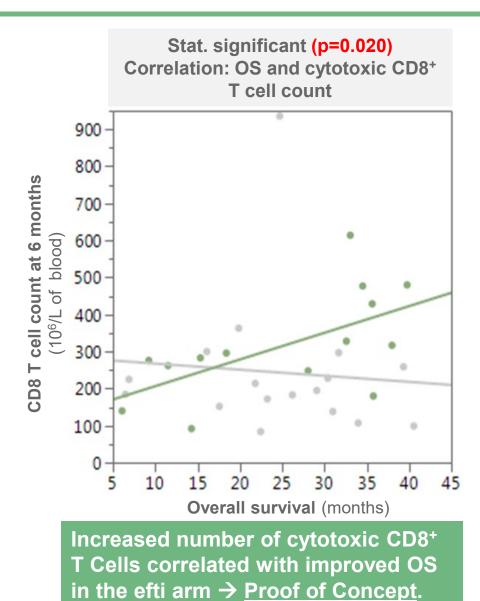
CDK4/6 are now standard, and most patients will have received it in future studies / real world → favorably for efti

AIPAC Phase IIb Clinical Results









AIPAC Phase IIb Clinical Results

Summary and Conclusions



First time

an APC activator has shown meaningful increase in Overall Survival (OS) in a randomised setting

Proof of Principle

Significant increase in cytotoxic T cell numbers compared to placebo

Proof of Concept

Prolonged OS in the overall population and clearly linked to pharmacodynamic effect (increase in CD8 T cells)

Path Forward

Regulatory (FDA and EMA) discussions are prioritised now



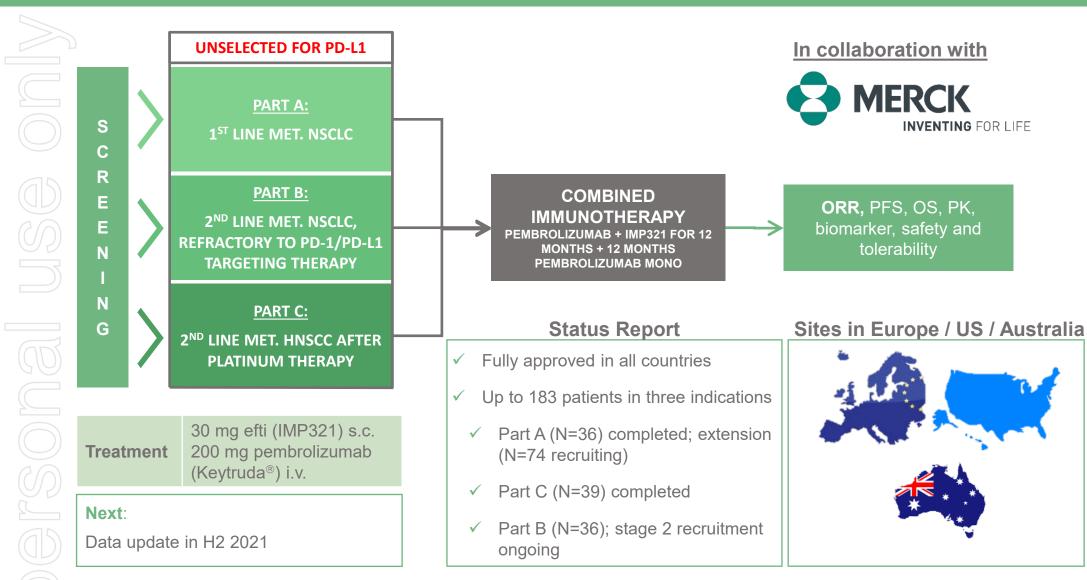
Efti + anti-PD-1 Combinations Update from ASCO 2021

Key Clinical Trials

TACTI-002 (Phase II) design & status



TACTI-002: Two ACTive Immunotherapeutics in NSCLC and HNSCC



TACTI-002: Phase II of efti and pembro in 1st line met NSCLC (Part A) BASELINE CHARACTERISTICS & EFFICACY*



Baseline Disease Characteristics*

Baseline parameters	N (%)
Age (years), median (range)	68.5 (53-84)
Female	11 (30.6)
Male	25 (69.4)
ECOG 0	15 (41.7)
ECOG 1	21 (58.3)
Non smokers	2 (5.6)
Current / Ex-smokers	34 (94.4)
Squamous pathology	15 (41.7)
Non-squamous pathology	21 (58.3)
Patients with liver metastasis	14 (38.9)

<u>Tumor Response*</u>

Best overall response, iRECIST	Local Read (investigator) N (%)	Blinded Read (BICR) N (%)
Complete Response	2 (5.6)	2 (5.6)
Partial Response	11 (30.6)	13 (36.1)
Stable Disease	11 (30.6)	10 (27.8)
Progression	8 (22.2)	6 (16.7)
Not Evaluable**	4 (11.1)	5 (13.9)
Disease Control Rate	24 (66.7)	25 (69.4)
Overall Response Rate* [95% CI interval]	13 (36.1) [20.8-53.8]	15 (41.7) [25.5-59.2]
Overall Response Rate – Evaluable pts*** [95% CI interval]	13 (40.6) [23.7-59.4]	15 (48.4) [30.1-60.9]

^{* -} All patients stage 1 and 2 (N=36) with \geq 1 treatment



^{** -} dropped off prior to first staging or were not evaluable post-baseline for any reason

^{*** -} Evaluable for efficacy meaning ≥ 1 treatment and ≥ 1 post baseline tumor staging

TACTI-002: Phase II of efti and pembro in 1st line met NSCLC (Part A) EFFICACY



ORR by PD-L1 subgroup*

	PD-L1	ORR iRECIST* (%)
	≥ 50% TPS	53.8
/ /	< 50% TPS	31.6
	≥ 1% TPS	44.0

^{*} according to investigator read, evaluable pts only

N=33; ** LN as target lesion; *** - pt had SD but < 6 wks --> BOR =

NE: NY not vet: NE not evaluable

Best response:

iSD

iPR

0 % 30 % 30 % 00 % 00 % 00 % 00 %

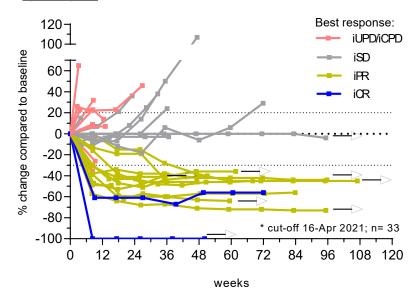
iUPD/iCPD

Overall PFS estimates by PD-L1 subgroup**

PD-L1	Median PFS iRECIST* (months)
Unselected	8.2
≥ 50% TPS	11.8
< 1% TPS	4.1

^{**} according to investigator read, minimum follow-up of 8.3 months, all patients stage 1 and 2 with \geq 1 treatment

Spider plot



Duration of Response (DOR)

- 92% responses confirmed
- 58% confirmed responses ongoing with 6+ months
- Median DOR estimated 13+ months

 At data cut-off, 7 pts still under therapy and 1 pt completed the 2 yrs of therapy



Waterfall plot

100

75

50

-25

-50

-75

Best % change from baseline

TACTI-002: Phase II of efti and pembro in 2nd line HNSCC (Part C) BASELINE CHARACTERISTICS & EFFICACY*



Baseline disease characteristics

Baseline parameters (N=39)	N (%)
Age, median (years)	62 (37-84)
Female	4 (10.3)
Male	35 (89.7)
ECOG 0	13 (33.3)
ECOG 1	26 (66.7)
Current smokers	6 (15.4)
Ex- or non-smokers	33 (84.6)
Previous chemotherapy	39 (100)
Previous cetuximab	16 (41.0)
Lung lesions	19 (48.7)
Liver lesions	6 (17.6)

Primary tumor location

Primary tumour location (N=39)	N (%)
Oral cavity	12 (30.8)
Oropharynx	14 (35.9)
Hypopharynx	7 (17.9)
Larynx	6 (15.4)

Tumor response*

Best overall response*, iRECIST	Investigator assessment N (%)
Complete Response	5 (13.5)
Partial Response	6 (16.2)
Stable Disease	3 (8.1)
Progression	17 (45.9)
Not Evaluable**	6 (16.2)
Disease Control Rate	14 (37.8)
Overall Response Rate [95% CI interval]	11 (29.7) [15.9 – 47.0]
Overall Response Rate - Evaluable pts*** [95% CI interval]	11 (35.5) [19.2 – 54.6]

^{* -} All patients (N=37) with \geq 1 treatment and no death due to COVID-19 prior to first post-baseline staging

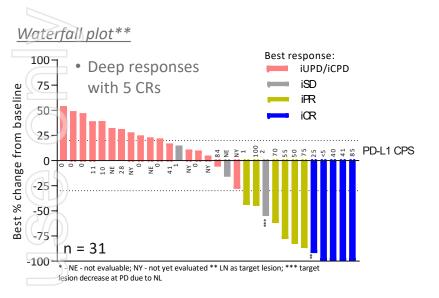
^{*** -} evaluable patients (N=31): \geq 1 treatment and \geq 1 post baseline tumor staging

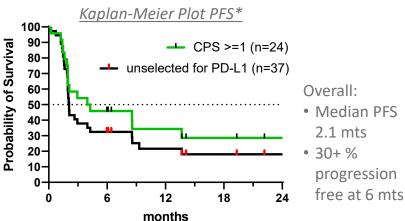


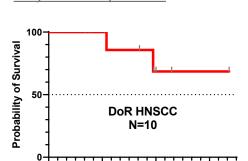
^{** -} dropped off prior to first staging or were not evaluable post-baseline for any

TACTI-002: Phase II of efti and pembro in **2nd line HNSCC** (Part C) **EFFICACY***









Duration of response (DOR) for

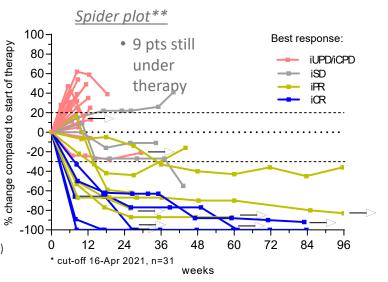
confirmed responders

ORR, PFS, DoR, OS for pts with CPS \geq 1 (N=24)*

Median OS	Median PFS	ORR iRECIST
(58% events)	(71% events)	(95% CI)
12.6 mts 54% alive at 12 mts	4.1 mts 45% PFS free at 6 mts	45.8 % (25.6-67.2)

* ≥ 1 treatment and no death due to COVID-19 prior to first post-baseline staging (N=37)

** >= 1 post baseline tumor staging (N=31)



Duration of response

months

- 91% confirmed responses
 - 80% confirmed responses ongoing (censoring at 4-20 months)
 - No progression prior to 6 months DOR
- Median duration of response cannot be estimated yet



18

INSIGHT-004*: Phase I of efti and avelumab



- INSIGHT-004 is a dose escalation study evaluating efti in combination with Bavenico (avelumab). Conducted as the 4th arm of the INSIGHT platform trial.
- 12 pts (cohort 1: gastric, gallbladder, colon cancer, pleural mesothelioma; cohort 2: gastric, gastroesophageal, anal, rectum, cervix uteri)

Key findings

- No DLTs and no new safety signals with standard dose of avelumab
- 5/12 (42%) patients with partial responses in:
 - o 1st line MSI high colorectal cancer
 - o 1st line pleural mesothelioma
 - o after radiochemo in squamous anal cell
 - pre-treated squamous cervical cancer (PD-L1 TPS < 1%) carcinoma
 - o 3rd line gastroesophageal junction
- Efti plus avelumab is safe and well tolerable
- Encouraging single cases in non ICI sensitive cancers

In collaboration with



Merck KGaA, Darmstadt, Germany

Institut für Klinisch-Onkologische Forschung
KRANKENHAUS
NORDWEST





12

Patients: 2 cohorts of 6 patients each



6 months

Combination treatment , then 6 months avelumab monotherapy





INSIGHT-005: Phase I for efti and bintrafusp alfa



To evaluate the feasibility and safety of combined treatment with bintrafusp alfa (M7824) and eftilagimod alpha. Conducted as the 5th arm of the INSIGHT trial*.

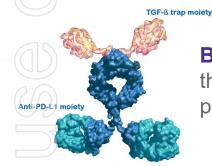
In collaboration with

Merck KGaA, Darmstadt, Germany

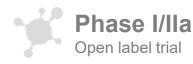


Institut für Klinisch-Onkologische Forschung





Bintrafusp alfa: bifunctional fusion protein that aims to block two immunosuppressive pathways, TGF-β and PD-L1.







Efti: LAG-3 fusion protein that activates antigen presenting cells (APCs), via the LAG-3 – MHC II pathway





Solid tumors

- Histologically confirmed locally advanced or metastatic
- received ≤4 prior lines of therapy

Q2W for maximum of 12 months

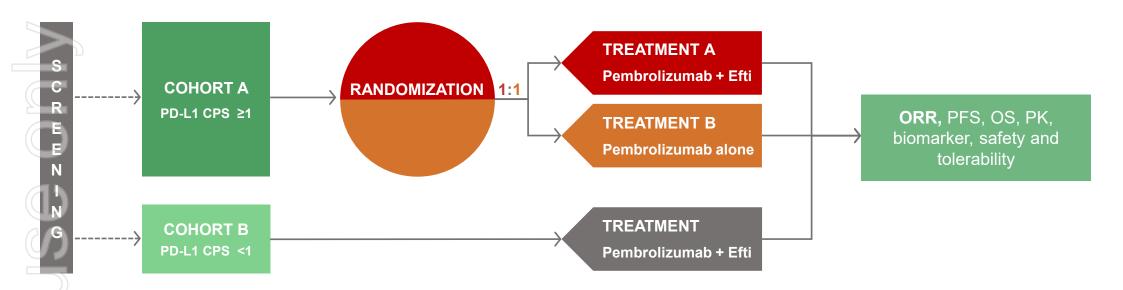
- bintrafusp alfa 1.200mg i.v.
- eftilagimod alpha 30mg s.c.

RP2D, Safety, ORR, PFS, PK, PD

TACTI-003 Trial in 1st line HNSCC

Current Design + Status





Design:

- Randomised study with ORR as primary endpoint
- Sites worldwide (AU, US, Europe)
- Approx. 154 pts: either to be randomized to have sufficient pts. in each group or in an experimental arm

Status:

- Advanced planning & study start up expected in mid 2021
- Fast Track designation granted by FDA in April 2021

In collaboration with



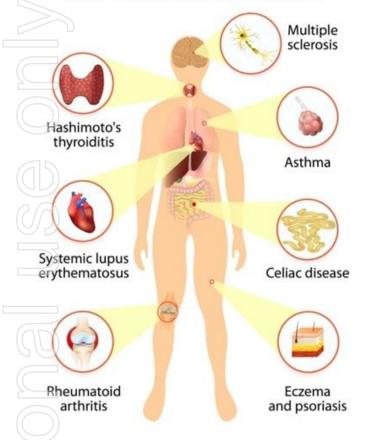


IMP761 - Autoimmune Diseases -

Broad potential in targeting auto-reactive memory T cells with IMP761





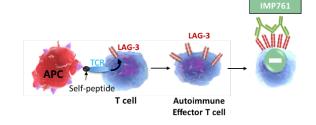


THE PRESENT: FIGHTING THE SYMPTOMS Treating general inflammation:

corticoids, methotrexate, anti-TNF-α, -IL-6, -IL-17, -IL-23 mAbs

THE FUTURE: FIGHTING THE CAUSE Treating the disease process:

silencing the few autoimmune memory T cells accumulating at the disease site with IMP761



POTENTIAL GAME CHANGER IN AUTOIMMUNE DISEASES (\$149.4 billion market size by 2025)¹



Corporate Snapshot & Outlook

Corporate Snapshot



Ticker symbols	IMM (ASX) IMMP (NASDAQ)
Securities on issue ⁽¹⁾ (as at 1 June 2021)	696.1 million ordinary shares
Cash & Cash equivalents (as at 31 March 2021)	~A\$51.7 million (US\$39.3 million)
Market Cap ⁽²⁾ (as at 1 June 2021)	A\$487.3 million (US\$377.3 million)

Notes:

⁽¹⁾ As at 18 May 2021~38.46% of the ordinary shares are represented by ADSs listed on NASDAQ where 1 ADS represents 10 ordinary shares. For a detailed summary of securities on issue refer to latest Appendix 2A released on ASX.

⁽²⁾ Market capitalization based on ASX share price and basic ordinary shares outstanding.

NB: US equivalent of amounts above are based on foreign exchange rate for AUD/USD of 0.7744 for market capitalization, and the US cash & cash equivalents amount was calculated using FX rate of 0.7602 as at 31 March 2021.

2020 & 2021 News Flow*



2020

- ✓ AIPAC PFS, ORR and OS delivered
- ✓ US **IND** for MBC
 - **TACTI-002** recruitment & data delivered e.g. at ASCO, EMSO & SITC for
 - ✓ 1st line NSCLC
 - ✓ 2nd line NSCLC
 - ✓ 2nd line HNSCC
- ✓ Support of global **COVID** efforts (Phase II)
- ✓ New partnerships: LabCorp
- ✓ Progress from IMP761
- ✓ Expansion of IP portfolio
 - Strong financial position

- ☐ Final data from **AIPAC**: 2nd OS follow up
- ✓ Data from **TACTI-002** & final data from **INSIGHT-004** at ASCO
- Recruitment & first data from **TACTI-002** Part A extension
- Start & ongoing recruitment of **new trial in 1st** line **HNSCC** (TACTI-003)
- Ongoing regulatory engagement
- Updates from IMP761
- Updates from partnered programs (e.g. GSK, Novartis, EAT COVID, CYTLIMIC and EOC Pharma)
- Potential new partnerships and expansion of existing programs
- ✓ Validation of LAG-3/MHC-II interaction through readout of BMS's Phase III data for relatlimab + nivo combination

Summary



Global leadership position in LAG-3 with four LAG-3 related product candidates in immuno-oncology and autoimmune disease

Multiple active clinical trials (including partnered candidates), with further significant data read-outs in 2021

Compelling clinical data from efti & strong rationale to combine with multiple FDA approved treatments

Established collaborations with e.g. Merck (MSD), Pfizer / Merck KGaA, Darmstadt; Novartis and GSK



Thank You