

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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This presentation is authorised for release by the CEO of Immutep Limited.

Overview



Immutep

 \ominus

is an innovative biotechnology company developing novel immunotherapies for cancer and autoimmune diseases

Global leadership position



in LAG-3 with four product candidates in immuno-oncology and autoimmune diseases

Clinical Potential



Immutep's product candidates have demonstrated clinical potential in a range of indications with high unmet need

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	immutep [©]	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
λf		H-L Roche	RO7247669		1	2		3	538
Oncology	귮	B.I.	BI754111		4	1		5	649
O	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						
Autoim	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

⁽https://www.sec.gov/Archives/edgar/data/872589/000110465919000977/a19-1325_18k.htm)

²⁾ On 3 Apr. 2020 Les Laboratoires Servier Acquires Symphogen

³⁾ Tesaro was acquired by and is now part of GSK (www.gsk.com/en-gb/media/press-releases/gsk-completes-acquisition-o

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

⁵⁾ Including IITs, two planned trials (MBC trial by EOC and HNSCC trial) and the EAT COVID trial

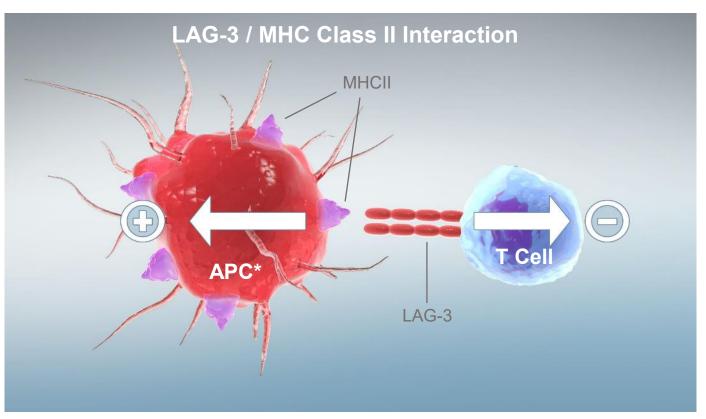
⁶⁾ RELATIVITY-047 (https://investors.bms.com/iframes/press-releases/press-release-details/2021/Bristol-Myers-Squibb-Announces-RELATIVITY-047-a-Trial-Evaluating-Anti-LAG-3-Antibody-Relatlimab-and-Opdivo-nivolumab-in-Patients-with-Previously-Untreated-Metastatic-or-Unresectable-Metasoma-Meets-Primary-Endopint-of-Progression-Free-Survival/default-aspy)

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



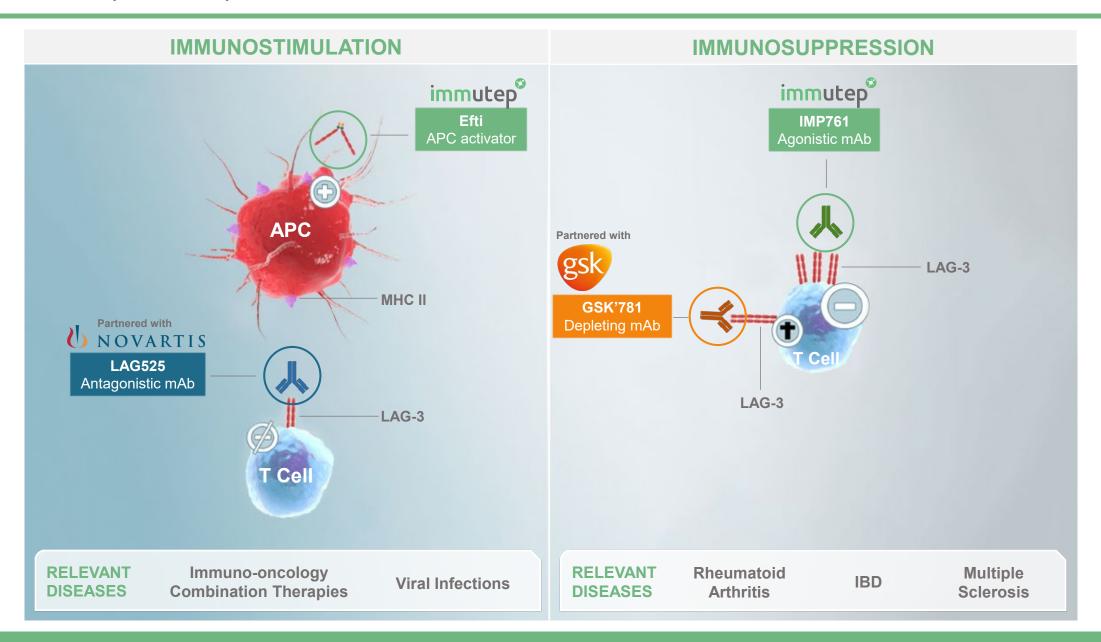
→ Negative regulation of LAG-3⁺ T Cells



Targeting LAG-3 / MHC II:

Multiple Therapeutics in Numerous Diseases









	Program	Preclinical	Phase I	Phase II	Late Stage ⁽⁵⁾	Commercial Rights	Market Size ⁽⁶⁾
		Metastatic Breast Cancer (Ch	emo – IO)				US\$29.9 billion
		Non-Small-Cell Lung Carcino TACTI-002	oma (IO – IO) ⁽¹⁾		MSD INVENTING FOR LIFE		US\$22.6 billion
		Head and Neck Squamous C TACTI-002	ell Carcinoma (IO – IO) ⁽¹⁾		MSD INVENTING FOR LIFE		LICCA O billion
	Eftilagimod	Head and Neck Squamous C TACTI-003	ell Carcinoma (IO – IO) ^(1b)		MSD INVENTING FOR LIFE		US\$1.9 billion
ology	Alpha (efti or IMP321)	Solid Tumors (IO – IO) ^{(2), (3a)} INSIGHT-004		Merck KGaA, Darmstadt, Germany		Global Rights	
Oncology	APC activating soluble LAG-3 protein	Solid Tumors (IO – IO) ^{(2), (3b)} INSIGHT-005		Merck KGaA, Darmstadt, Germany	S	immutep®	
		Melanoma (IO – IO) ⁽¹⁾ TACTI-mel					US\$4.5 billion
		Solid Tumors (In situ Immui INSIGHT	nization) ⁽²⁾				
		Solid Tumors (Cancer Vaccin YNP01 / YCP02 / CRESCEN		CYTLIMIC Cytotoxic T Lymphocyte Immunotherapy in Cancer			
		Metastatic Breast Cancer (Ch	emo – IO) ^(4b)	•	FEOL	Chinese Rights	US\$2.3 billion
Inf. Dis.	Efti	COVID-19 disease (Monother	rapy) ⁽⁷⁾		S	Global Rights ⁽⁸⁾	
	IMP761	EAT-GOVID			§)	Global Rights	US\$149.4 billion
Autoimm.	(Agonist AB)				§)	immutep"	(2025)
Notes							

- Information in pipeline chart current as at June 2021

- 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*





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



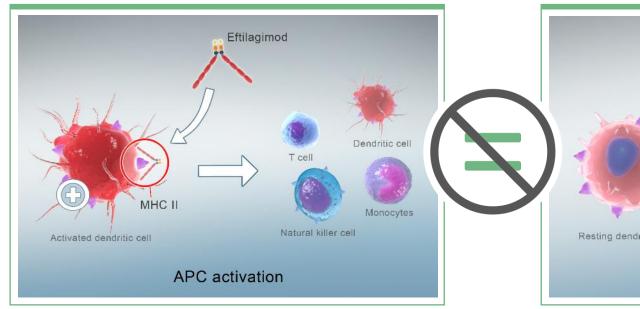
Eftilagimod Alpha (efti or IMP321)

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"

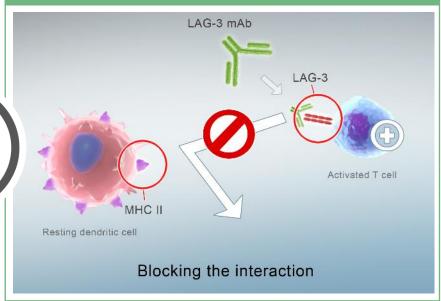


Efti is an MHC II agonist

APC activator

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

"RELEASING THE BRAKE ON THE T CELL"



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

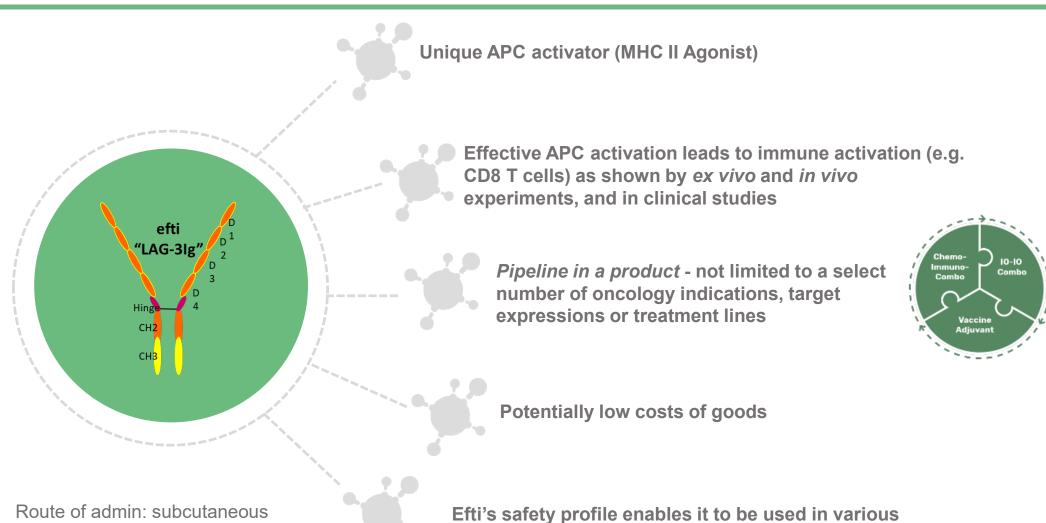
Immune checkpoint inhibitor

 increases cytotoxicity of pre-existing CD8 T cell response

Efti: Potential Pipeline in a Product

High intrinsic value





combination settings

Dose: 30 mg every 2 weeks*

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



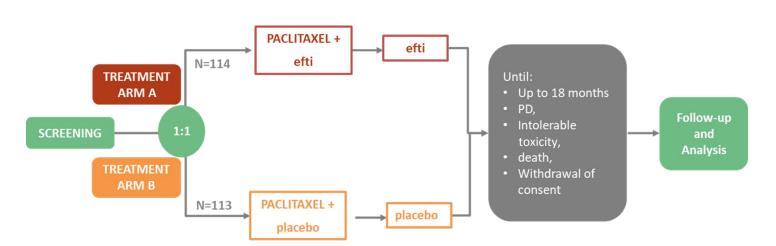
Efti + Chemo Combination:

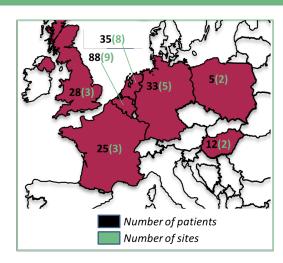
Exciting interim OS results
Presented at SABCS in December 2020

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 FU 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

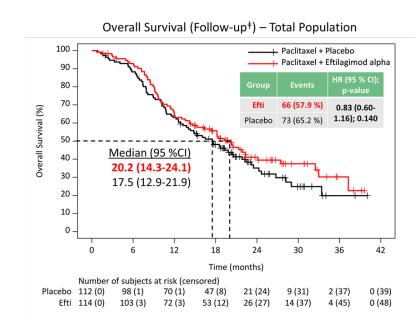
AIPAC Phase IIb Clinical Results

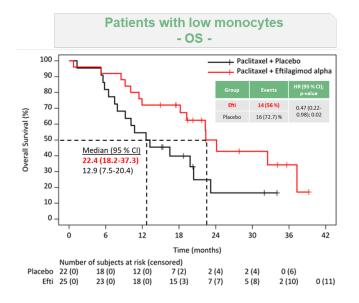


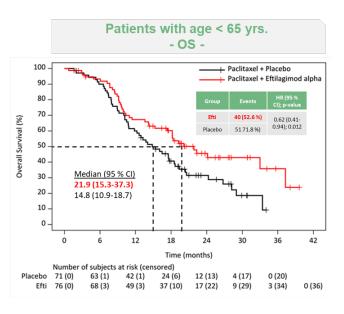


For predefined sub-groups:

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

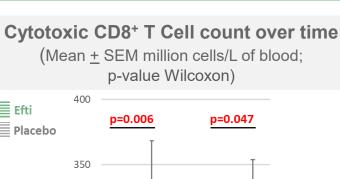
have negative impact on OS in placebo group (median reduced from 20.0 to 14.9 months), but <u>not</u> in the efti group (median OS 20.9 vs. 20.4 months)

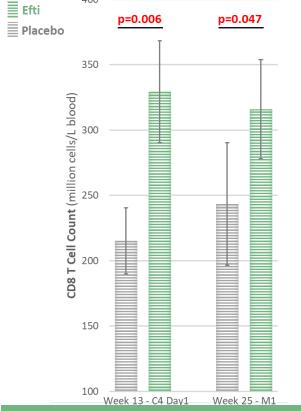
CDK4/6 are now standard, and most patients will have received it in future studies / real world → favorably for efti

AIPAC Phase IIb Clinical Results

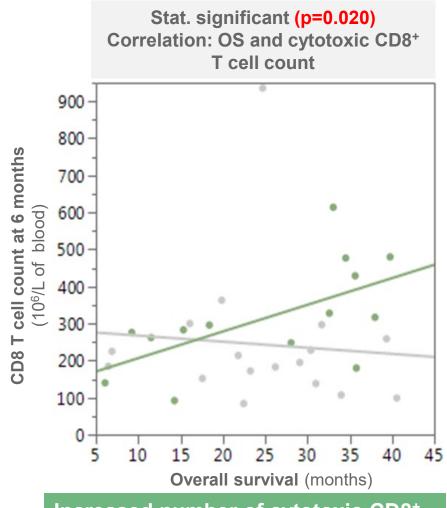








Number of T cells increased in efti group, especially cytotoxic CD8⁺ → Proof of Principle.



Increased number of cytotoxic CD8⁺ T Cells correlated with improved OS in the efti arm → Proof of Concept.

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



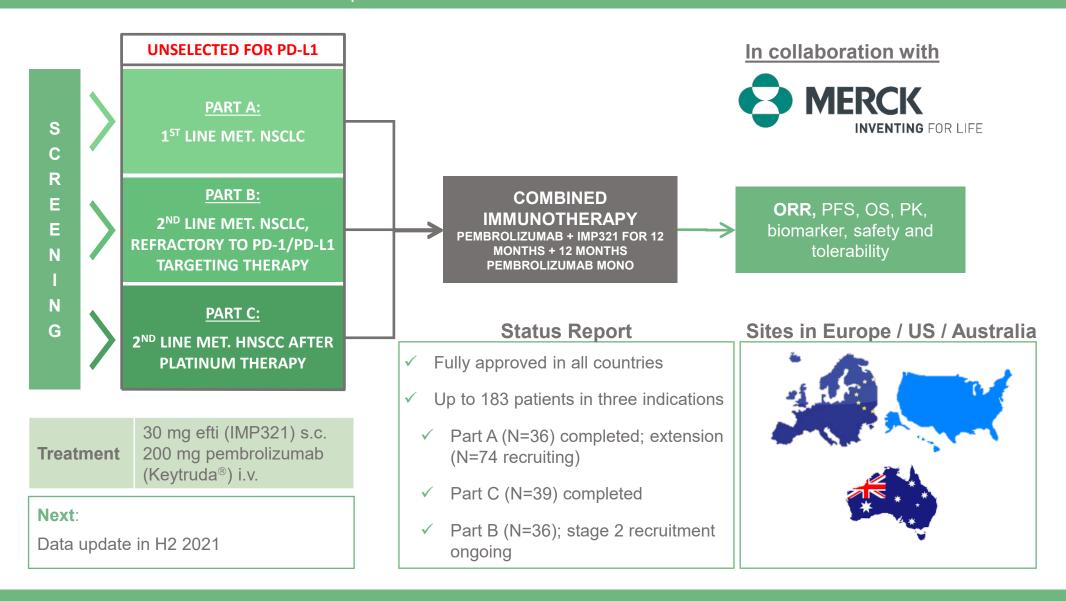
Efti + anti-PD-1 Combinations Update from ASCO 2021

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

Best response:

iSD

iPR

iUPD/iCPD

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

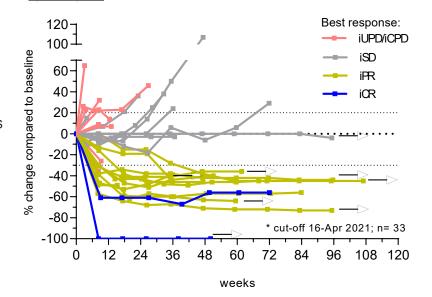
NE: NY not vet: NE not evaluable

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

-25

-50

-75

-100

Best % change from baseline

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

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

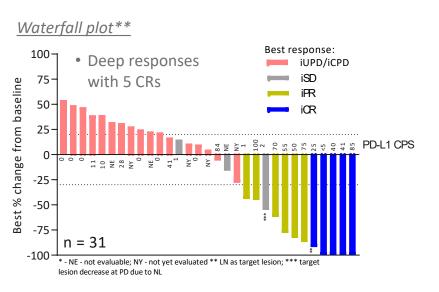
^{*** -} evaluable patients (N=31): \geq 1 treatment and \geq 1 post baseline tumor staging



^{** -} 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***

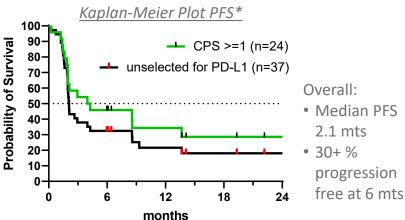


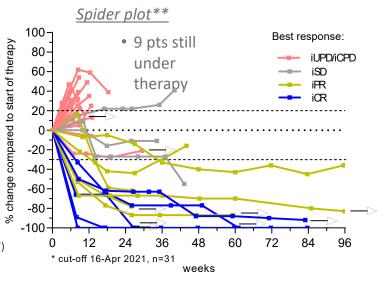


ORR, PFS, DoR, OS for pts with CPS \geq 1 (N=24)*

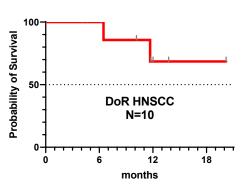
Median OS	Median PFS	ORR iRECIST
(58% events)	(71% events)	(95% CI)
12.6 mts 54% alive at 12 mts	4.1 mts 45% PFS free at 6 mts	45.8 % (25.6-67.2)

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





<u>Duration of response (DOR) for</u> <u>confirmed responders</u>



Duration of response

- 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



^{** &}gt;= 1 post baseline tumor staging (N=31)

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

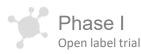
- No DLTs and no new safety signals with standard dose of avelumab
- 5/12 (42%) patients with partial responses in:
 - o 1st line MSI high colorectal cancer
 - 1st line pleural mesothelioma
 - o after radiochemo in squamous anal cell
 - pre-treated squamous cervical cancer (PD-L1 TPS < 1%) carcinoma
 - 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







Patients: 2 cohorts of 6 patients each



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

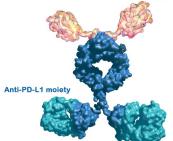
Merck KGaA, Darmstadt, Germany



Institut für Klinisch-Onkologische Forschung







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



Phase I/IIa



I **Z** Patients



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



12 months
Combination treatme



Two sites
Germany

Solid tumors

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

Q2W for maximum of 12 months

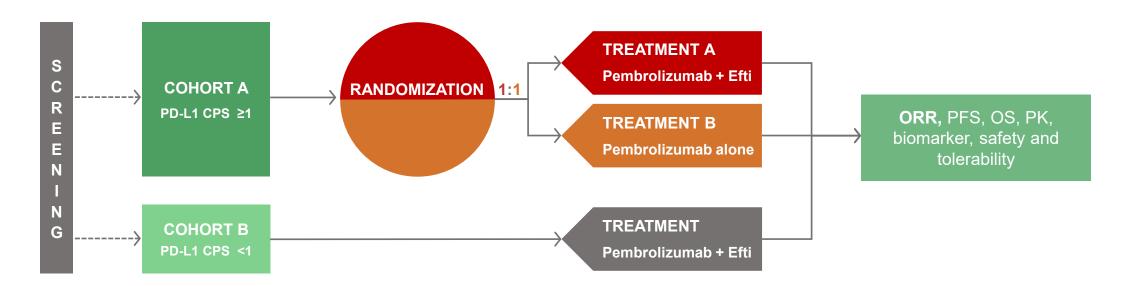
- bintrafusp alfa 1.200mg i.v.
- eftilagimod alpha 30mg s.c.

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



AUTOIMMUNE DISEASES

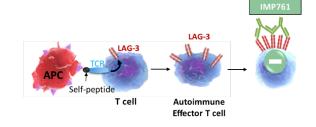




corticoids, methotrexate, anti-TNF-α, -IL-6, -IL-17, -IL-23 mAbs

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

2021

- ✓ 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