

### The global leader in developing LAG-3 therapeutics

Corporate Presentation May 2022

(ASX: IMM, NASDAQ: IMMP)



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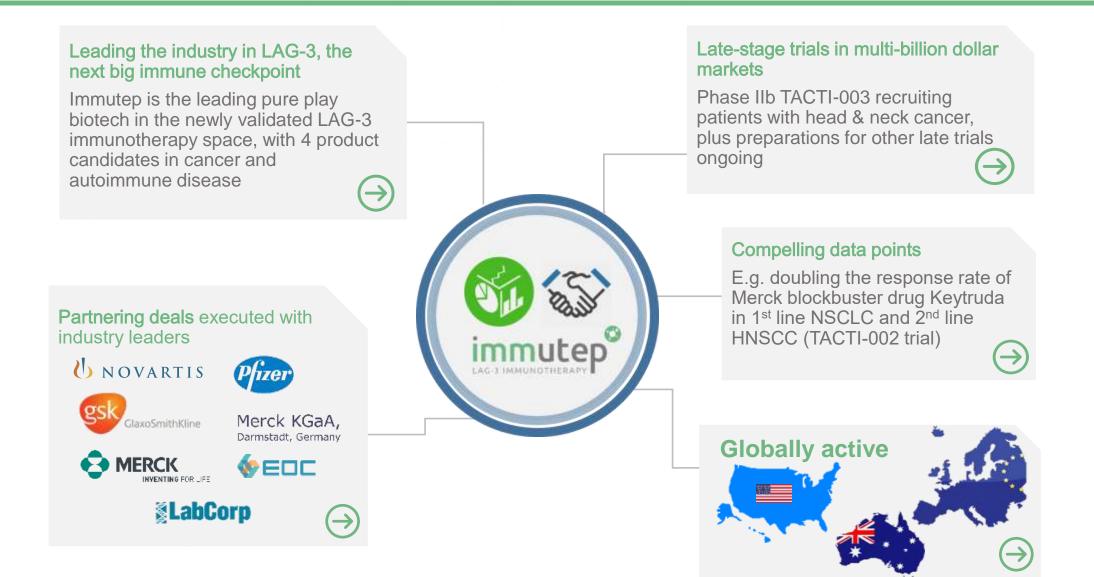
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### **Overview**





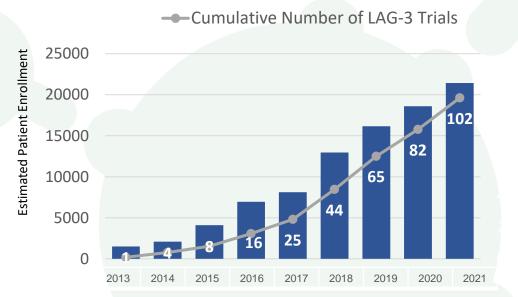


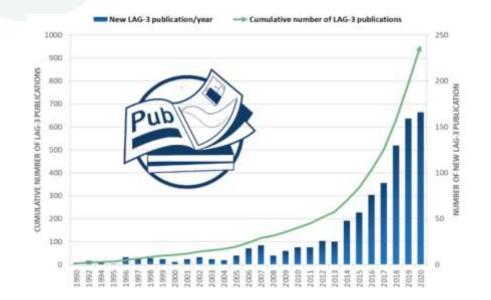
### LAG-3 Pioneer: French immunologist Prof Frédéric Triebel, Immutep CMO & CSO



LAG-3 is the most promising new immune checkpoint for cancer treatment

### **Expanding LAG-3 Clinical Trials & Publications**





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LAG-3 IMMUN

Over 100 clinical trials evaluating LAG-3 candidates

Over 20,000 patients in clinical trials globally

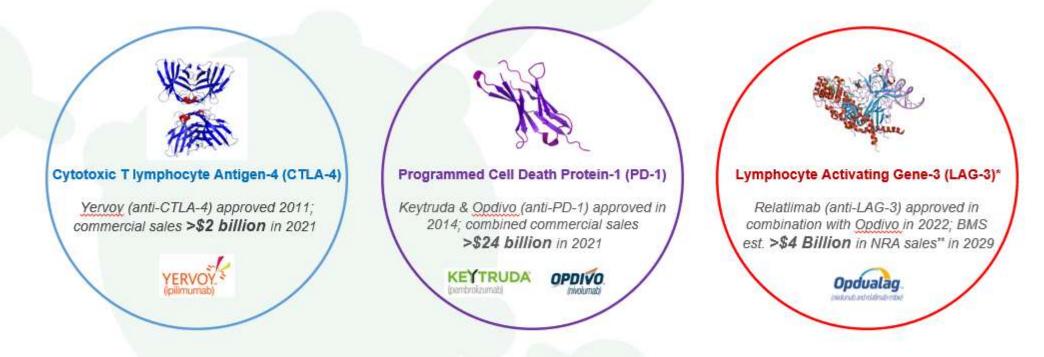
Over 900 LAG-3 publications in total

Sources: GlobalData, Dec 2021; PubMed, Jan 2022

### LAG-3: Validated Checkpoint with Unique Characteristics



Medicine's understanding of the immune system's role in controlling cancer has risen substantially since regulatory approval of immunotherapies targeting CTLA-4, PD-1, and now LAG-3 checkpoints.



LAG-3 is unique because both its inhibition of T cells & activation of dendritic cells engages both the adaptive & innate immune systems against cancer.



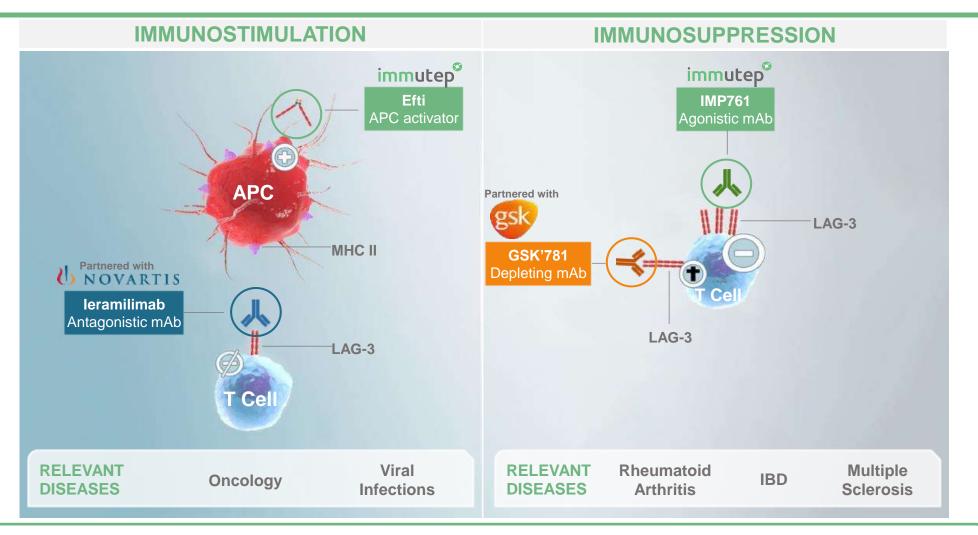
## LAG-3 Overview

### - A Validated Immune Checkpoint -

### **Targeting LAG-3 / MHC II:**

Immutep has multiple therapeutics in numerous diseases





- Immutep is the only company with four LAG-3 related compounds, each with a different mechanism of action for treatment of numerous diseases
- ✓ Two major partnerships with pharma and two products under own development

### Immutep's LAG-3 Trial Pipeline\*



	Program	Preclinical	Phase I	Phase II	Late Stage <sup>(5)</sup>	Commercial Rights	Market Size <sup>(6)</sup>
	Eftilagimod Alpha	Metastatic Breast Cancer (C AIPAC	chemo – IO)				US\$29.9 billion
		Head and Neck Squamous TACTI-003	Cell Carcinoma (IO – IO) <sup>(1)</sup>				US\$1.9 billion
		Head and Neck Squamous TACTI-002	Cell Carcinoma (IO – IO) <sup>(1)</sup>				
		Non-Small-Cell Lung Carci TACTI-002	noma (IO – IO) <sup>(1)</sup>				US\$22.6 billion
Oncology	(efti or IMP321)	Solid Tumors (IO – IO) <sup>(2), (3:</sup> INSIGHT-004	a)	Prizer Merck KGaA,		Global Rights	
Ō	soluble LAG-3 protein	Solid Tumors (IO – IO) <sup>(2), (3)</sup> INSIGHT-005	5)	Merck KGaA, Darmstadt, Germany	<b>S</b>		
	·	Solid Tumors (IO – IO – ch INSIGHT-003	emo) <sup>(2)</sup>				
		Solid Tumors (Cancer Vacc YNP01 / YCP02 / CRESCEI					
		Metastatic Breast Cancer (C	chemo – IO) <sup>(4b)</sup>			Chinese Rights	US\$2.3 billion
Inf. Dis.	Efti	COVID-19 disease (Monoth EAT-COVID	erapy) <sup>(7)</sup>		S.		
Autoimm.	IMP761 (Agonist AB)				(S)	Global Rights	US\$149.4 billion (2025)
<u>Notes</u> * Ir (1) Ir (2) If c (3) a	linical trial ) In combination with BAVE		th Bintrafusp alfa	control over this (6) GlobalData Mar <u>https://www.kbv</u> (7) IIT conducted b	rs to Phase IIb clinical trials or more clinically a ket Size forecast for US, JP, EU5, Urban Chir research.com/autoimmune-disease-therapeur y University Hospital Pilsen. Immutep has no	na and Australia; <u>KBV Rese</u> <u>tics-market/</u> )	arch:

### Immutep Out-Licensed Immunotherapy Pipeline\*





- (1) Late stage refers to Phase IIb clinical trials or more clinically advance
- (1) Reflects completed Phase I study in healthy volunteers
- Reflects completed Phase I study in healthy volunteers and in patients with plaque psoria

- (4) https://clinicaltrials.gov/ct2/results?cond=&term=LAG525&cntry=&state=&city=&dist=
- (5) https://clinicaltrials.gov/ct2/results/cond=&term=GSK2831781&cntry=&state=&city=&dist= and https://www.gsk.com/media/5957/g1-2020\_results-slides.pdf
- (6) Discontinued in Jan 2021



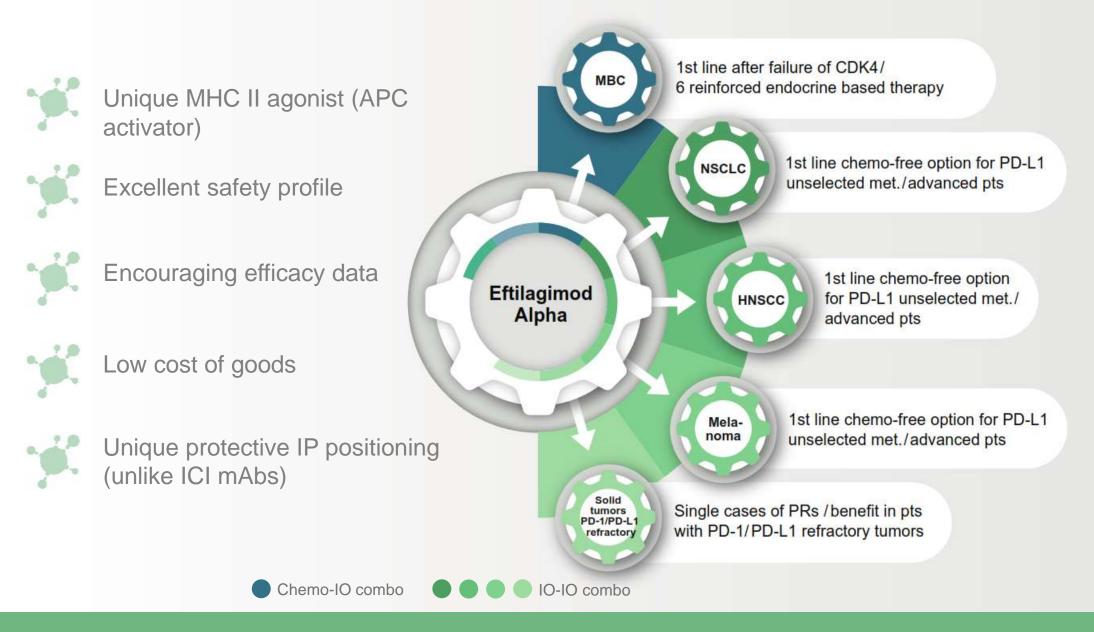
## - Bringing APC Activation into Oncology -

eftilagimod alpha ~ efti ~ IMP321

### **Efti: Potential Pipeline in a Product**

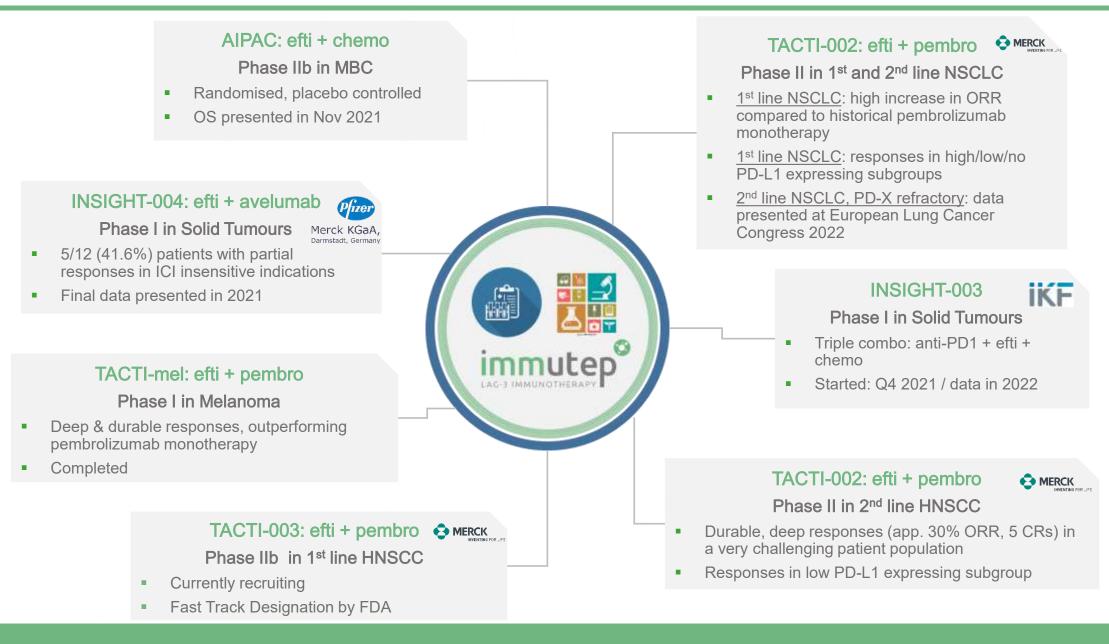
Potential for use in various immuno-oncology (IO) combination settings





### **Efti's Clinical Potential**







### Efti + anti-PD-1 Combination

### TACTI-002 TACTI-003

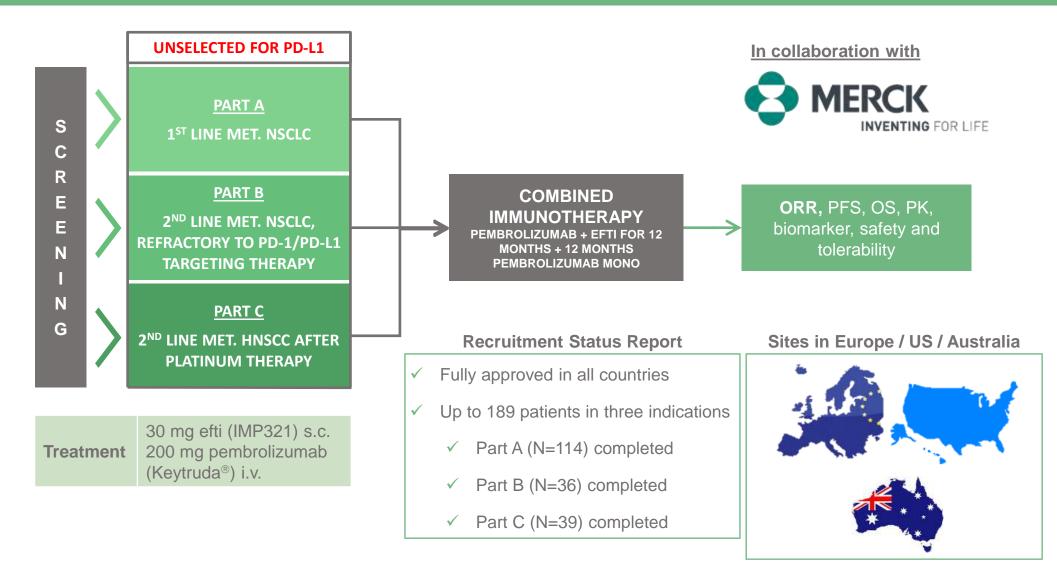
Interim updates from ASCO 2021, SITC 2021 and ELCC 2022

### TACTI-002 (Phase II)

Design & Status



### TACTI-002: Two ACTive Immunotherapeutics in NSCLC and HNSCC



1<sup>st</sup> line NSCLC (Part A)



- PD-L1 distribution as expected (~70% with < 50% PD-L1 expression) → PD-L1 all comer trial</li>
- Patients are typical NSCLC 1<sup>st</sup> line patients

Baseline parameters	N (%)	Best overall response, iRECIST, N = 36	Local Read (investigator) N (%)	Blinded Read (BICR) N (%)
Age (years), median (range)	68.5 (53-84)	Complete Response	2 (5.6)	2 (5.6)
Female	11 (30.6)	Partial Response	11 (30.6)	13 (36.1)
Male	25 (69.4)	Stable Disease	11 (30.6)	10 (27.8)
ECOG 0 ECOG 1	15 (41.7)	Progression	8 (22.2)	6 (16.7)
	21 (58.3)	Not Evaluable**	4 (11.1)	5 (13.9)
Current / Ex-smokers Non-smokers	34 (94.4) 2 (5.6)	Disease Control Rate	24 (66.7)	25 (69.4)
Squamous pathology Non-squamous pathology	15 (41.7) 21 (58.3)	Overall Response Rate* [95% Cl interval]	13 <mark>(36.1)</mark> [20.8-53.8]	15 <b>(41.7)</b> [25.5-59.2]
Patients with liver metastasis	14 (38.9)	Overall Response Rate – Evaluable pts*** [95% Cl 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

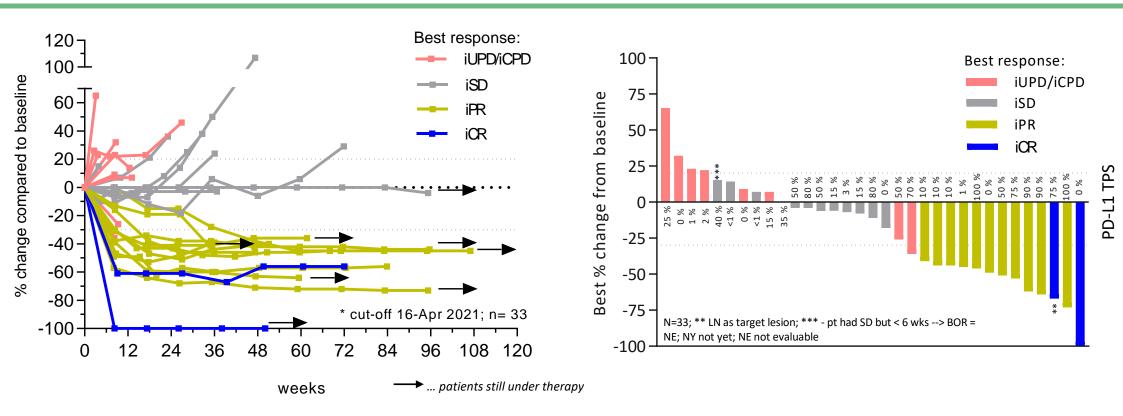
\*\* - dropped off prior to first staging or were not evaluable post-baseline for any reason

\*\*\* - Evaluable for efficacy meaning  $\geq$  1 treatment and  $\geq$  1 post baseline tumor staging

t Central Review

1<sup>st</sup> line NSCLC (Part A)





#### **Duration of response (DoR)**

- 92% responses confirmed
- 58% confirmed responses ongoing with 6+ months
- 42% of confirmed responses progressed after 6.5-13.8 months
- Median DoR estimated 13+ months

- Responses at all PD-L1 levels including 1
  Complete Response with TPS of 0%
- At data cut-off, 7 pts still under therapy and 1 patient completed the 2 years of therapy

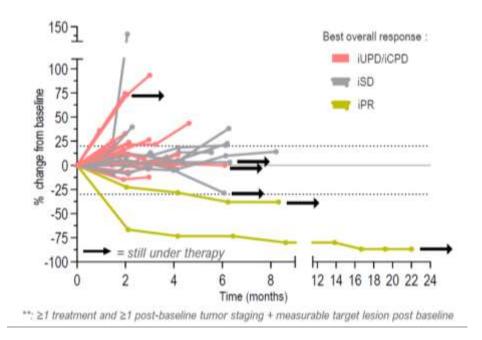
<sup>(1)</sup> Preliminary data, cut-off Apr 16, 2021

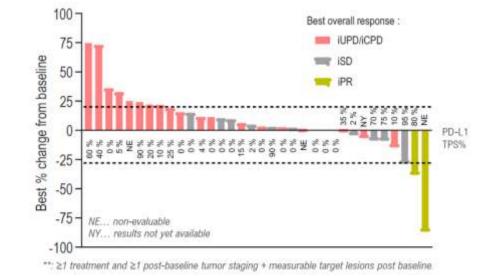
<sup>17</sup> Graphs represent all patients with at least one post baseline assessment. One patient has no official RECIST assessment as this was done < 6 weeks and this does not qualify according to RECIST. Per local investigator assessment. iRECIST... Immune Response Evaluation Criteria In Solid Tumors

2<sup>nd</sup> line NSCLC (Part B)



### Efti with Keytruda is showing encouraging activity in lung cancer





#### Key Interim Results (N=34)

- DCR of 36.1% and 26% progression free at 6 months
- 73.7% tumour shrinkage or tumour growth deceleration
- Encouraging OS at the 6-month landmark 73% survival rate
- 5.6% confirmed and durable partial responses
  - patients continuing well beyond expectations over 9 months & 23 months

- All 34 patients had 2<sup>nd</sup> line metastatic non-small cell lung carcinoma (NSCLC) with confirmed progressive disease after prior PD-1 or PD-L1 therapy (PD-X refractory)
- Efti continues to be safe and well tolerated
- At data cut-off, 6 pts still under therapy

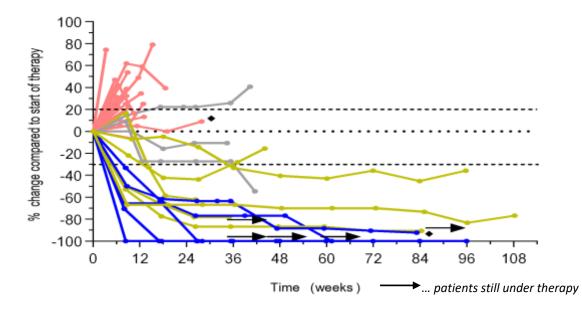
2<sup>nd</sup> line HNSCC (Part C)

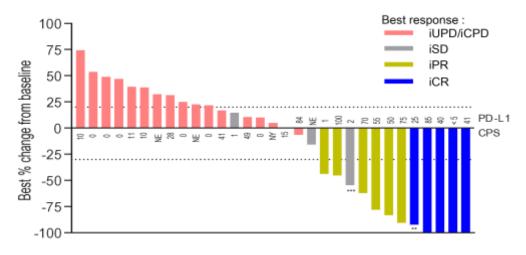


Best overall response, IRECIST	Investigator assessment N (%)
Complete Response	5 (13.5)
Partial Response	6 (16.2)
Stable Disease	3 (8.1)
Progression	17 (45.9)
Not evaluable <sup>®</sup>	6 (16.2)
Disease Control Rate	14 (37.8)
Overall Response Rate [95% CI]	11 (29.7) [15.9 – 47.0]
Overall Response Rate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

- ORR (iRECIST) in ITT of 29.7% and 35.5% evaluable pts
- Responses are deep with 5 (13.5%) CRs and long lasting
- ORR of 40.7% (CPS ≥ 1) and 64.3 (CPS ≥ 20)
- OS rates at 12 months for all PD-L1 groups in the range of 50% or above

All comer (N=37)	≥1 (N=27)	≥20 (n=14)
_		
29.7	40.7	64.3
23	17	7
54.7	55.5	71.4
48.4	48.2	64.3
30	17	8
37.8	48.2	64.3
32.4	40.7	57.1
	(N=37) 29.7 23 54.7 48.4 30 37.8	(N=37)      (N=27)        29.7      40.7        23      17        54.7      55.5        48.4      48.2        30      17        37.8      48.2





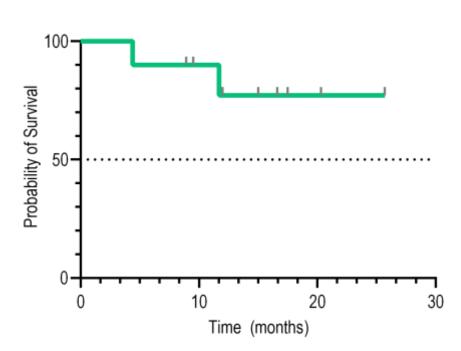
(1) Database cut-off date was August 4, 2021 (efficacy

19 Graphs represent all patients with at least one post baseline assessment. One patient has no official RECIST assessment as this was done < 6 weeks and this does not qualify according to RECIST. Per local investigator assessment. iRECIST Immune Response Evaluation Criteria In Solid Tumors

### 2<sup>nd</sup> line HNSCC (Part C), DoR and Benchmarking



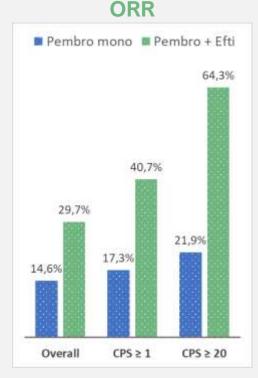
**Duration of Response (DoR)** for confirmed responders (N=10)



- Median duration of response not yet reached
- All ongoing responses lasting
  9+ months

### Benchmarking against Pembro mono

- ORR clearly higher (≥ factor 2) in all PD-L1 subgroups and overall
- PFS and OS rates at 6 and 12 months respectively are higher in all PD-L1 subgroups and overall with efti combination



	PD-L1 (CPS)	Pembro mono**	TACTI-002
	≥ 20	21.9%	64.3%*
ORR (%)	≥ 1	17.3% (2% CR)	<b>40.7%</b> * (20.8% CR*)
(70)	Overall pop.	14.6%	<b>35.5%</b> <sup>#</sup>
mDoR (mths)	Overall pop.	18.4	Not reached with min. 9+ months at cut-off

(1) Database cut-off date was August 4.

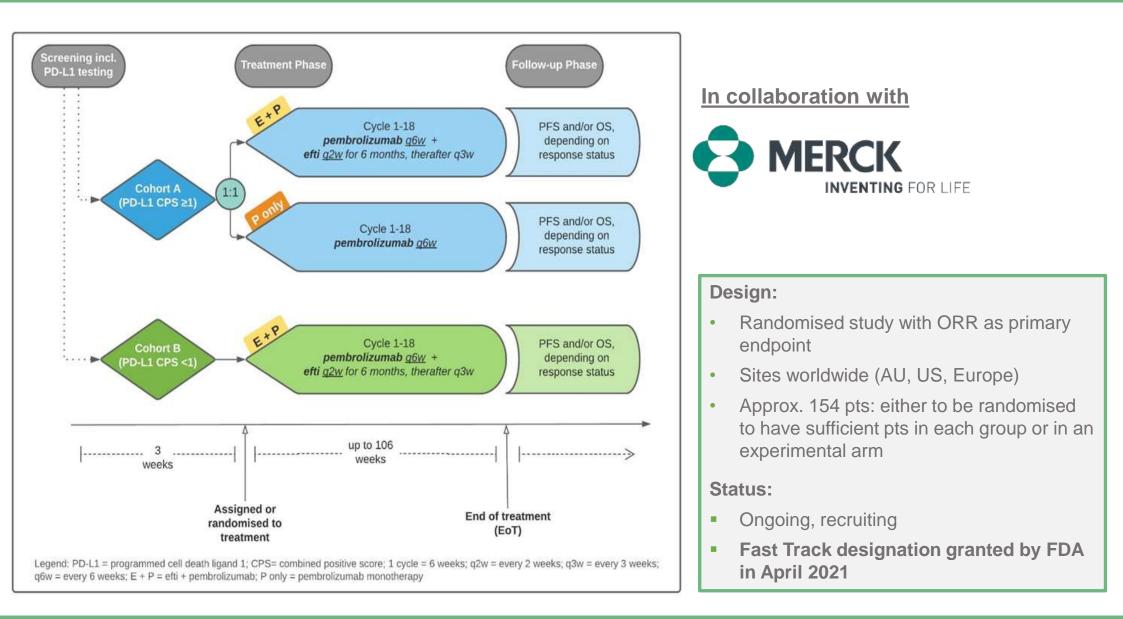
\* - only patients evaluated where PD-L1 results available (N=14 for CPS ≥ 20) (N=27 for CPS ≥ 20); # - Evaluable patients (N=31); \*\* Data for pembro

derived from KN040 (EEW Cohen et al., The Lancet 20

### **TACTI-003 Trial in 1<sup>st</sup> line HNSCC**



Current Design + Status





### Efti + Chemo Combination

### AIPAC

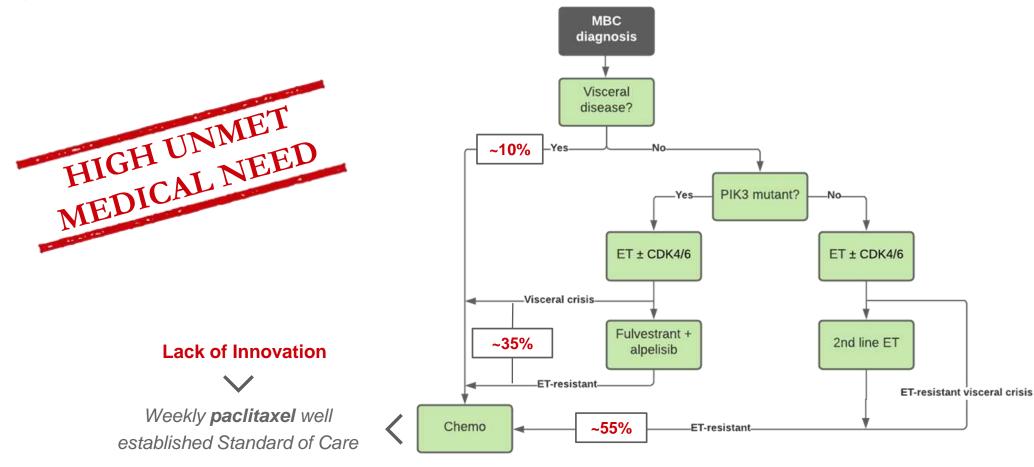
Final OS results presented at SITC 2021

### **Goal:** Improving OS while maintaining QoL in HR<sup>+</sup>/HER2<sup>-</sup> MBC patients



#### **Epidemiology:**

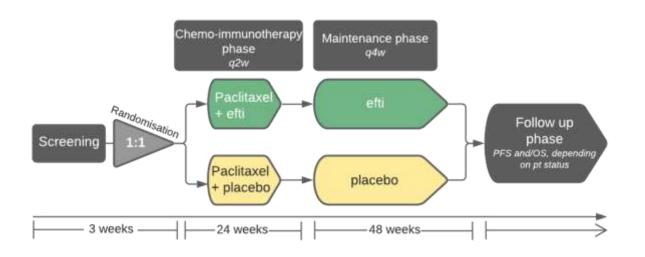
- Breast cancer (BC) is the most frequently diagnosed cancer. More than 2 million breast cancer (thereof ~70% HR+/HER2--) diagnoses per annum worldwide.
- Up to 550,000 patients in total and app. 350,000 patients younger than 65 develop metastatic disease and are eligible to receive chemotherapy<sup>(1) (2)</sup>





### Efti: AIPAC (Phase IIb) design

### AIPAC: Active Immunotherapy PAC litaxel in HER2<sup>-/</sup> HR<sup>+</sup> metastatic breast cancer (MBC)



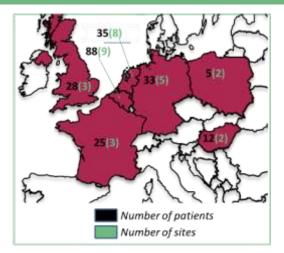
#### Hypothesis-Generating Study (227 patients)

#### Primary endpoint<sup>(\*)</sup> (presented Mar. 2020) included:

• Assessment of Progression-Free Survival (PFS)

#### Secondary endpoints<sup>(\*)</sup> (presented Dec. 2020) included:

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



#### Fact sheet

- $\checkmark$  Conducted in 7 EU countries
- $\checkmark$  Local and blinded independent central read
- ✓ Primary analysis PFS (immature OS) Mar.
  2020
- ✓ Follow-up 1 analysis OS Sep. 2020 (SABCS Dec. 2020) – ~60% OS events
- $\checkmark$  Final OS analysis presented at SITC 2021
- Biomarker data presented at ESMO Breast in May 2022

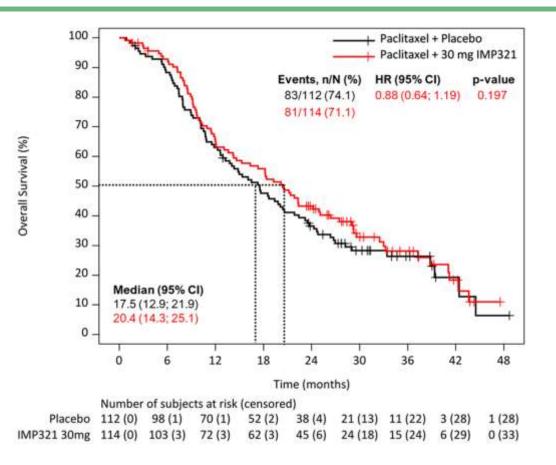
#### Notes:

24 \* No hypothesis testing

ORR – overall response rate, DCR – disease control rate, PFS – progression free survival, OS – overall survival, QoL – Quality of life

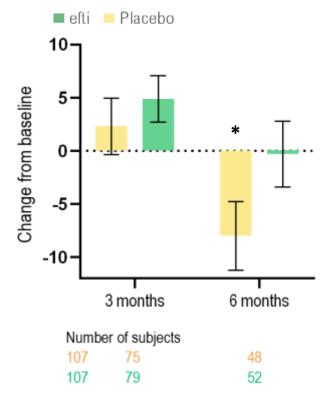
### **AIPAC Results: Overall Unselected Population\***

Improving OS with better QoL



Global Health Status / QoL QLQC30-B23

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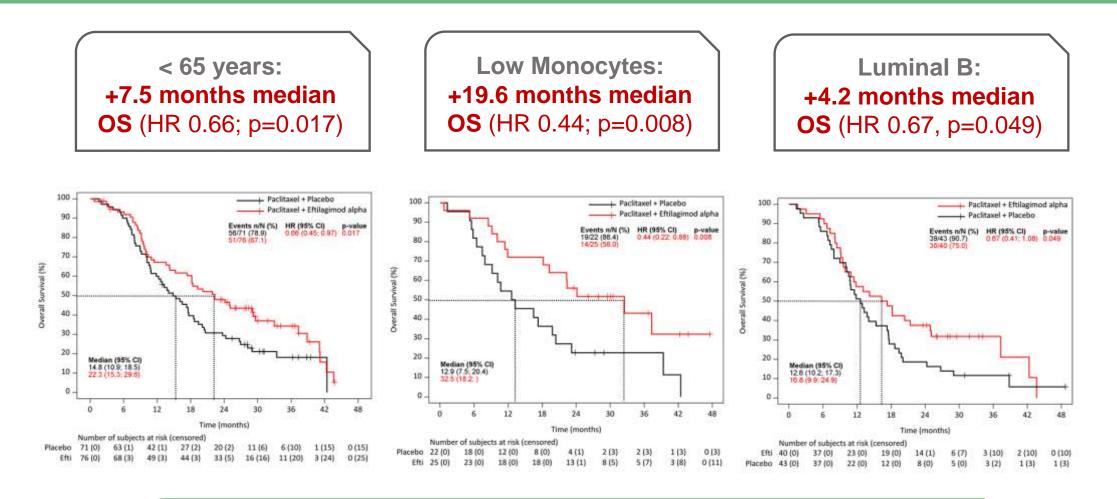


- Increase in OS: +2.9 months from median of 17.5 (95% CI: 12.9-21.9) in placebo to 20.4 (95% CI: 14.3 -25.1) in the efti group
- Post-study treatment similar: 86% (efti) vs. 90% (placebo); majority received chemotherapy 70.2% (efti) vs. 76.8% (placebo)
- Preserving QoL in the efti arm, while significant deterioration of QoL (QLQ-C30-B23) observed in the placebo group at 6 months
- Note: paclitaxel treatment intensity was similar between groups

### **AIPAC Results: Prespecified Subgroups**

Statistically significant median OS improvement in 3 subgroups



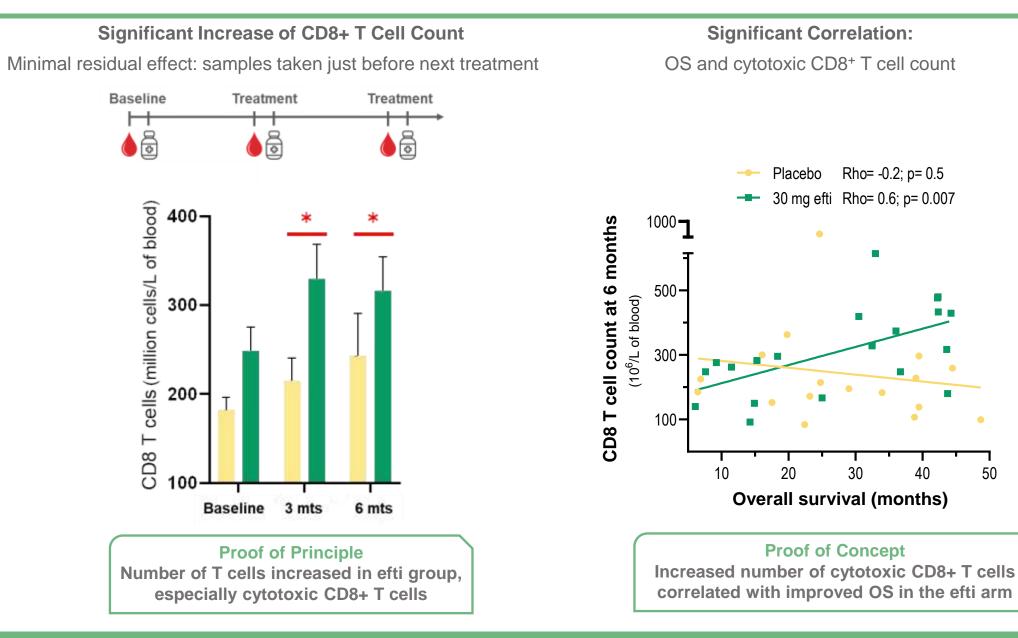


Statistically significant and clinically meaningful improvement in median OS in 3 prespecified patient subgroups: informs Phase III trial design

### **AIPAC** Results

### Immune Monitoring on Fresh Blood (up to 70 patients)





### **Pharmacodynamic Biomarker Analysis\***



Fold change of biomarkers compared to baseline

Biomarker	Treatment	Fold change mean ± SEM Median (25%Q-75%Q) [Min-Max]	p-value (2-sided rank-sum Wilcoxon test)	
Managutas	efti (n=42)	<b>5.81</b> ±1.49 <b>2.07</b> (1.40-5.16) [0.63-56.00]	0.025	
Monocytes	Placebo (n=34)	<b>2.29</b> ±0.44 <b>1.47</b> (1.21-2.23) [0.09-13.57]		
Activated CD4	efti (n=45)	<b>2.17</b> ±0.23 <b>1.56</b> (1.07-3.14) [0.42-7.13]	0.000	
T cells	Placebo (n=35)	<b>1.54</b> ±0.13 <b>1.31</b> (1.05-1.84) [0.26-4.14]	0.206	
Activated CD8	efti (n=42)	<b>2.54</b> ±0.35 <b>1.76</b> (1.10-3.25) [0.35-10.75]	0.007	
T cells	Placebo (n=34)	1.86 ±0.40 1.17 (0.79-1.67) [0.20-13.14]	0.027	
020140	efti (n=32)	<b>2.78</b> ±0.30 <b>2.39</b> (1.36-3.93) [0.67-7.25]	0.006	
CXCL10	Placebo (n=22)	<b>1.56</b> ±0.18 <b>1.40</b> (0.86-2.18) [0.35-3.17]	0.006	

#### Analysis of fresh blood by FACS (subset of patients)

- Efti significantly increased circulating levels of monocytes, CD8<sup>+</sup> T cells and CXCL10 compared to baseline.
- On-treatment increases are significantly linked to improved survival (overall median of 18.2 months used as a cut-off for "good" or "bad" OS) for patients treated with efti, but not for patients in the placebo arm except for activated CD4.
- Significant higher number of on-treatment circulating CD8<sup>+</sup> and CD4<sup>+</sup> T cells in patients with improved survival in the efti group. For patients treated with placebo, no effect observed or the change is not linked to improved survival.

### AIPAC-003: Phase III in MBC

General Concept (subject to further regulatory interactions)

### 1) Primary Endpoint: Overall Survival

- Preferred endpoint for Phase III and approval by regulatory agencies in such a patient population.
- Seems to be a better fit for active immunotherapies such as efti.

#### 2) Treatment

 Paclitaxel will be allowed to be continued beyond 6 cycles to accommodate for EU & US standards and as a lesson from AIPAC.

#### 3) Patient Population on Target

 Immutep will define the patient population and statistical read-out in a way to increase likelihood of success.

### 4) Statistical Design

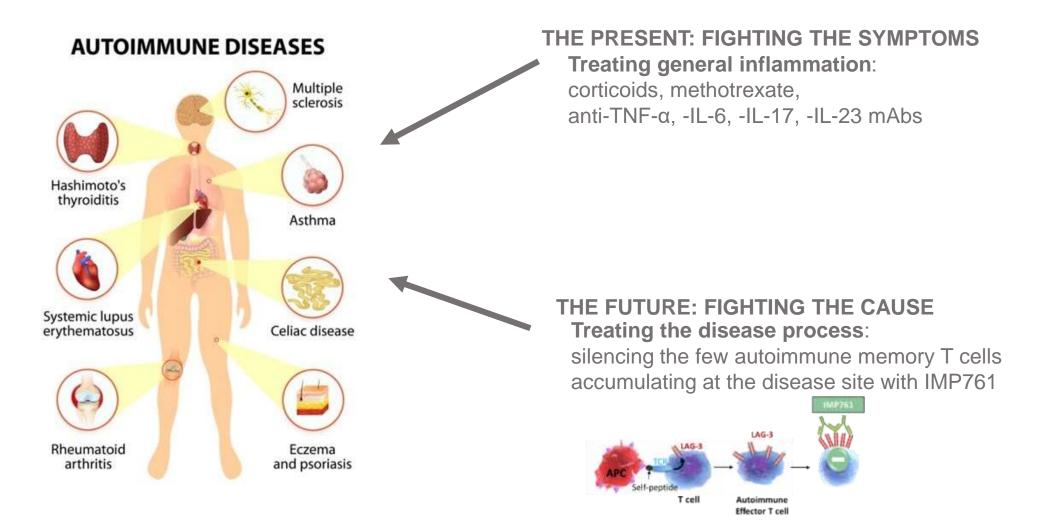
• Will be robust and pre-agreed with regulatory agencies to ensure success later during MAA/BLA procedures.



### IMP761 - Autoimmune Diseases -

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





POTENTIAL GAME CHANGER IN AUTOIMMUNE DISEASES (US\$153.32 billion by 2025)<sup>1</sup>

<u>Note</u>

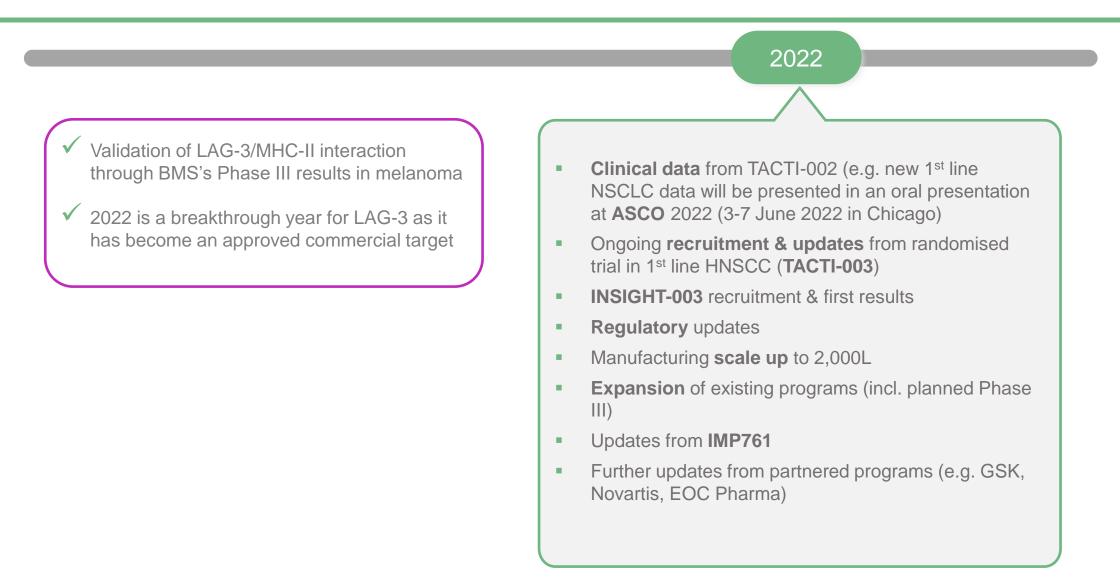
(1) Source: <u>https://www.researchandmarkets.com/reports/4828880/autoimmune-disease-therapeutics-</u> market-by-drug



### Outlook

### 2022 News Flow\*





<sup>33 \*</sup>The actual timing of future data readouts may differ from expected timing shown above. These dates are provided on a calendar year basis. A tick symbol indicates a completed item.

Summary





(1) Currently ~28% of the ordinary shares are represented by ADSs listed on NASDAQ where 1 ADS represents 10 ordinary shares as of 23 May 2022.

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### Thank You