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LAG-3 IMMUNOTHERAPY

The global leader in developing LAG-3 therapeutics

Annual General Meeting
November 2019

(ASX: IMM, NASDAQ: IMMP)

Notice: Forward Looking Statements

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2019 Summary

- Strong operational and financial progress
- Continued focus on LAG-3 immunotherapy
- Progressed the development of four product candidates for cancer and autoimmune disease
- Reported encouraging interim data for lead product candidate, efti
- Committed partnerships with five of the world's largest pharmaceutical companies - Merck (MSD), Novartis and GSK, plus Merck (Germany) and Pfizer, along with Eddingpharm (EOC) in China
- Preparations for multiple data readouts in coming months

Ticker	ASX: IMM; NASDAQ: IMMP
Ordinary Shares / American Depository Shares (ADSs)	73% / 27%
Market Cap (29 Oct 19)	A$109m
Ordinary shares on issue* (29 Oct 19)	3.9 billion ordinary shares 1 ADS equals 100 ordinary shares

* Market capitalisation based on ASX share price. For detailed summary of all securities on issue refer to latest Appendix 3B released on ASX.

Corporate Highlights of past 12 months

- Sound financial management
- ADR raise in Dec 2018: US$5.2million (A$7.2million)
- ASX Placement and Rights Issue A$10 million, post FY19
- R&D cash incentives received from Australian & French schemes
- Presentations at SITC, World Immunotherapy Congress, ASCO
- Six new patents granted in FY19, five relating to efti

R&D Highlights of past 12 months

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TACTI-mel
- Phase I recruitment completed & positive final efficacy data reported

AIPAC
- Phase IIb clinical fully recruited comprising 227 patients in June 2019 across 30 clinical sites across the UK and Europe

TACTI-002 – with Merck & Co.
- IND application granted by FDA
- Phase II trial 32 patients participating so far

INSIGHT
- Phase I trial in Germany (Investigator Initiated Trial study) 13 patients recruited

INSIGHT-004 – with Merck KGaA & Pfizer
- Phase I trial – six patients dosed thus far; cohort 1 fully recruited

IMP761
- Pre-clinical study successfully completed, with cell line development steps started

Collaboration Highlights of past 12 months

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Novartis

- Data presentation of LAG525 at ASCO with 5 clinical trials now live

GSK

- Commenced Phase II clinical study evaluating GSK2831781 (derived from IMP731) in 280 ulcerative colitis patients
- GSK £4million (~A$7.39 million) milestone payment

EOC Pharma

- Start of Phase I in metastatic breast cancer in China

CYTLIMIC

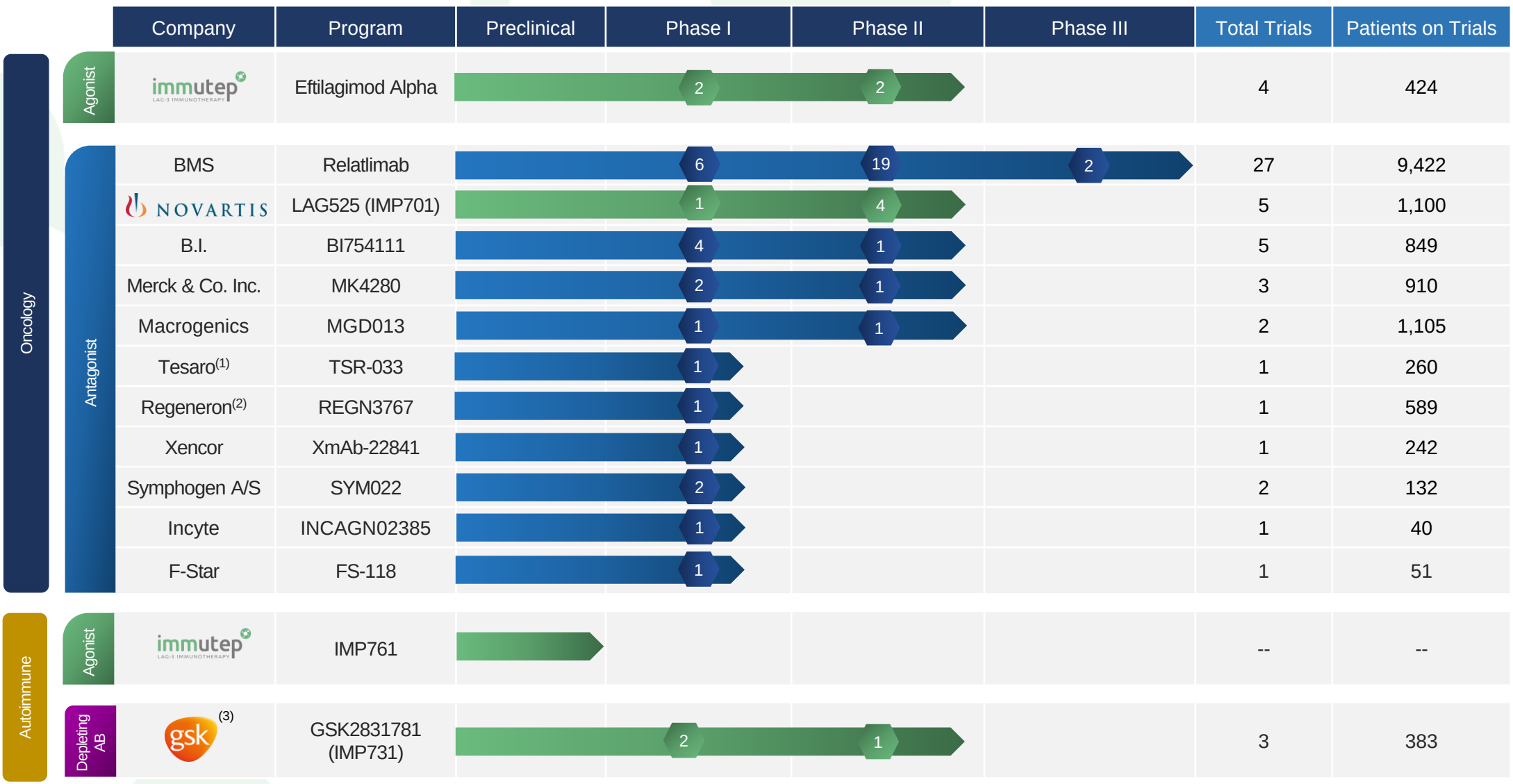
- Clinical trial collaboration concluded in Jan 2019

Key Financials FY19

Revenue and other income FY19	$7.5M (FY 18 A$7.4M)	Includes revenues, grants and received interest
G&A Expenses FY19	$6.4M (FY 18 A$7.2M)	Decrease largely due to the lower employee share-based payment expenses
R&D and IP Expenses FY19	$16.6M (FY 18 A$10.0M)	Increase was expected and was primarily due to the increased clinical trial activities
Net Loss FY19	$18.3M (FY 18 A$12.7M)	Increase is due to an increase in research and development activities and decrease in the license revenue
Net cash (outflows) from operating activities	$15.3M (FY 18 A$7.8M)	Higher primarily due to increased clinical trial activities
Cash and cash equivalents at the end of the year	$16.6M (FY 18 A$23.5M)	
Cash in Bank	A$19.6M (30 Sep 19)*	Cash runway through to end of CY20 with continued focus on disciplined cash management

*without GSK milestone payment and French R&D tax incentive payment

LAG-3 Therapeutic Landscape Overview



Notes:

Sources: Company websites, clinical trials.gov, and sec.gov, as of September 27, 2019

(1) Tesaro was acquired by and is now part of GSK

(2) As of January 7, 2019 Regeneron is in full control of program and continuing development (Sanofi discontinued)

(3) Includes the Phase I study in psoriasis (completed March 2018)

* Reference to Eftilagimod Alpha, IMP731 and IMP761

Program Update

Immutep Controlled Immunotherapy Pipeline*

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Program	Preclinical	Phase I	Phase II	Late Stage(5)	Commercial Rights
Oncology – Eftilagimod Alpha (LAG-3Ig or IMP321), APC activating Soluble LAG-3 Protein	**AIPAC** (Chemo-IO Combo) Metastatic Breast Cancer				Global Rights – immutep
	TACTI-002 (1) (IO-IO Combo) NSCLC (1st/2nd L.) HNSCC (2nd)			MERCK INVENTING FOR LIFE	
	INSIGHT-004 (2), (3) (IO-IO Combo) Solid Tumors		Pfizer / Merck KGaA, Darmstadt, Germany		
	TACTI-mel (IO-IO Combo) Melanoma				
	INSIGHT (2) (In Situ Immunization) Solid Tumors				
	EOC 202 (4) (Chemo-IO Combo) Metastatic Breast Cancer		EOC		Chinese Rights – EOC
Autoimmune – IMP761 (Agonist AB)					Global Rights – immutep

Notes

* Information in pipeline chart current as at 30 September 2019

(1) In combination with KEYTRUDA® (pembrolizumab) in non-small cell lung carcinoma ("NSCLC") or head and neck carcinoma ("HNSCC")

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

(3) In combination with BAVENCIO® (avelumab)

(4) EOC Pharma is the sponsor of the EOC 202 clinical trial which is being conducted in the People's Republic of China

(5) Late stage refers to Phase IIb clinical trials or more clinically advanced clinical trials

Out-Licensed Immunotherapy Pipeline*

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Program	Preclinical	Phase I	Phase II	Late Stage(1)	Commercial Rights/Partners
Oncology – LAG525 (Antagonist AB)	IO-IO Combo: Solid Tumors + Blood Cancer				Global Rights – NOVARTIS
	Chemo-IO Combo: Triple Negative Breast Cancer				
	IO-IO-Small Molecule Combo: Melanoma				
	IO-IO Combo: Solid Tumors				
	Chemo-IO-Small Molecule Combo: Triple Negative Breast Cancer				
Autoimmune – GSK'781 (Depleting AB)	Ulcerative Colitis				Global Rights – gsk
	Healthy Japanese and Caucasian Subjects				
	Psoriasis(2)				

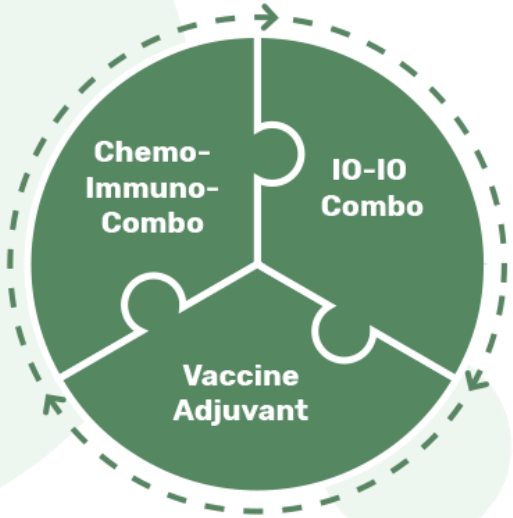
Notes
* Information in pipeline chart current as at 30 September 2019
(1) Late stage refers to Phase IIb clinical trials or more clinically advanced clinical trials
(2) Reflects completed Phase I study in healthy volunteers and psoriasis

Lead Program Eftilagimod Alpha (IMP321) Update

Opportunity for Eftilagimod Alpha

Efti has multiple shots on goal in different indications and in different combinations

- **Best-and-First-In-Class** MHCII agonist
- Good safety profile and encouraging efficacy data thus far
- Estimated favorable (low) cost of goods, current flat dosing and manufacturing process
- Potential for use in various combination settings – **potential pipeline in a product**

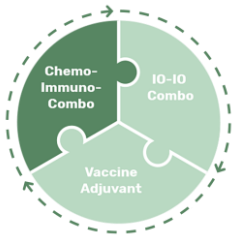


• Late Stage European Phase IIb AIPAC (Immutep)

• Phase I TACTI-mel (Immutep)
• Phase II TACTI-002 (Immutep[(1)])
• Phase I INSIGHT – Stratum D (Immutep[(2)])

• Phase I Solid Tumors (Cytlimic)
• Phase I INSIGHT - Stratum A+B (IKF[(3)])

Notes
(1) In collaboration with Merck & Co., Inc., Kenilworth, NJ, USA (known as MSD outside the United States and Canada) and in combination with KEYTRUDA® (pembrolizumab)
(2) In collaboration with Merck KGaA, Darmstadt, Germany and Pfizer Inc. and in combination with BAVENCIO® (avelumab). This extension of INSIGHT is also referred to as INSIGHT-004
(3) INSIGHT Investigator Initiated Trial ("IIT") is controlled by lead investigator and therefore Immutep has no control over this clinical trial



Efti - Clinical Development AIPAC

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AIPAC: Active Immunotherapy PAClitaxel in HER2-/ HR+ MBC

Safety-run in, 15 (6+9) patients, 2 cohorts → Stage 2 → Arm 1, *113* patients: paclitaxel + IMP321; Arm 2, *113* patients: paclitaxel + placebo → Phase IIb, multinational, randomized, double-blind → Run-in: RP2D; Stage 2: Efficacy (PFS)

Other Objectives	Anti-tumor activity, safety and tolerability, PK, immunogenicity, quality of life
Patient Population	Advanced MBC indicated to receive 1st line weekly paclitaxel
Treatment	Run-in: Paclitaxel + IMP321 (6 or 30 mg) Arm 1: Paclitaxel + IMP321 (30 mg) Arm 2: Paclitaxel + Placebo
Location	>30 sites in 7 (GB, DE, PL, HU, FR, BE, NL) EU countries

Status Report (Oct 2019)

- ✓ Phase IIb efficacy and safety data consistent with data from safety-run in trial and historical control group / prior clinical trials (Brignone et al J Trans Med 2010, 8:71)
- ✓ Regulatory approval in 7 EU countries
- ✓ 227 patients recruited in Stage 2 → LPI Jun 2019
- • PFS, ORR data expected calendar Q1 2020

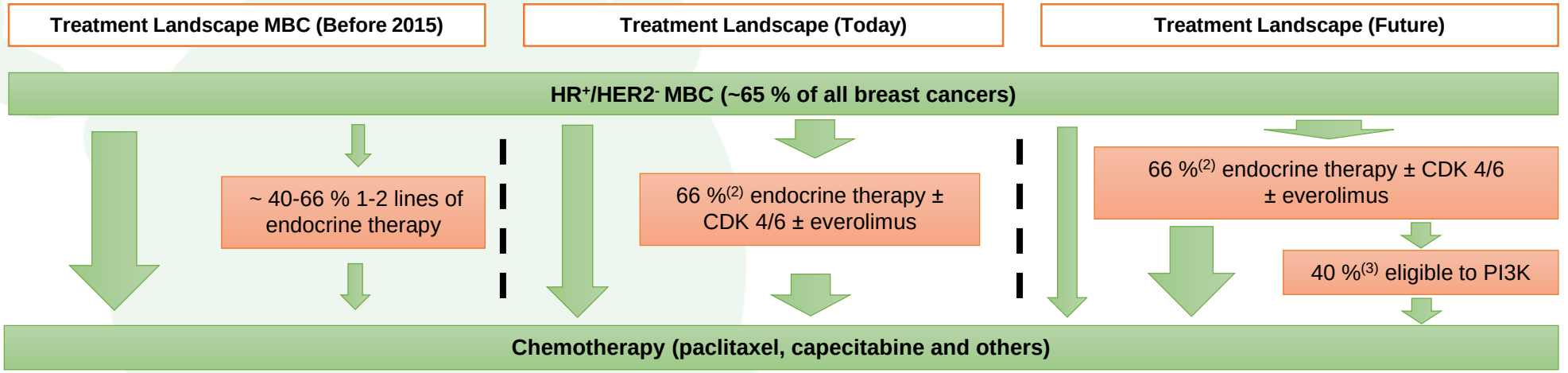
Key features: 1- double blinded pivotal trial in MBC patients → CMA in the EU
2- broader perspective: validation of APC activators → a second class of active I-O products after the ICI

R2PD – recommended Phase II dose, ORR – overall response rate, PFS – progression free survival, OS – overall survival, PK –pharmacokinetics

Treatment Landscape for HR+/HER2- MBC

Epidemiology:

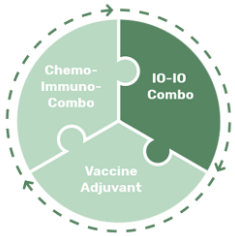
- 812,500 HR+/HER2- diagnoses p.a. worldwide (1)
- ~ appr 250.000 develop metastatic disease and are eligible to chemotherapy



- Despite all changes → no improvement for patients receiving chemotherapy
- Paclitaxel one of the most widely used chemotherapies
- No active IO approved in this setting thus far

Notes
(1) Source: GlobalData 2019
(2) Caldeira et al Oncology and therapy 2016; 4:189-197
(3) https://www.ascopost.com/News/59389 ; Usage to be determined as not yet approved by EMA
(4) https://www.onclive.com/insights/mbc-endocrine-partner/role-of-pi3k-inhibitors-in-hr-positive-metastatic-breast-cancer

MBC – metastatic breast cancer BC – breast Cancer



Efti in Melanoma
TACTI-mel – Trial Design

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TACTI-mel: Two ACTive Immunotherapeutics in Melanoma

24 patients, 4 cohorts of 6 patients → Efti (IMP321) + anti-PD-1 (Keytruda®) → Phase I, multicenter, open label, dose escalation → Recommended Phase II dose, safety and tolerability

Other objectives	PK and PD of efti, response rate, PFS
Patient Population	Metastatic melanoma

7 sites in Australia

Status Report (Oct 2019)

- ✓ Part A: 1, 6 and 30 mg efti s.c. every 2 weeks starting with cycle 5 of pembrolizumab
- ✓ Part B: efti at 30 mg s.c. every 2 weeks starting with cycle 1 of pembrolizumab
- → Status: recruitment + treatment completed; interim results on following slides
- ✓ Pembrolizumab (Keytruda®) 2 mg/kg every 3 weeks i.v. part A and B
- ✓ Final efficacy data presented in Oct 2019
- • Final safety data in H1 2020

Efti - Clinical Development
TACTI-002 (Phase II)

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TACTI-002: Two ACTive Immunotherapeutics in different indications

Simon's 2 stage design; 3 indications; 109 pts → Efti (IMP321) + Pembrolizumab (Keytruda®) for 12 months + 12 months pembrolizumab mono → Phase II, multi-national (EU + US + AU), open label → **ORR,** PFS, OS, PK, Biomarker; Safety and tolerability

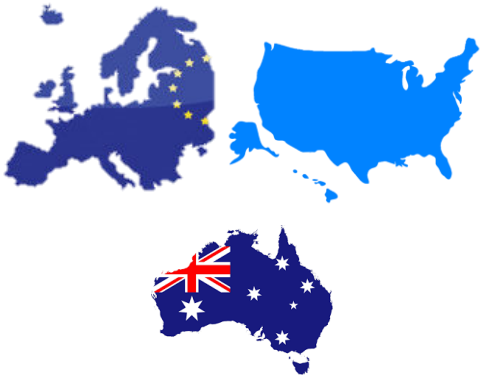
Patient Population	A: 1st line NSCLC PD-X naive B: 2nd line NSCLC, PD-X refractory C: 2nd line HNSCC, PD-X naïve
Treatment	30 mg Efti (IMP321) s.c. 200 mg Pembrolizumab i.v.

In collaboration with

MERCK
INVENTING FOR LIFE

Status Report (Oct 2019)

- ✓ Fully approved in all countries (ES, GB, US, AU)
- ✓ Part A (PD-L1 all comers, 1st line NSCLC): 41 % ORR in stage 1 → 2nd cohort opened (Oct 19)
- ✓ 35 pts recruited in total

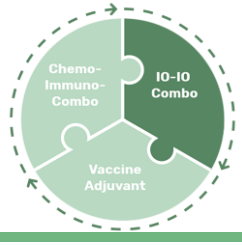


13 sites in Europe / US / Australia

Key features: PD-X refractory patients (part B), chemo-free option for NSCLC, first FDA IND

NSCLC – non-small-cell lung cancer, HNSCC – head and neck squamous cell cancer, ORR – overall response rate, PFS – progression free survival, OS – overall survival, PK – pharmacokinetics, PD-X – any PD-1 or PD-L1 treatment

Preliminary data, cut-off September 2019



Efti - Clinical Development INSIGHT-004 (Phase I)

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INSIGHT-004 – Dose escalation of efti in combination with avelumab

Dose escalation, solid tumors, 2 cohorts of 6 pts each → Efti (IMP321) + Avelumab (Bavenico®) for 6 months + 6 months avelumab monotherapy → Phase I, monocenter DE, open label, IIT → **RP2D, Safety,** ORR, PFS, PK, PD

Patient Population	Solid tumors after failure of standard therapy
Treatment	6/30 mg Efti (IMP321) s.c. 800 mg avelumab i.v.; Both every 2 weeks

Status Report (Oct 2019)

- ✓ 1 site in Germany
- ✓ Protocol approved by CA/ ED
- ✓ Six patients dosed thus far
- • First data expected end of 2019

In collaboration with

Pfizer
Merck KGaA, Darmstadt, Germany
I.K.F.

Key features: safety with a PD-L1 antagonist avelumab

R2PD – recommended phase 2 dose, ORR – overall response rate, PFS – progression free survival, OS – overall survival, PK –pharmacokinetics

Eftilagimod Alpha Partnerships

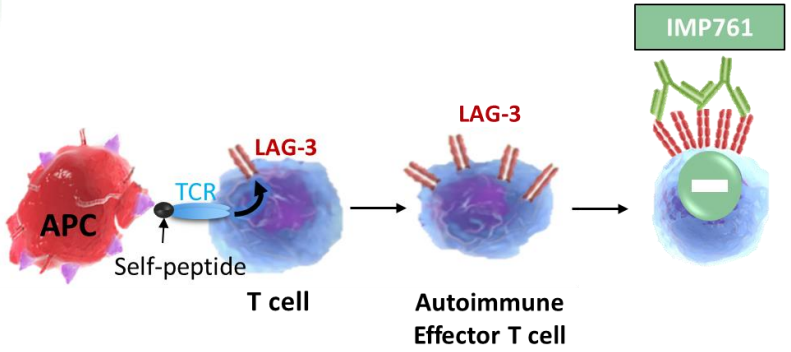
- EOC, an Eddingpharm spin-off holding the Chinese rights for efti, Phase I study in MBC ongoing
- **Milestone and royalty bearing partnership** for Immutep where EOC bears all the costs of funding the trials

- Spin off from NEC, Japan. Est. Dec 2016; aims to develop cancer drugs discovered by artificial intelligence
- Multiple Material Transfer Agreements; **Clinical Trial Collaboration (up to US$5M)**
- Preclinical and clinical research ongoing
- Milestone bearing partnership for Immutep where CYTLIMIC bears all the costs of funding the trials -> USD 0.5M upfront payment paid to Immutep

- Strategic supply partnership for the manufacture of efti
- Through WuXi, Immutep was first company ever to import and use a Chinese manufactured biologic in a European clinical trial

IMP761
(Autoimmune Diseases)

IMP761 Summary



- **The Concept**: treating the cause of autoimmune diseases, not just the symptoms
- **The Target**: the self-peptide specific memory T cells harboring LAG-3
- **The Tool**: an agonistic LAG-3-specific mAb down-modulating self-peptide-induced TCR signaling
- **The Evidence** (1): *in vitro* down-modulation of peptide-induced human T cell proliferation and activation
- **The Evidence** (2): *in vivo* down-modulation of peptide-induced T cell infiltration/inflammation at the tissue site in a NHP model
- **Intellectual Property**: 1 family – composition of matter methods of treatment, expiry 2036
- **The Status**: cell line development ongoing and GMP manufacturing preparations underway in order to progress to clinical development

Outlook

2019/ 2020 Clinical Guidance*

Reported:

- ✓ TACTI-002 to commence, Phase II trial in collaboration with MSD: H1 2019
- ✓ TACTI-mel data from fourth patient cohort (30 mg dose at cycle 1) in 2019
- ✓ IMP761 program update: 2019
- ✓ INSIGHT-004 to commence, IIT Phase I trial in collaboration with Pfizer and Merck KGaA: Q2 2019
- ✓ AIPAC fully recruited: Q2 2019
- ✓ TACTI-002 first data in September 2019
- ✓ TACTI-mel: final efficacy data 15 Oct 2019

Upcoming Data:

- TACTI-002 data update: Q4 2019
- INSIGHT-004 update: Q4 2019
- TACTI-mel safety data: H1 2020
- AIPAC PFS data (metastatic breast cancer): Q1 2020
- TACTI-002 data update: Q1 2020
- INSIGHT-004 data update: H1 2020

*The actual timing of future data readouts may differ from expected timing shown above. These dates are provided on a calendar year basis.

Thank you!