



The global leader in developing LAG-3 therapeutics

Oppenheimer's 29th Annual Healthcare
Conference
March 19, 2019

(ASX: IMM, NASDAQ: IMMP)

Notice: Forward Looking Statements

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Investment Highlights

The global leader in developing LAG-3 therapeutics for immuno-oncology and autoimmune diseases

Deep expertise and IP in the LAG-3 immune control mechanism

Broad portfolio of LAG-3 product candidates developed by Company

Relationships with multiple industry leaders, including Merck (MSD), Pfizer/ Merck KGaA, GSK and Novartis

Clinical data readouts expected throughout 2019

Company Snapshot

- Globally active biotechnology company with operations in Australia, Europe and U.S.
- Four LAG-3 related product candidates in development in immuno-oncology and autoimmune disease
- Committed partnerships with five of the world's largest pharmaceutical companies - Merck (MSD), Pfizer/ Merck KGaA, Novartis and GSK, along with Eddingpharm in China

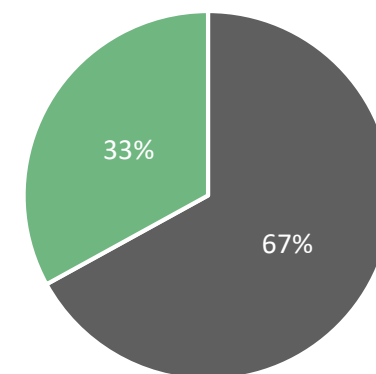
Capital Structure

Ticker symbols	IMM (Australian Securities Exchange) IMMP (NASDAQ)
Securities on issue⁽¹⁾ (as of 13 March 2019)	3.38 billion ordinary shares 11.2 million American Depositary Shares (ADSs)
Cash & Term Deposits (as at 31 December 2018)	A\$26 million (~US\$18 million)
Market Cap (as of 13 March 2019)	A\$111.7 million (US\$78.8 million)

Notes:

⁽¹⁾ Market capitalization based on ASX ordinary share price. For a detailed summary of all securities on issue refer to latest Appendix 3B released on ASX. Each ADS represents 100 ordinary shares.

Shareholders

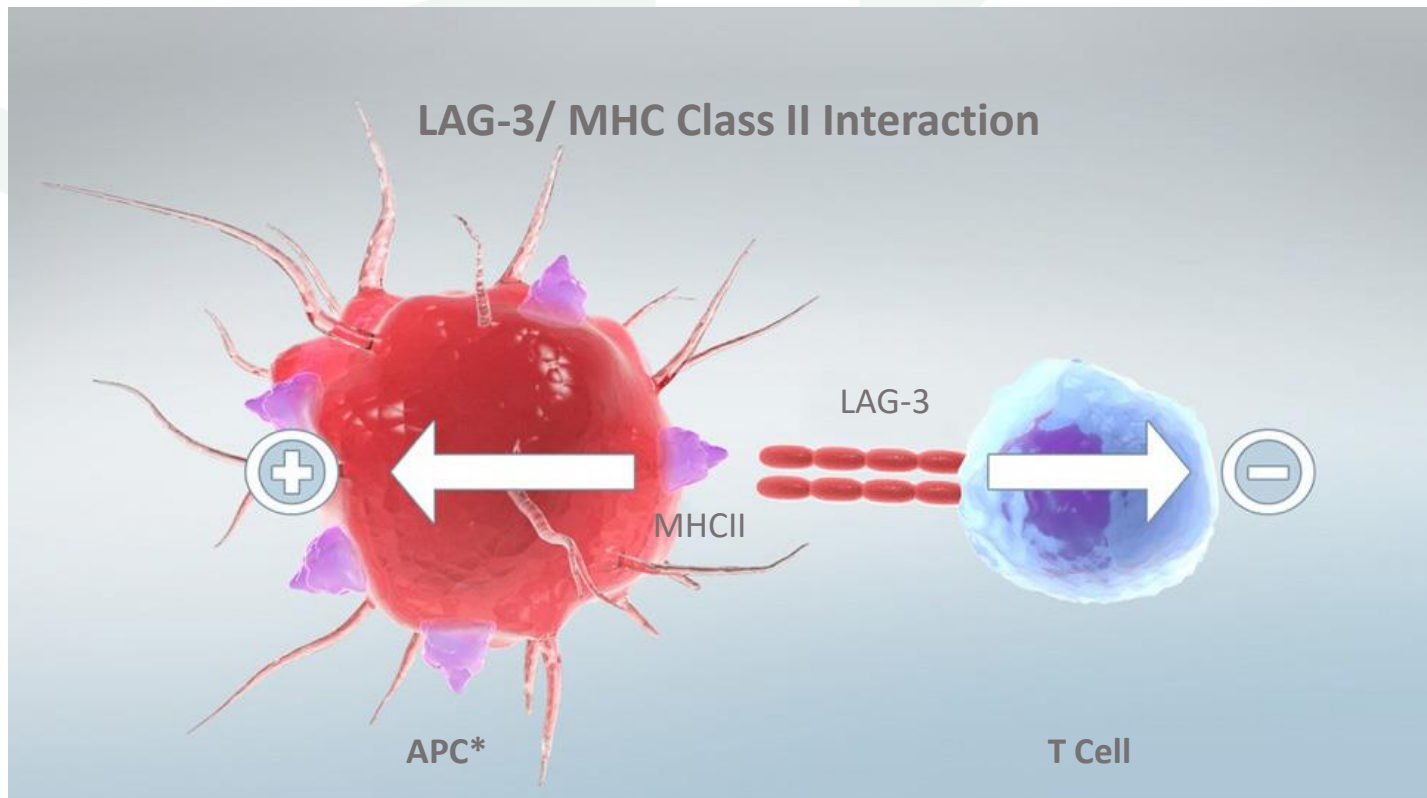


■ Australian Securities Exchange ■ Nasdaq

LAG-3 Overview & Product Candidates

LAG-3 as a Therapeutic Target

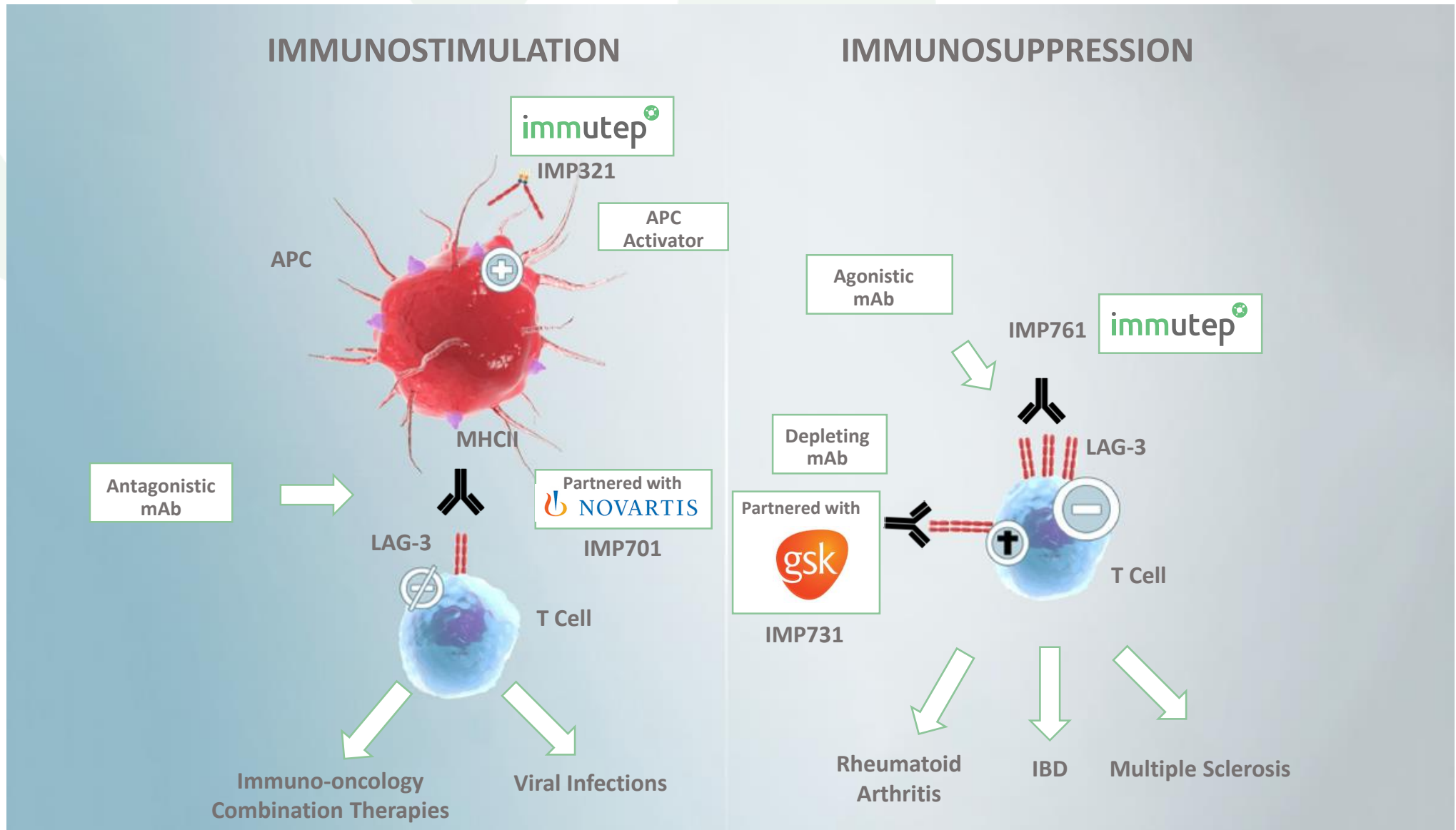
LAG-3 is widely expressed on tumor infiltrating lymphocytes (TILs) and cytotoxic T cells →
Prime target for an immune checkpoint blocker



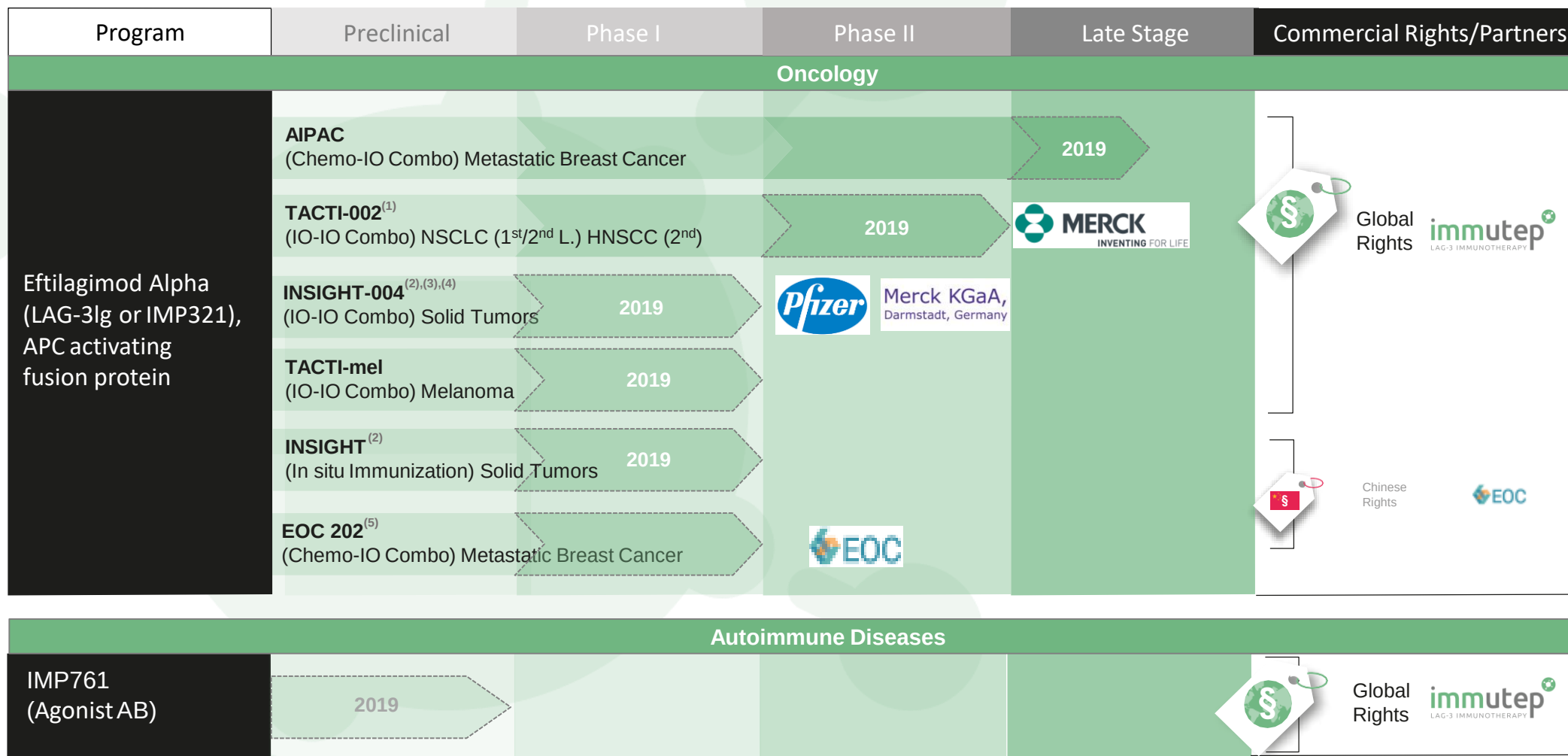
→ **Positive regulation**
of antigen
presenting cells
(APC) → increase
in antigen
presentation to
cytotoxic CD8⁺
T cells

→ **Negative regulation**
of LAG-
3⁺ T Cells

Targeting LAG-3/MHC II May Lead to Multiple Therapeutics in Numerous Indications



Immutep Controlled Immunotherapy Pipeline*



Notes

* Actual timing of data readouts may differ from expected timing shown above. Information in pipeline chart current as at 12 February 2019.

(1) In combination with KEYTRUDA® (pembrolizumab) in non-small cell lung carcinoma ("NSCLC") or head and neck carcinoma ("HNSCC"); clinical trial is currently planned and not active

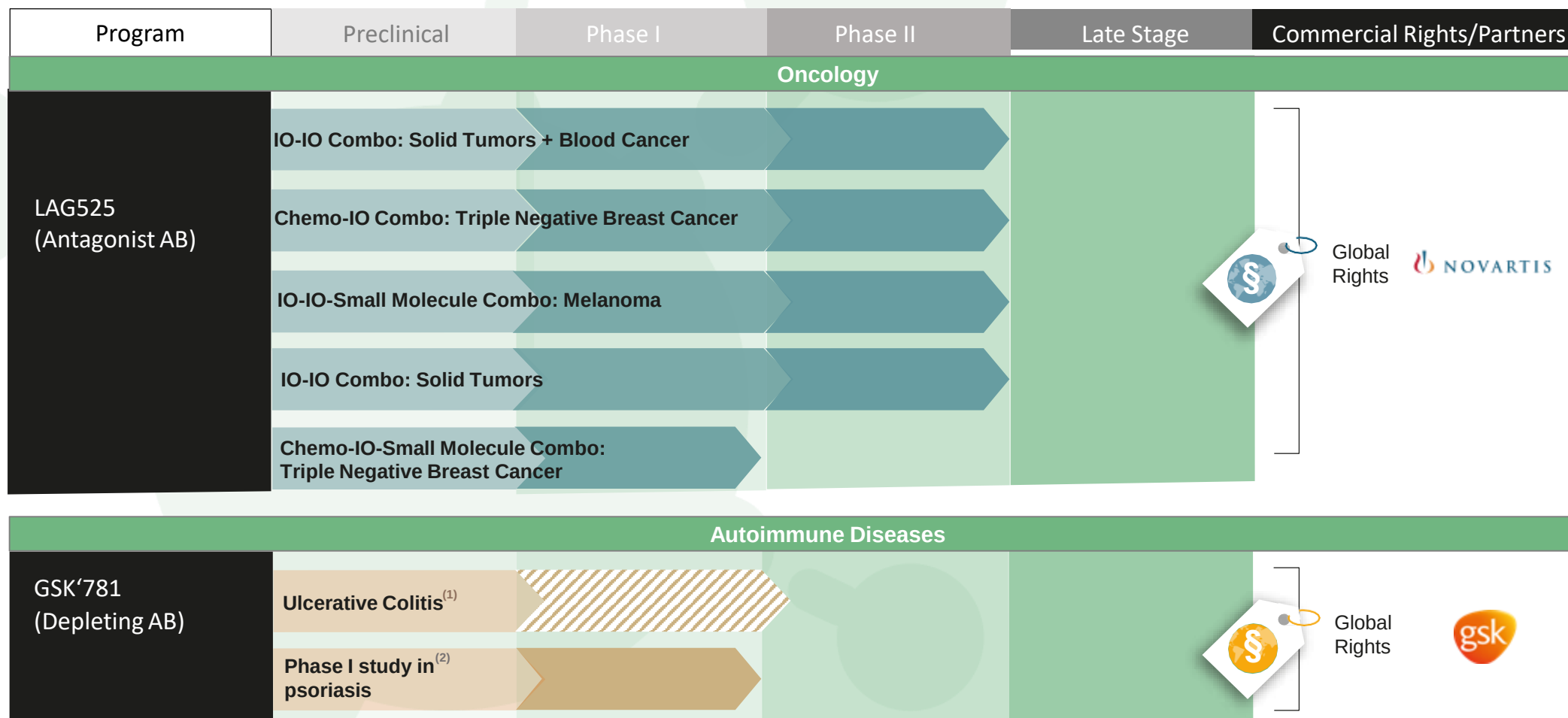
(2) INSIGHT Investigator Initiated Trial ("IIT") is controlled by lead investigator and therefore Immutep has no control over this clinical trial

(3) In combination with BAVENCIO® (avelumab)

(4) Clinical trial is currently planned and not active

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

Out-Licensed Immunotherapy Pipeline



Notes

- (1) Clinical trials currently planned and not yet active (as depicted by diagonal striped lines). Proof of concept data in Ulcerative Colitis for GSK'781 expected in 2H 2020.
- (2) Reflects completed Phase I study in healthy volunteers and psoriasis.

Lead Program Eftilagimod Alpha (IMP321)

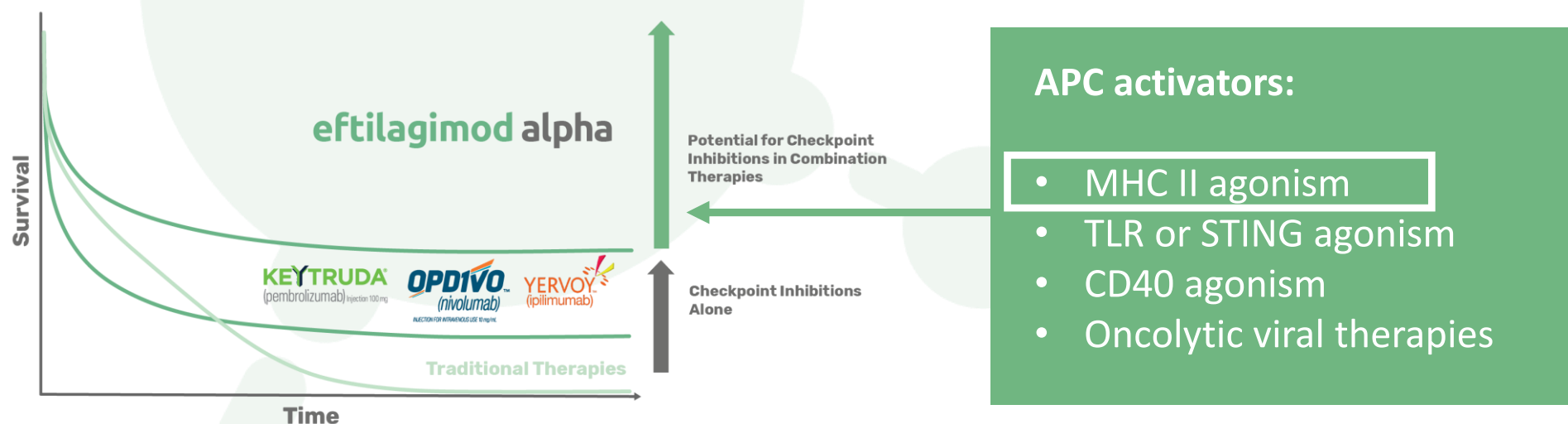
IO Therapy Oncology Response Rates

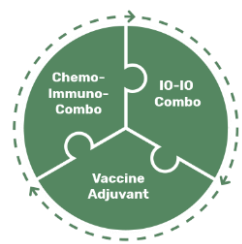
Approximately 70-80% of patients do not respond to anti-PD1 monotherapy

How can we enable more efficacious T-cell responses?

- Immunogenic cell death to liberate/uncover tumor antigens
- Cross-presentation of those antigens
- Recruitment of T cells into the tumor microenvironment
- Reversing the pathways driving a repressive tumor environment

This could be achieved through the right APC activation



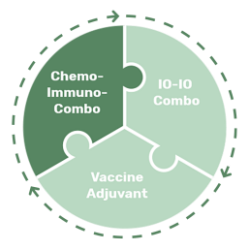


Opportunity for Eftilagimod Alpha

Eftilagimod has the potential to be an **ideal combinatory therapeutic in the oncology treatment regimen** that could improve the prognosis for patients

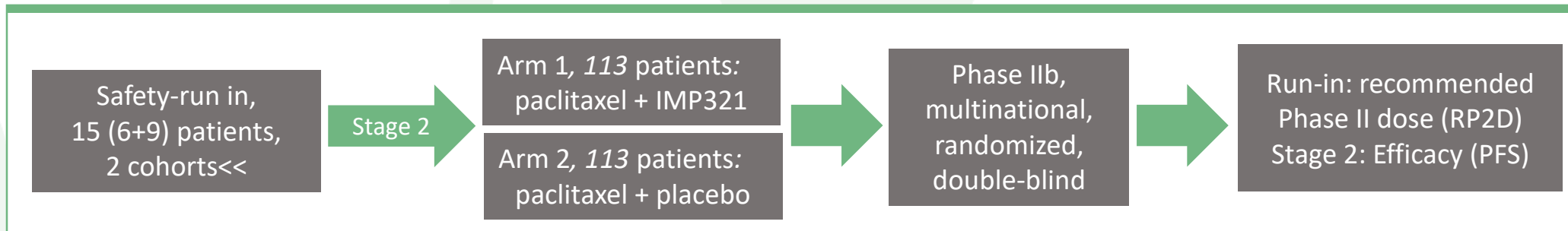
Eftilagimod Key Characteristics (based on current data):

- First-in-class MHCII agonist
- Good safety profile and encouraging efficacy data thus far
- Potential for use in various combination settings (e.g. IO, chemo, vaccines or in situ immunization)
- Estimated favorable (low) cost of goods based on current flat dosing regimen and manufacturing process



Eftilagimod Alpha in MBC (AIPAC) (chemo-immunotherapy)

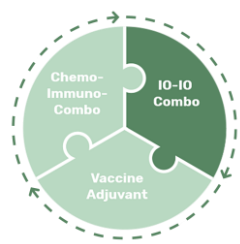
AIPAC trial (Phase IIb): Active Immunotherapy PAClitaxel, MBC patients, different EU countries



Primary Objective	Run-In: Recommended Phase II dose (RP2D) Stage 2: Efficacy (PFS) of paclitaxel + IMP321 vs. paclitaxel + placebo
Other Objectives	Anti-tumor activity, safety and tolerability, pharmacokinetic and immunogenic properties, quality of life of IMP321 plus paclitaxel compared to placebo
Patient Population	Advanced MBC indicated to receive 1 st line weekly paclitaxel
Treatment	Run-in: Paclitaxel + IMP321 (6 or 30 mg) Arm 1: Paclitaxel + IMP321 (30 mg) Arm 2: Paclitaxel + Placebo
Countries	NL, BE, PL, DE, HU, UK, FR → overall 30+ sites

Status Report (March 2019)

- ✓ Safety run-in completed successfully
- ✓ Randomized phase started early 2017 with the RP2D (30 mg)
- ✓ Interim-data of safety run-in presented at ASCO 2017
- ✓ To-date, efficacy and safety data in-line with historical control group/ prior clinical trials (Brignone et al Journal Translational Medicine 2010, 8:71)
- ✓ Regulatory approval to conduct trial in 7 EU countries
- ✓ Mid-point of patient enrolment reached (June 2018)
- ✓ >190 patients recruited in Stage 2
 - First read out expected in Q4/2019



Efti (IMP321) in Melanoma TACTI-mel (IO combination) – Trial Design

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

Primary Objective

Recommended dose for Phase II with efti
(IMP321) + pembrolizumab

Safety + tolerability

Other Objectives

PK and PD of IMP321, response rate, time
to next treatment, PFS

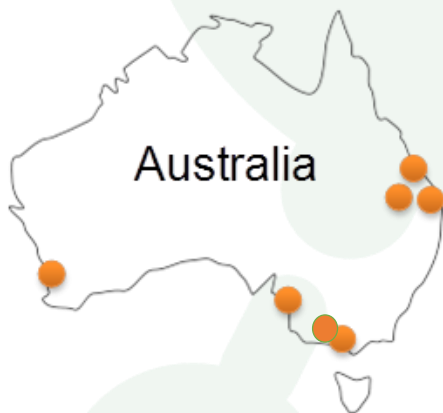
- Part A: efti (IMP321) at 1, 6 and 30 mg s.c. every 2 weeks starting with cycle 5 of pembrolizumab

→ Status: recruitment completed; interim results on next slides

- Part B: efti (IMP321) at 30 mg s.c. every 2 weeks starting with cycle 1 of pembrolizumab

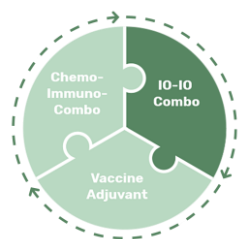
→ Status: recruitment completed and initial data presented in November 2018

- Pembrolizumab (Keytruda®) 2 mg/kg every 3 weeks i.v. part A and B



Australia

7 sites in Australia



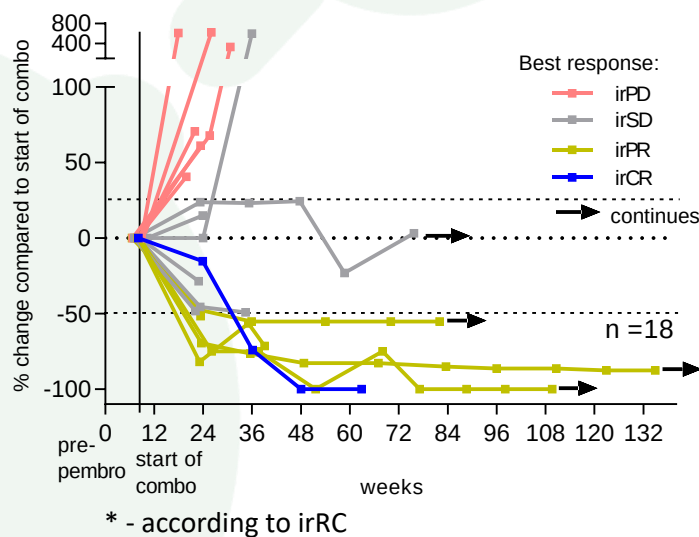
Efti (IMP321) in Melanoma TACTI-mel (IO combo)- Results after Start of Combo (part A)

Baseline Characteristics	N = 18 (%)
ECOG 1 / 0	22 % / 78 %
Elevated LDH	7 (39%)
Metastasis stage M1c	14 (78 %)
Pre-treated with BRAF/MEK/ipilimumab	5 (28 %)

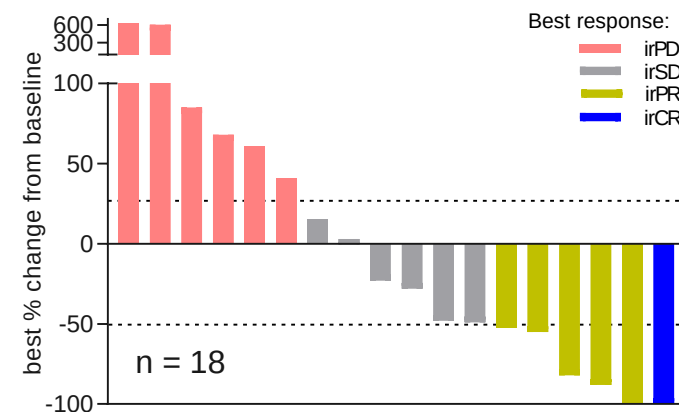
Best Overall Response acc. to irRC	N = 18 (%)
irCR	1 (6 %)
irPR#	5 (28 %) #
irSD	6 (33 %)
irPD	6 (33 %)
Best overall response rate (ORR)	6 (33 %)
Patients with tumor shrinkage	10 (56 %)
Disease control rate	12 (66 %)

- incl. 1 pt with complete disappearance of all target lesions; CR acc. to RECIST 1.1

Spider plot* (starting with cycle 5 of pembrolizumab)

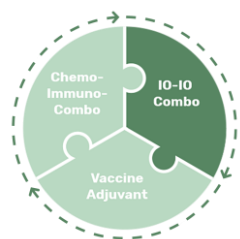


Waterfall plot* (starting with cycle 5 of pembrolizumab)



Exploratory analysis
(C1D1
pembrolizumab):
ORR of 61 %

- Patients with very late stage of disease (M1c, elevated LDH)
- Majority not responding to pembrolizumab
→ Tumor shrinkage in 56 % of these patients incl. 2 pts with complete disappearance of all target lesions



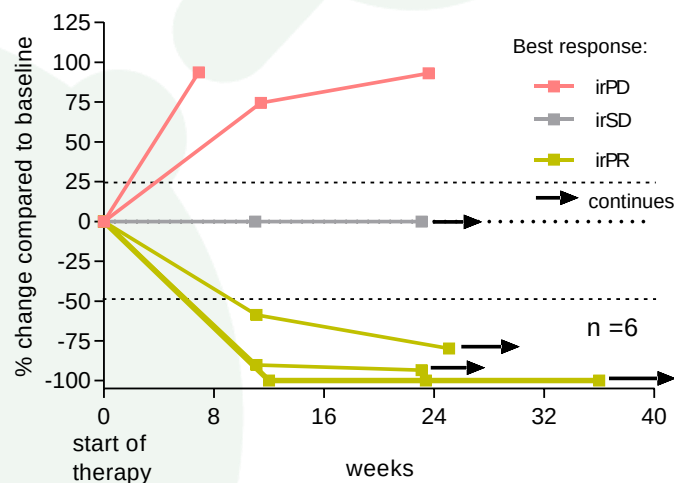
Efti (IMP321) in Melanoma TACTI-mel (IO combo)- Results Part B

Baseline Characteristics	N = 6 (%)
ECOG (0/1)	3 (50 %) / 3 (50 %)
Sex (f/m)	1 (13 %) / 5 (83 %)
Elevated LDH	5 (83%)
Metastasis stage M1c	6 (100 %)

Best Overall Response acc. to irRC	N = 6 (%)
irCR	0 (0 %)
irPR#	3 (50 %) #
irSD	1 (13 %)
irPD	2 (25 %)
Best overall response rate (ORR)	3 (50 %)
Patients with tumor shrinkage	3 (50 %)
Disease control rate	4 (66 %)

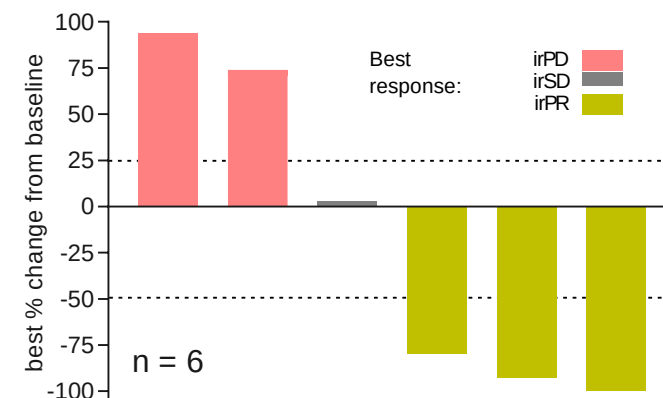
- incl. 1 pt with complete disappearance of all target lesions

Spider plot* (part B)

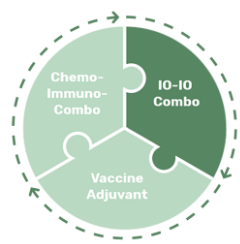


* - acc to irRC

Waterfall plot* (part B)

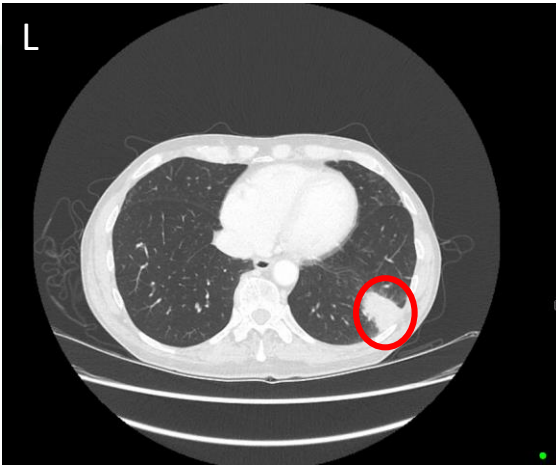


- All patients with very late stage of disease (M1c, elevated LDH)
- No DLTs or new safety signals
- Confirmed deep partial responses in 3 (50%) of the pts
- Treatment of 4 pts ongoing (currently 6+ months all)

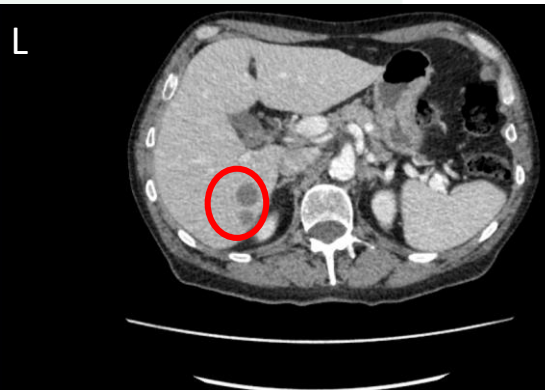
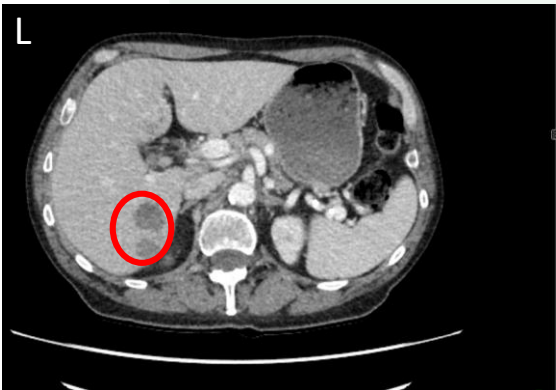
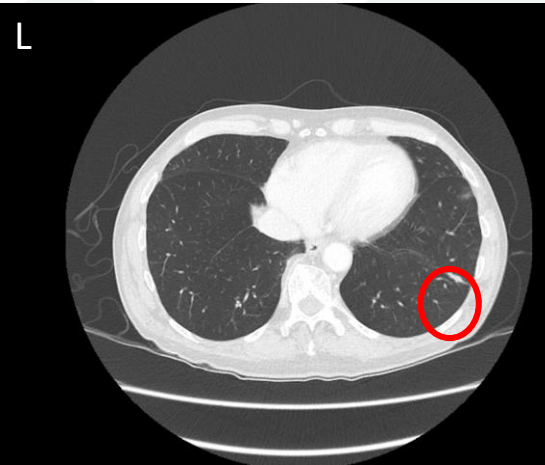


Efti (IMP321) in Melanoma TACTI-mel (IO combo)- Results Part B – Single Case

July 2018 (baseline)

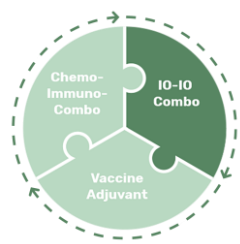


January 2019 (6 months)



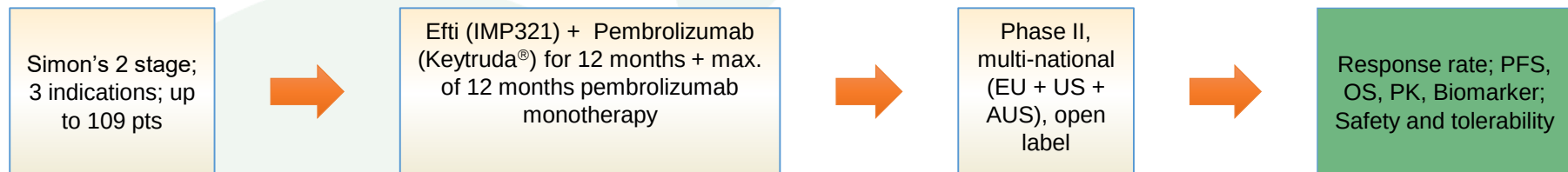
- 69 year old male
- Multiple lung, bone, liver and lymph node metastases from melanoma → **M1C stage**
- BRAF wild type
- ECOG 1

→ clear regression of lung and liver metastases
→ treatment continues (6+ months)

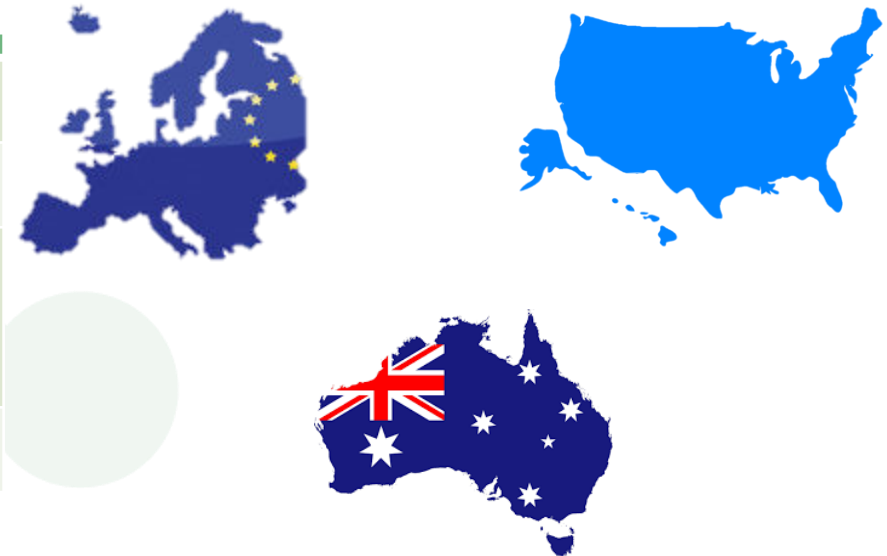


TACTI-002 Trial Design

An umbrella trial: Two ACTive Immunotherapeutics in different indications



Primary Objective	Response rate (iRECIST)
Other Objectives	Safety, PFS+OS, PK, exploratory biomarker analysis
Patient Population	Part A: 1 st line NSCLC PD-X naïve Part B: 2 nd line NSCLC, PD-X refractory Part C: 2 nd line HNSCC, PD-X naïve
Treatment	30 mg Efti (IMP321) s.c. 200 mg Pembrolizumab i.v.



13 sites in Europe / US / Australia

Notes

NSCLC – non-small-cell lung cancer, HNSCC – head and neck squamous cell cancer, DMC – data monitoring committee, PFS – progression free survival, OS – overall survival, PK – pharmacokinetics, PD-X – any PD-1 or DL-1 treatment

Eftilagimod Alpha Partnerships



- Eddingpharm holds Chinese rights
- Chinese IND for IMP321 granted in Dec 2017
- EOC, an Eddingpharm spin-off holding the Chinese rights for IMP321, Phase I study in MBC starting
- Milestone and royalty bearing partnership for Immunotep



- Spin off from NEC, Japan. Est. Dec 2016; aims to develop cancer drugs discovered by artificial intelligence
- January 2019, entered into clinical trial collaboration, service and supply agreement
- Preclinical and clinical research ongoing

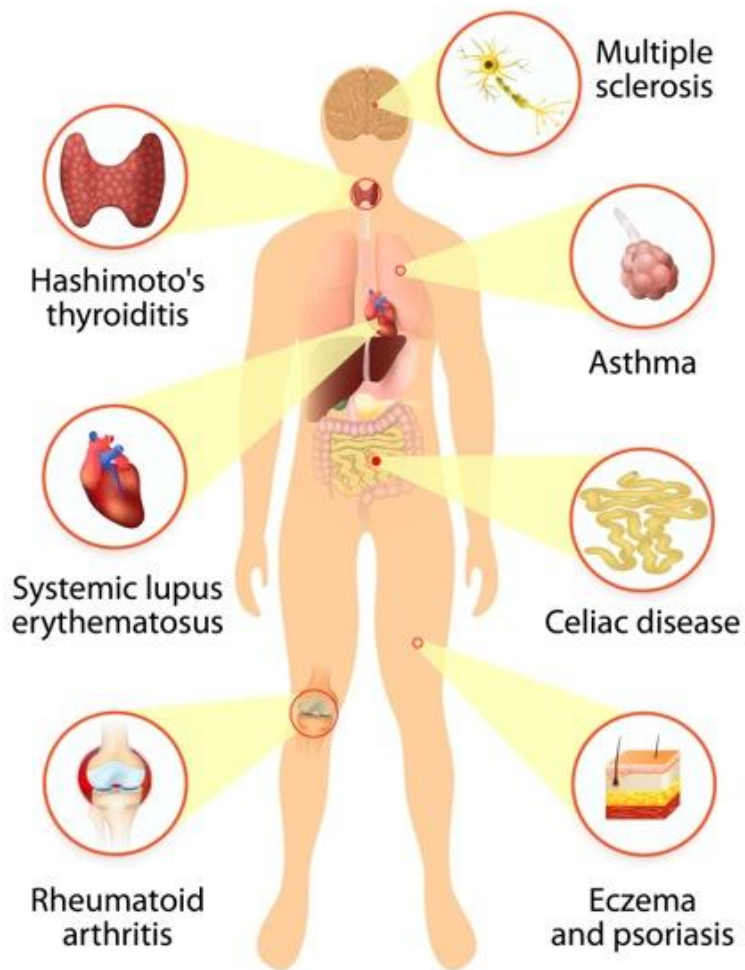


- Strategic supply partnership for the manufacturing of eftilagimod alpha
- Through WuXi, Immunotep was first company ever to import and use a Chinese manufactured biologic in a European clinical trial

IMP761 (Autoimmune Diseases)

Broad Potential in Targeting Auto-reactive Memory T cells with IMP61

AUTOIMMUNE DISEASES



THE PRESENT: FIGHTING SYMPTOMS

Treating general inflammation:

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

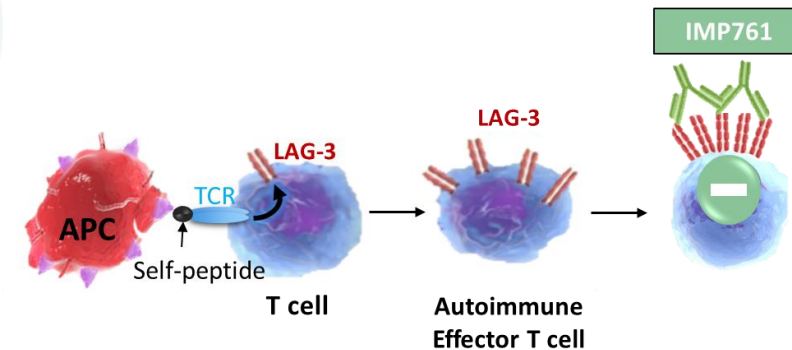
THE FUTURE: FIGHTING THE CAUSE OF AID

Treating the disease process:

silencing the few auto-immune memory T cells
accumulating at the disease site with IMP761

IMP761 – Agonist mAb

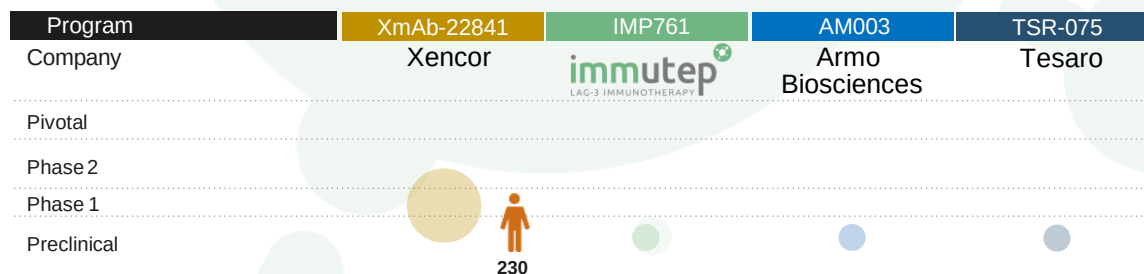
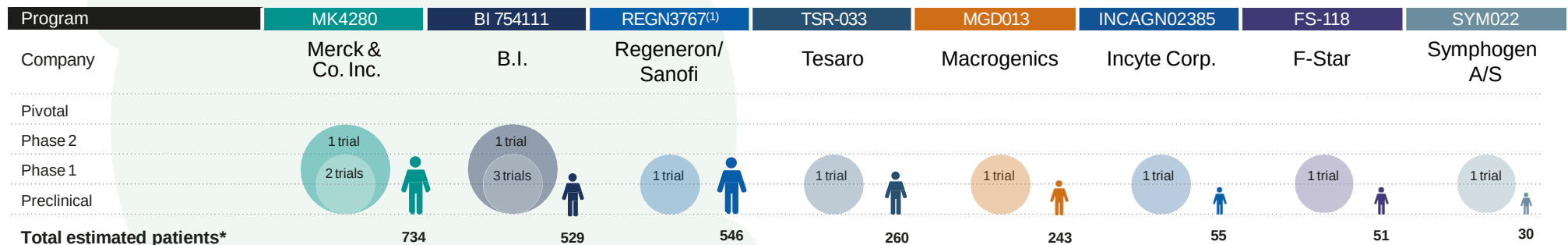
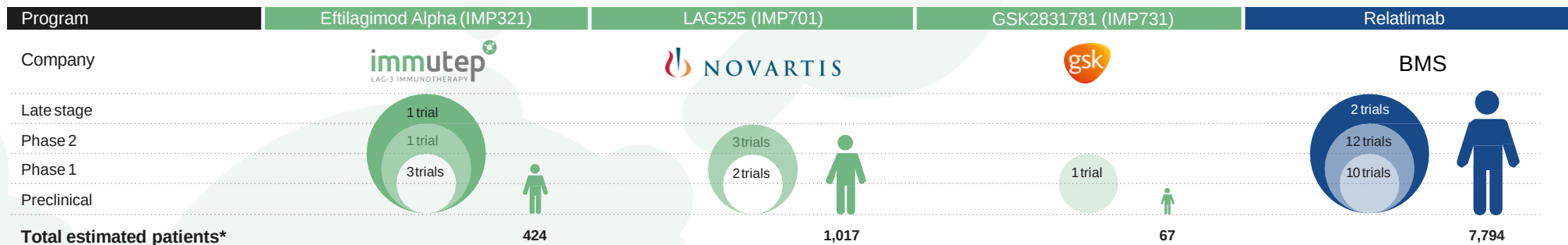
- **The Goal:** a more targeted therapeutic approach for AID
- **The Target:** the self-peptide-specific “exhausted” memory T cells harboring LAG-3
- **The Tool:** IMP761, an agonistic LAG-3-specific mAb down-modulating self-peptide-induced TCR signaling
- **The Evidences**
 - in vitro inhibition of peptide-induced human T cell proliferation and activation
 - in vivo down-modulation of an antigen-induced inflammatory T cell infiltration in a new NHP model
- **The Status:** Cell line development ongoing and GMP manufacturing preparations underway in order to progress to clinical development.



LAG-3 Landscape

LAG-3 Therapeutic Landscape Overview

Immunetep is the leader in developing LAG-3 modulating therapeutics



Indicates one product; size indicates stage of development, green = product either developed by Immunetep or under license from Immunetep

Indicates No. of patients on trials

Notes:

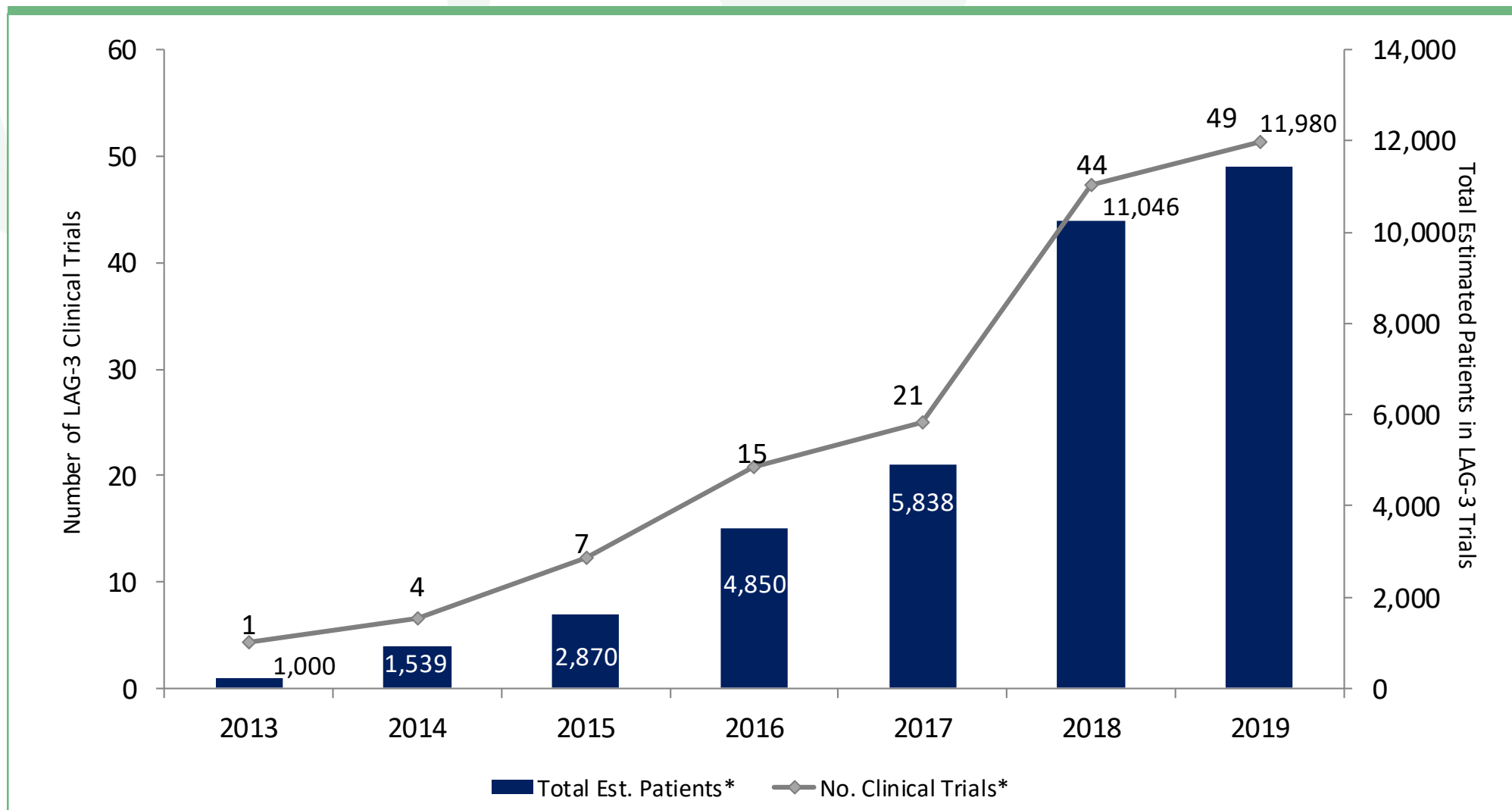
Sources: GlobalData, company websites, clinical trials.gov, and sec.gov

Information as of March 1, 2019, includes planned and completed trials, includes trials where the company may not be the sponsor

(1) As per Sanofi 6-K filing (February 2, 2019) development of REGN3767 has stopped

Increasing Clinical Trials Targeting LAG-3

Industry increasingly deploying resources to development of LAG-3 therapeutics



Sources: GlobalData, company websites, clinical trials.gov, and sec.gov

Information as of March 1, 2019

*2019 includes planned and completed trials, includes trials where the company may not be the sponsor

Outlook

Potential News Flow and Milestones

R&D

INSIGHT-004 to commence, IIT Phase I trial in collaboration with Pfizer and Merck KGaA: H1 2019

TACTI-mel final data in H2 2019

TACTI-002 first data in H2 2019

INSIGHT-004 first data in H2 2019

IMP761 program updates: throughout 2019

INSIGHT program updates: mid 2019

AIPAC first progression free survival data (metastatic breast cancer trial): Q4 2019

Data presentations and posters at conferences

Other

Potential milestone payments from partners as trials progress

Participation at investor and investment bank healthcare investor conferences

Continued expansion of patent portfolio

Continued regulatory interaction

Ongoing business development activities

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Thank you!