



BIOTECH SHOWCASE

January 14th 2020



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COMPANY SNAPSHOT

LEADING ANTIBODY IMMUNO-ONCOLOGY PLATFORM



- Advancing Cancer Immunotherapy by overcoming tumor resistance
- Validated by publications in top-tier journals e.g. Cancer Cell, and Immunity and partnerships with leading pharma companies such as Pfizer, Transgene, Bayer Pharma, Daiichi Sankyo and Mitsubishi Tanabe Pharma

ROBUST PIPELINE FUELED BY STRONG, FULLY INTEGRATED RESEARCH ENGINE



- Broad portfolio: 2 proprietary programs in the clinic – 5 programs in the clinic by 2020
- Entered into a Clinical Trial Collaboration and Supply Agreement with MSD to Evaluate BI-1206 in Combination with KEYTRUDA[®] in Advanced Solid Tumors

VALIDATING DEAL WITH PFIZER



- Development of anti-tumor associated myeloid (anti-TAM) antibodies
- \$3 million upfront, \$6 million equity stake, potential milestones > \$500 million, up to double digit royalties
- Selection of the second target discovered by BioInvent's proprietary F.I.R.S.T[™] technology

STRONG INSTITUTIONAL SHAREHOLDER BASE



- a.o. Pfizer, Omega Funds, Institut Mérieux, Van Herk Investments, Rhenman Healthcare Equity
- Concluded combined rights and directed issue in Q1/2019 and raised approximately MSEK 240 before transaction costs

EXPERIENCED MANAGEMENT TEAM WITH BIG PHARMA AND BIOTECH EXPERIENCE

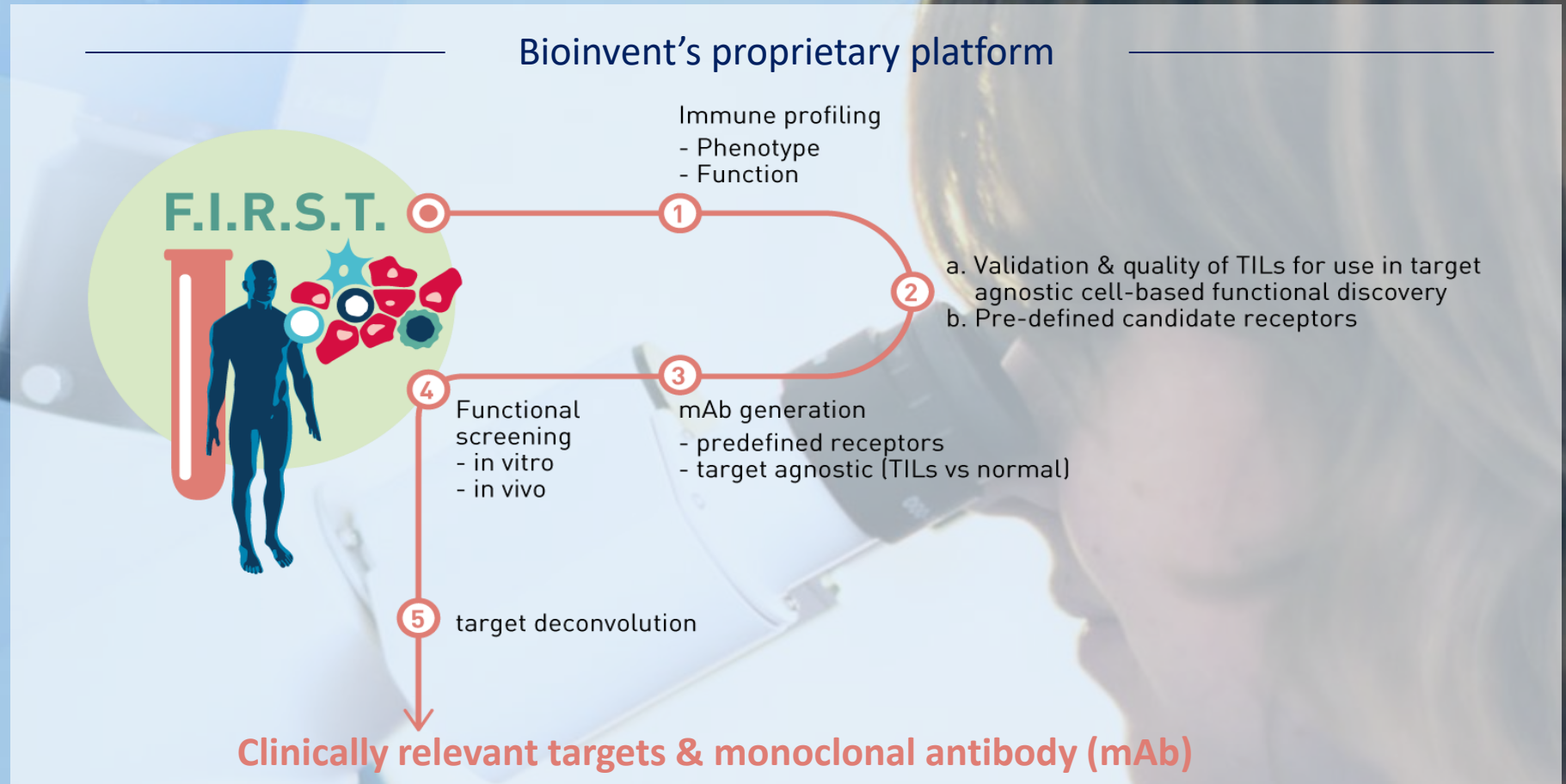


- Broad scientific/clinical expertise
- Significant senior executive experience with strong focus on partnering/deal making

SELECTED 2019 MILESTONES

- Received €0.75 million milestone payment from Mitsubishi Tanabe Pharma Corporation in connection with enrollment of the first patient in a Phase II clinical trial of an antibody identified from BioInvent's proprietary n-CoDeR® antibody library.
- Published first data from two parallel Phase I/IIa clinical trials of BI-1206.
- Acceptance by FDA of an IND application for a Phase I/IIa clinical trial of BI-1206 in combination with pembrolizumab in solid tumors.
- Received \$0.5 million milestone from XOMA Corporation related to the acceptance by FDA of the IND application for TAK-169.
- Pfizer selected the first target discovered by BioInvent's proprietary F.I.R.S.T™ technology platform under the collaboration with Pfizer Inc, triggering a payment from Pfizer to BioInvent of \$0.3 million.
- Signing of manufacturing agreement with Cancer Research UK expected to generate approximately SEK 30 million (~\$3 million)
- Presented BI-1206 preclinical data in mantle cell lymphoma at ASH 2019. Single agent BI-1206 had potent anti-MCL activity in the FcγRIIb-expressing MCL PDX model to overcome ibrutinib-venetoclax dual resistance.
- Entered into a Clinical Trial Collaboration and Supply Agreement with MSD to Evaluate BI-1206 in Combination with KEYTRUDA® in Advanced Solid Tumors
- Pfizer selected the second target and extended the research collaboration and license agreement

F.I.R.S.T™ - A UNIQUE PATIENT CENTRIC PLATFORM FOR DISCOVERY OF NOVEL ONCOLOGY TARGETS AND MAB



Platform validated by Pfizer

- Pfizer is now using the platform for their tumor associated myeloid cells (TAM)

NEW DRUGS AND MECHANISMS ARE NEEDED TO IMPROVE CANCER IMMUNOTHERAPY & SURVIVAL

THE CONCEPT WORKS

New drugs direct the immune system to combat tumors

ONLY A SUBSET OF PATIENTS RESPOND TO CURRENT DRUGS

New mechanisms and antibodies needed to improve outcomes

A RAPIDLY GROWING MARKET

2016 sales¹

43bn

(USD)

2022E sales¹

97bn

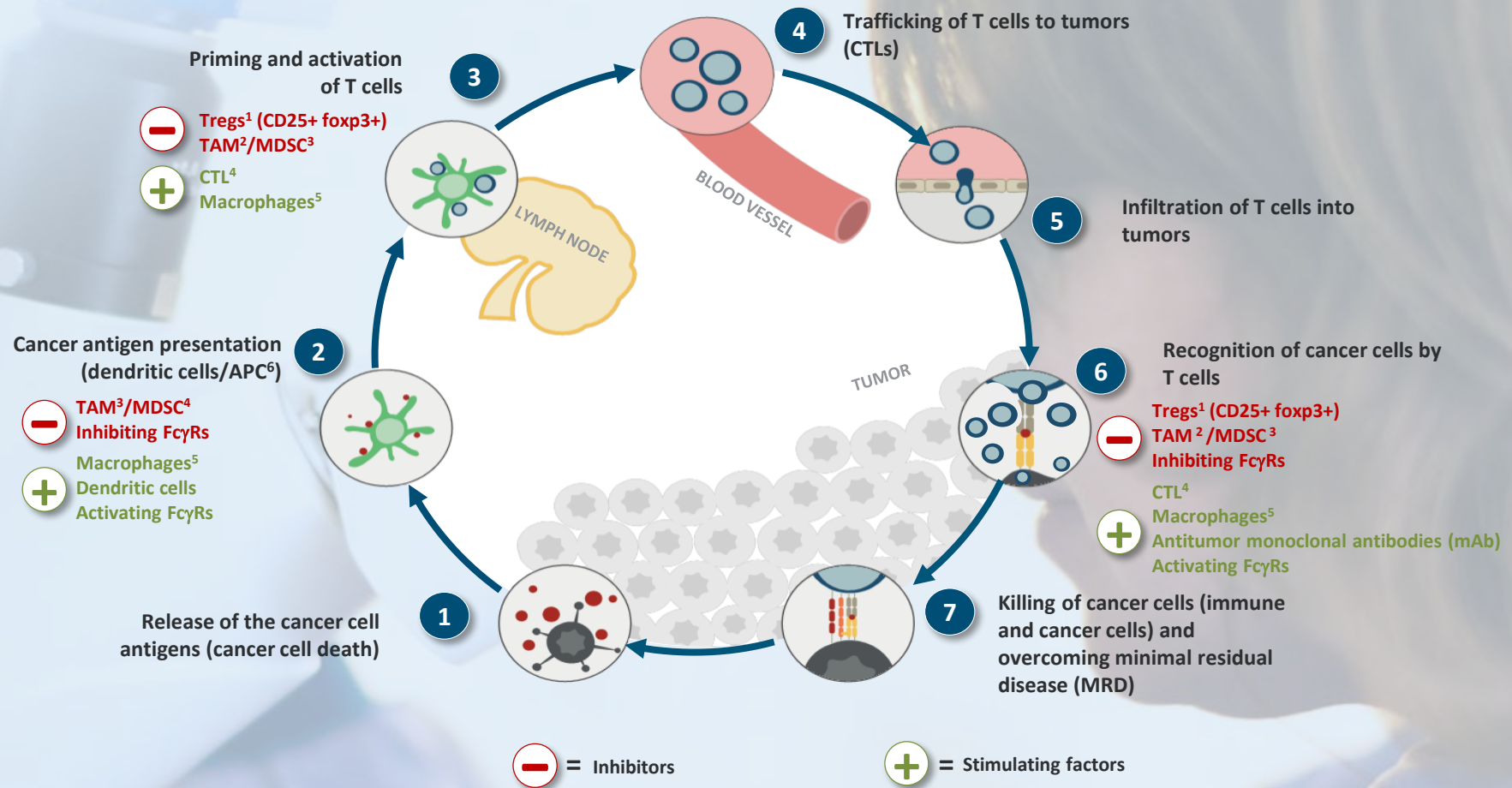
(USD)

CAGR 2016-2022E¹

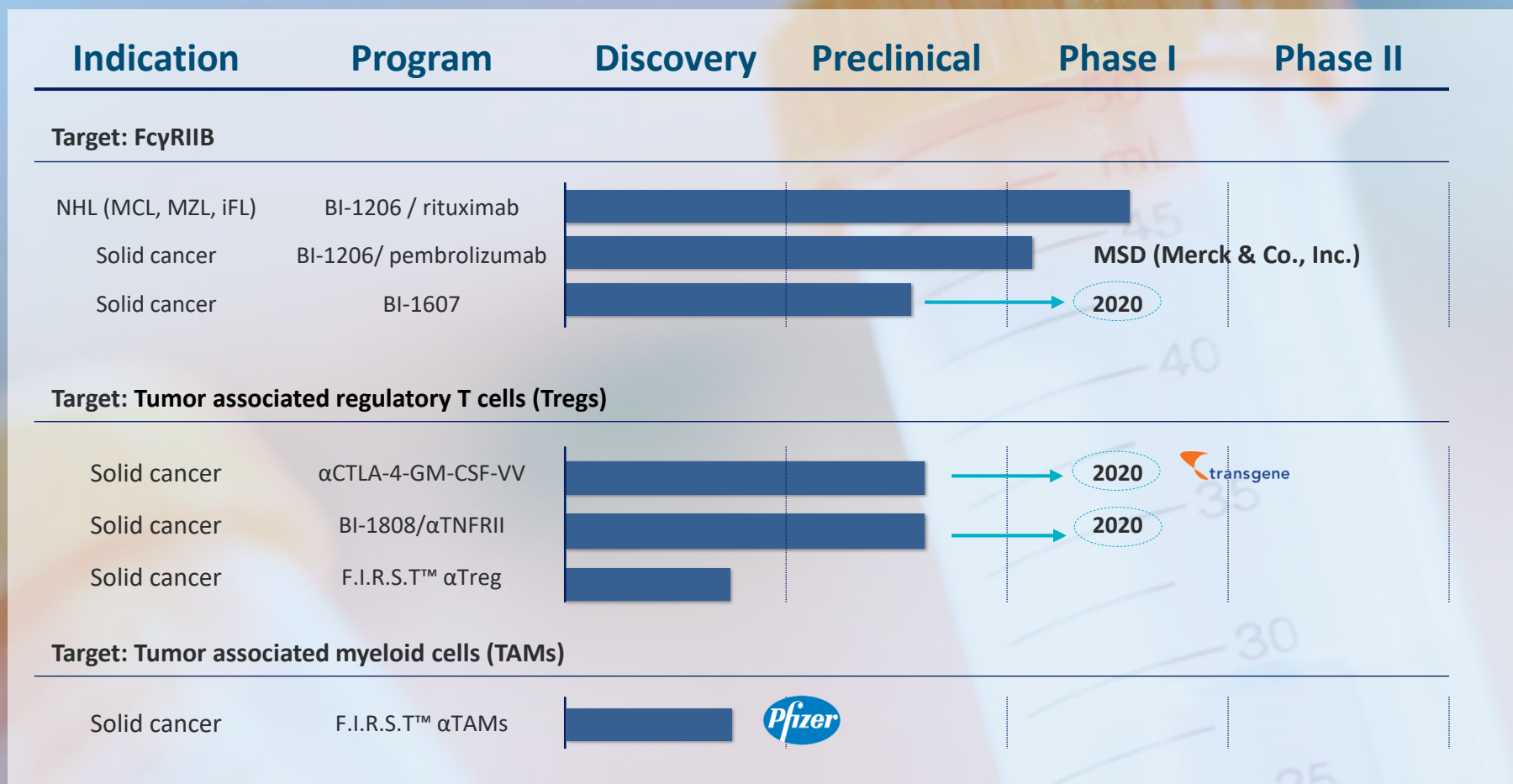
14.6%

BIOINVENT TARGETS KEY IMMUNE SUPPRESSIVE CELLS & MECHANISMS TO BOOST ANTI-CANCER IMMUNITY

The cancer immunity cycle

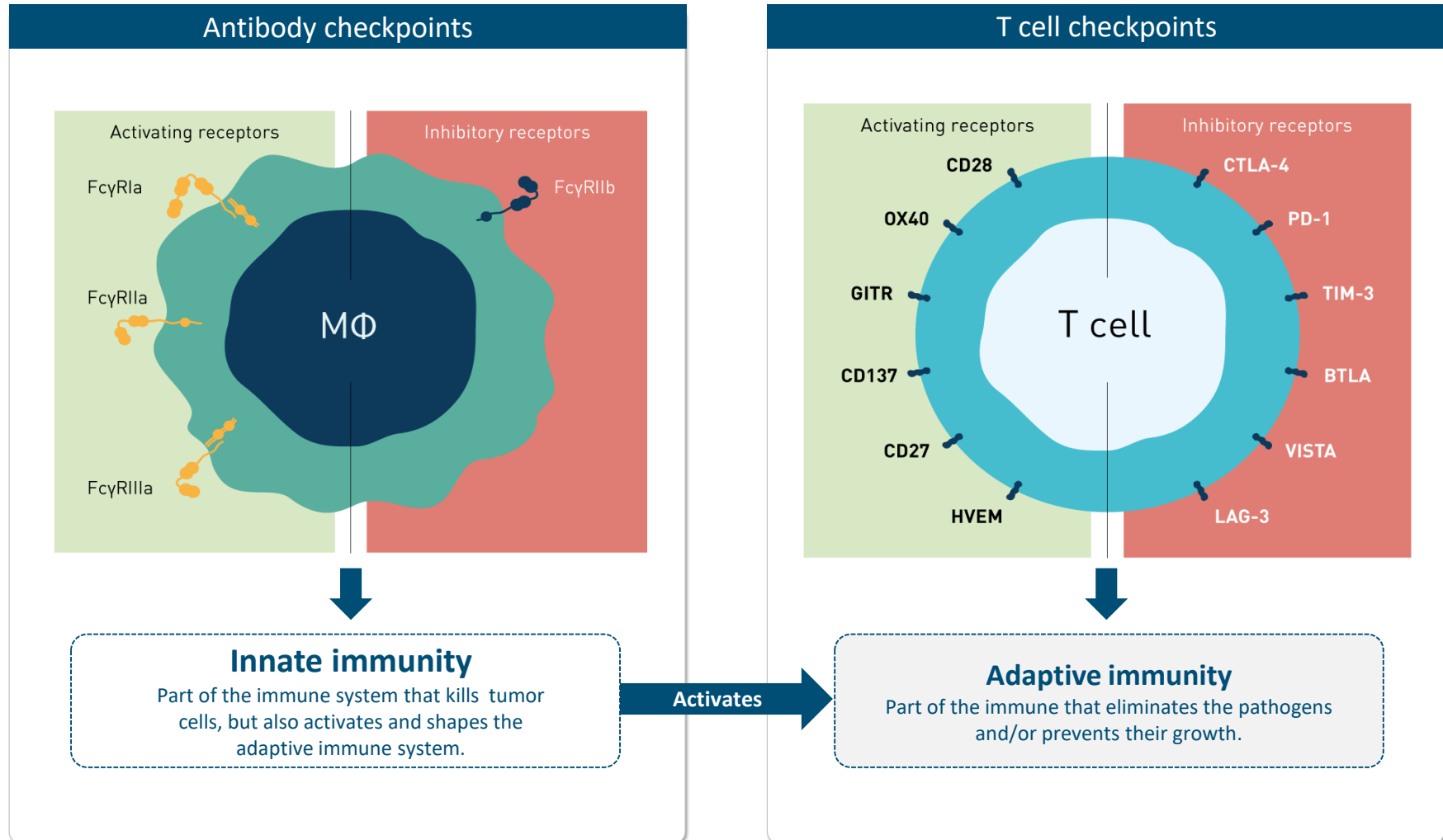


PIPELINE – MULTIPLE VALUE DRIVERS



- BioInvent additionally has ownership in anti-PlGF programs TB-403 and THR-317 partnered with Oncurios and Oxurion
- Two parallel Clinical Phase I/II studies ongoing with BI-1206 (BioInvent and CRUK sponsored)

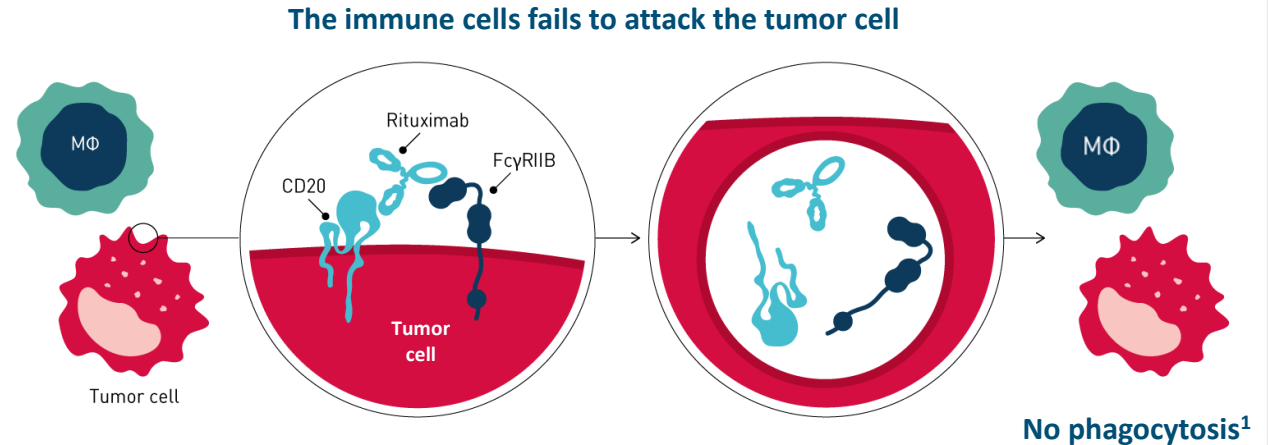
FcγRIIB – A SINGLE INHIBITORY ANTIBODY CHECKPOINT TO UNLOCK ANTI-CANCER IMMUNITY



BI-1206 IN NON-HODGKIN LYMPHOMA TURBOCHARGING ANTI-CD20

PRE BI-1206

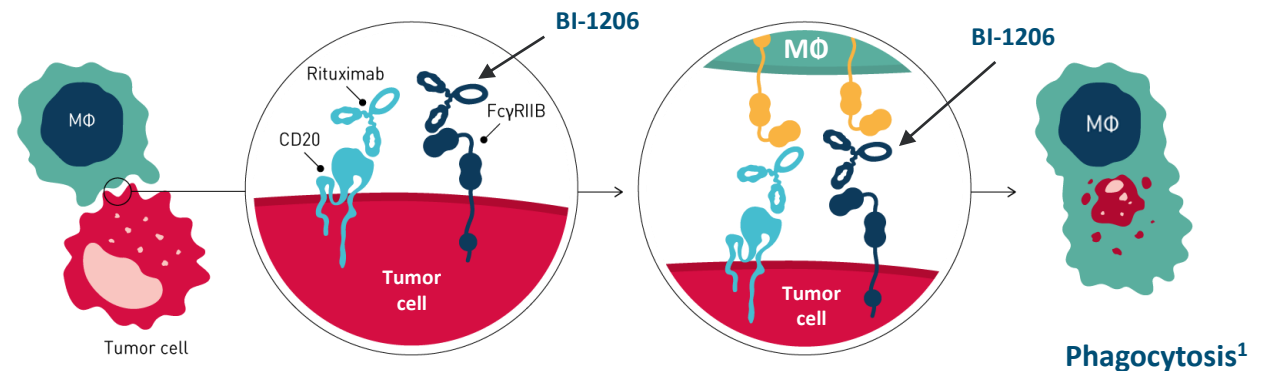
- Rituximab is effective when bound to **CD20** on the cell surface, but its efficacy is hampered by FcγRIIB-mediated endocytosis
- **Rituximab** is a monoclonal antibody (Rituxan®, Mabthera®, Roche) killing malignant B cells
- **CD20** is an antigen expressed on the surface of B cells, as well as cancer cells derived from B-cells
- The **FcγRIIB**-receptor functions to remove Rituximab from CD20, i.e. protecting cancer cells from the immune system



POST BI-1206

- BioInvent's **BI-1206** blocks the **FcγRIIB** receptor, suppressing the tumor's protection. Its activity helps restore and enhance rituximab's effect
- With the **FcγRIIB**-receptor blocked, a better anti-tumor activity is engaged allowing the immune system to find and kill the tumor cell

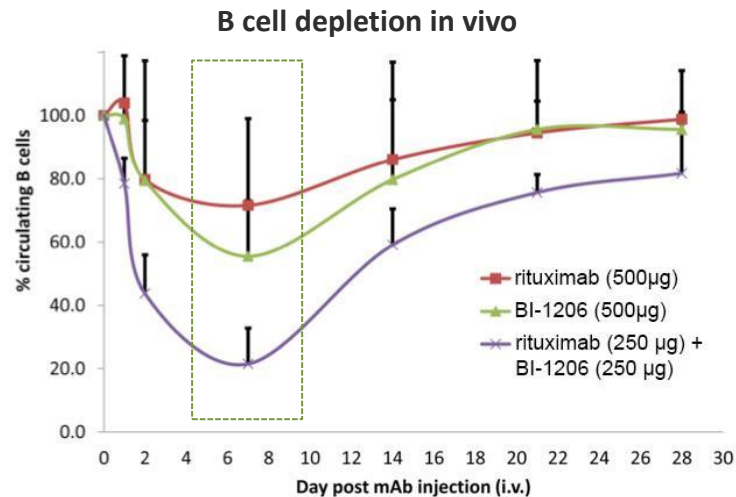
With the FcγRIIB-receptor blocked, the immune system can kill the tumor cell



BI-1206 IN NON-HODGKIN LYMPHOMA : CUTTING BOTH WAYS

BI-1206 BLOCKS RITUXIMAB INTERNALIZATION AND IMPROVES ITS ANTI-TUMOR ACTIVITY

Human CD20 FcγRIIB double transgenic mice



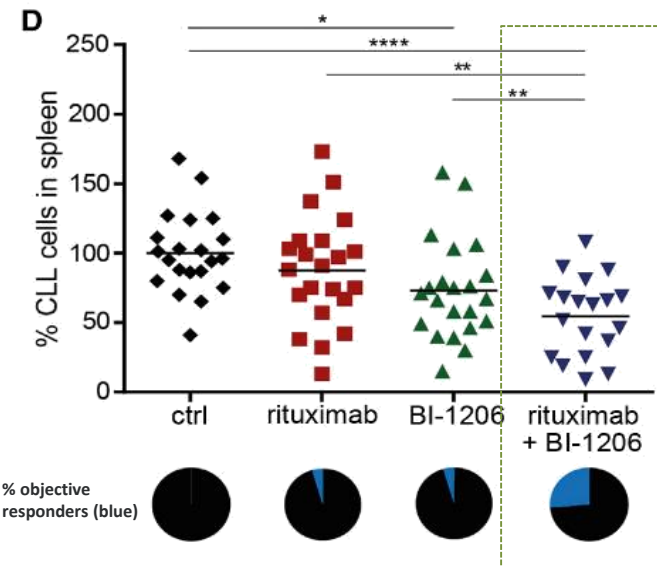
Comments

- By combining Rituximab and BI-1206, results show a synergistically enhanced B cell depletion
- Demonstrating that BI-1206 is truly boosting Rituximab's effect

**BOOSTING
RITUXIMAB'S EFFECT**



Humanized model of relapsed / refractory CLL¹



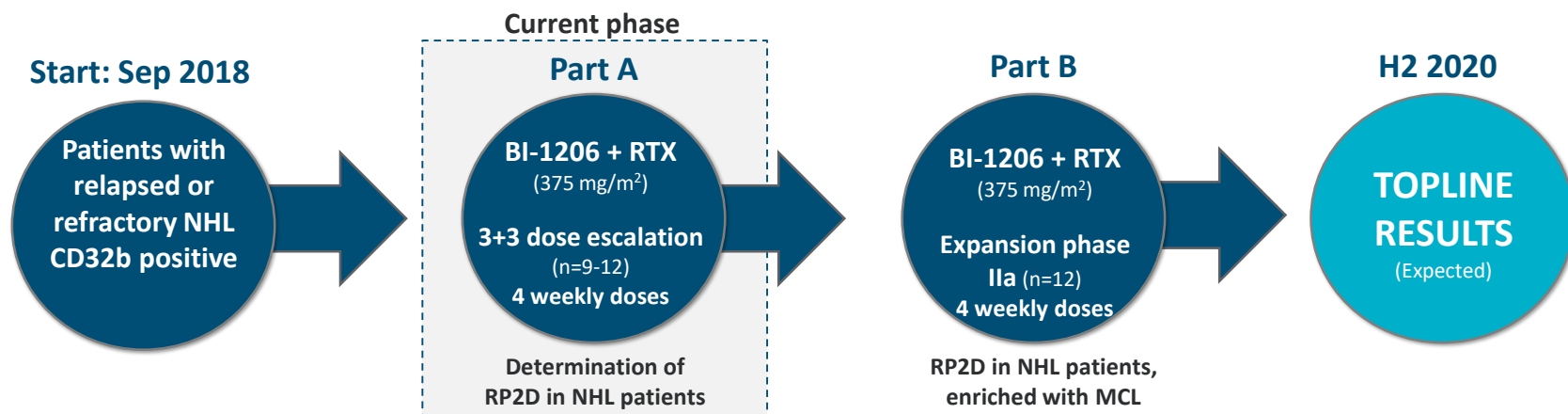
Comments

- Adding BI-1206 re-sensitizes tumor cells to rituximab mediated leukemic cell depletion
- Demonstrating that BI-1206 can overcome rituximab resistance in vivo

BI-1206 IN NON-HODGKIN LYMPHOMA - PHASE I/IIA STUDY

STUDY OVERVIEW

- A multicenter, open label, Phase I/IIa study in relapsed or refractory indolent Non-Hodgkin Lymphoma (iNHL) patients enriched with Mantle Cell Lymphoma – approximately 24 patients across sites in US & EU
- High proportion of patients expressing FCγRIIB in enriched population
- High unmet medical need – despite the availability of targeted therapies



BI-1206 IN NON-HODGKIN LYMPHOMA - PHASE I/IIA STUDY

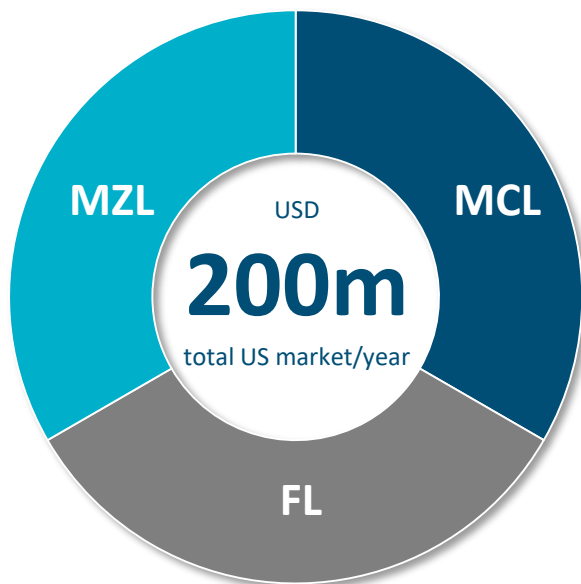
STUDY OBJECTIVES

- Safety & tolerability of BI-1206 in combination with rituximab
- PK/PD¹ of the antibody
- Recommended phase 2 dose (RP2D)
- Signs of efficacy of the combination treatment
- Biomarker exploration (B cell depletion, phosphorylation of FCγRIIB)
 - FCγRIIB overexpression is associated with a worse prognosis for the patient

BI-1206 IN NON-HODGKIN LYMPHOMA :

VALUE PROPOSTION – KEY SEGMENTS & VALUE DRIVERS

KEY SUB-SEGMENTS OF NON-HODGKIN LYMPHOMA (NHL)



- **MCL**¹, mantle cell lymphoma develops in the outer edge of a lymph node called mantle cell. Usually diagnosed in people in their early 60s. MCL may be slow growing (indolent) but can also be fast-growing (aggressive).
- **FL**¹, follicular lymphoma is typically very slow-growing and is the most common form of slow-growing non-Hodgkin lymphoma.
- **MZL**¹, marginal zone lymphoma is a slow growing type of B cell non-Hodgkin lymphoma that begins forming in the marginal zones of lymph tissue. Median age for diagnosis is 65.

Value drivers

Safety, chemo-free regimen and scientific rationale in anti-CD20 refractory B-cell lymphoma are key drivers of BI-1206 attractiveness.

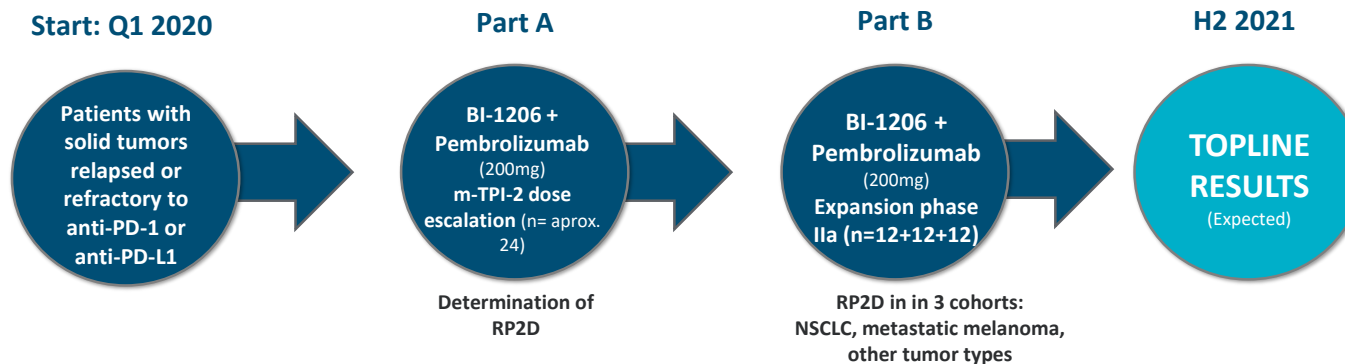
- First-in-class in hematology - no direct competitors
- BI-1206 shows a favorable safety profile
- High unmet need for chemotherapy-free, safer options in 2nd Line
 - in Rituximab-refractory patients
 - in aggressive disease such as MCL
 - in transplant ineligible and elderly MCL patients
 - In patients ineligible for chemo or targeted therapies
- Shorter clinical trials in 2nd Line and 3rd Line MCL (~2-3 years)
- Strong scientific rationale
- Possible label extension to all therapeutic areas where anti-CD20 mAbs are used
- BioInvent has received Orphan Drug Designation from the FDA for BI-1206 in MCL in January

BI-1206 IN SOLID TUMORS:

18-BI-1206-03, CLINICAL TRIAL COLLABORATION AND SUPPLY AGREEMENT WITH MSD

STUDY OVERVIEW

- A multicenter, open label, Phase I/IIa study in adults with advanced solid tumors who have relapsed or are refractory to anti-PD-1 or anti-PD-L1 therapy– approximately 60-70 patients across sites in US & SWE
- High unmet medical need – despite the availability of targeted therapies
- Strong rationale for combination, as FcγRs have been shown to modulate the activity of immune checkpoint inhibitors
- Local overexpression of FcγRIIb may determine resistance to anti-PD1 therapy



BI-1206 IN SOLID TUMORS:

18-BI-1206-03, CLINICAL TRIAL COLLABORATION AND SUPPLY AGREEMENT WITH MSD

STUDY OBJECTIVES

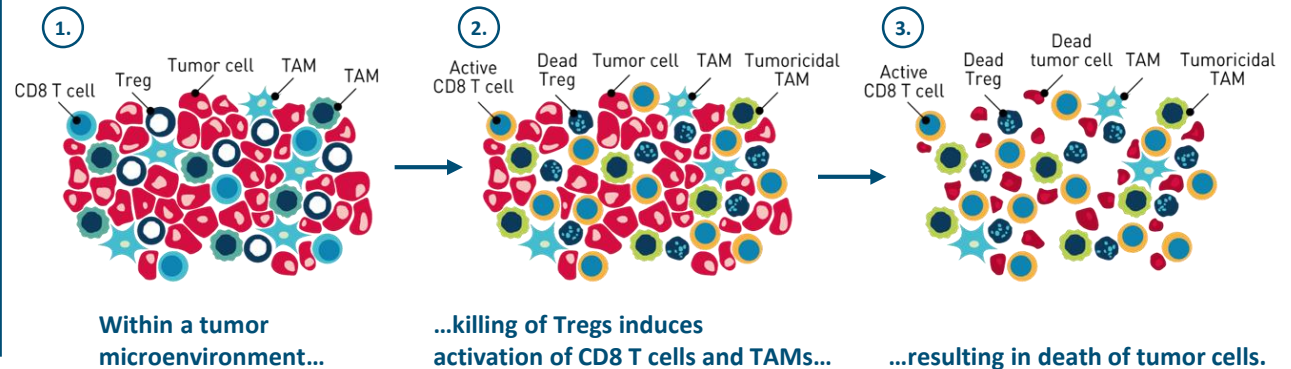
- Safety & tolerability of BI-1206 in combination with pembrolizumab
- PK/PD¹ of the antibody
- Recommended phase 2 dose (RP2D)
- Signs of efficacy of the combination treatment
- Biomarker exploration (CD32b and PD-1 tumor expression)

TARGETING TREGS AND TAMs TO MITIGATE IMMUNE SUPPRESSION

TARGETING TREGS

- Regulatory T cells (Tregs) can substantially inhibit immune responses, enabling tumor cells to escape detection.
- BioInvent is utilizing its F.I.R.S.T.™ platform to identify and characterize monoclonal antibodies to cancer-associated Treg targets in a function-first, target agnostic, manner.
- BioInvent is also pursuing differentiated antibodies to known targets through novel mechanisms and pathways.

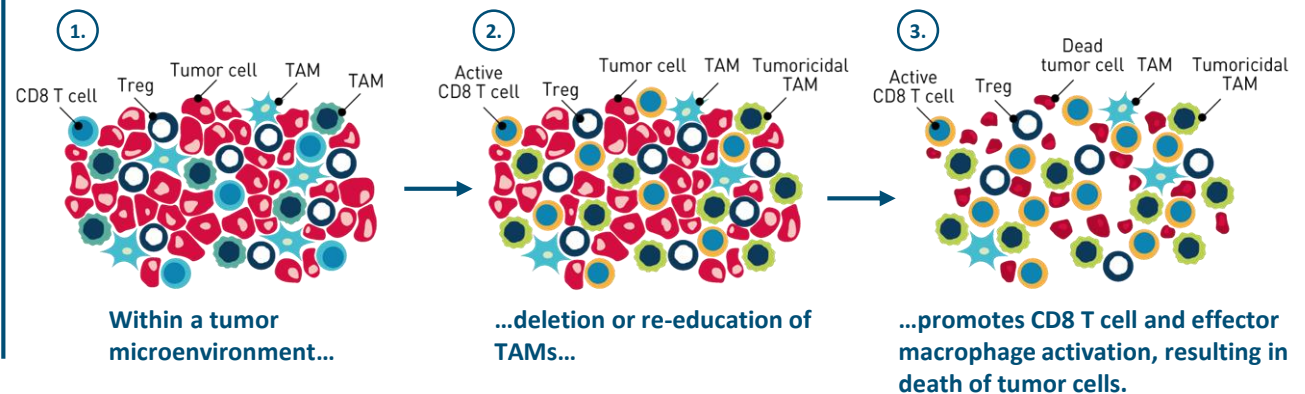
Developing antibodies that act on Tregs via novel or validated targets



TARGETING TAMs

- In partnership with Pfizer Inc., BioInvent works to identify novel oncology targets and therapeutic antibodies that may either reverse the immunosuppressive activity of tumor-associated myeloid cells (TAMs) or reduce the number of tumor-associated myeloid cells in the tumor.
- BioInvent is eligible for potential future development milestones in excess of \$500 million.

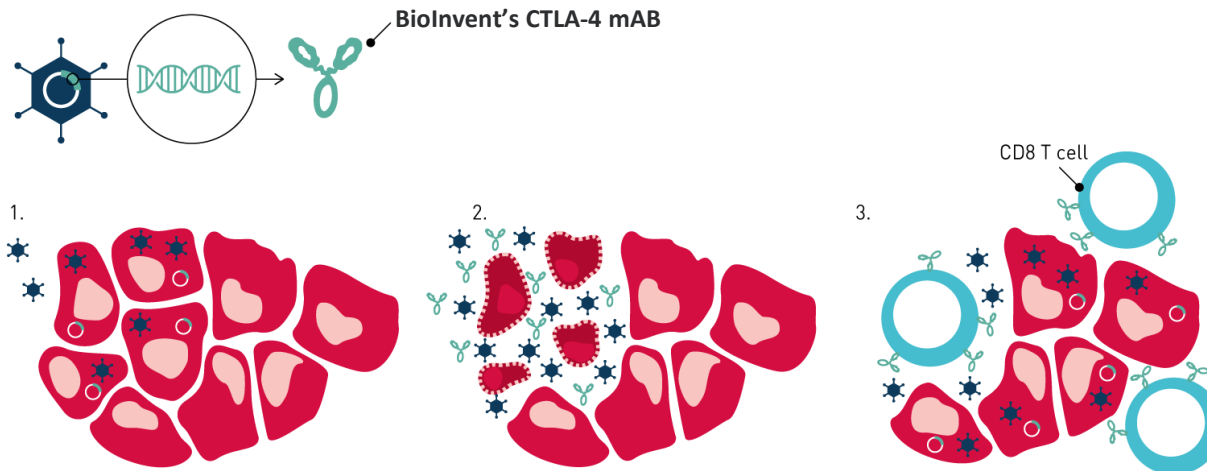
Strategic collaboration with Pfizer – developing antibodies that act on TAMs



MABS + ONCOLYTIC VIRUS TO TARGET SOLID TUMORS

50/50 PARTNERSHIP WITH TRANSGENE TO DEVELOP NEXT GENERATION ONCOLYTIC VIRUS

MAbs and oncolytic virus attacking the solid tumor



Oncolytic virus & anti-CTLA-4 antibody combination elicits stronger antitumor response & targeted expression of anti-CTLA-4 antibody, which improves safety profile

Comments

1.

- Virus-particles infect tumor cells
- Virus replicates and persists in tumor cells without integrating into host genome in a safe manner

2.

- Virus infected tumor cells produce human Treg depletion optimised anti-CTLA-4 antibody
- Virally infected tumor cells lyse as a result of viral infection
- Tumor antigens are released into tumor microenvironment

3.

- Intratumorally produced anti-CTLA-4 depletes Tumor Treg and induce Teff activation
- Tumor antigens are taken up by APCs fuelling activation of Tumor-specific T cells
- Systemic adaptive anti-tumor responses are induced and boosted "abscopal effect"

ABOUT THE COLLABORATION



- BioInvent and Transgene collaborate to **co-develop oncolytic virus (OV)** candidates encoding a validated anti-CTLA-4 antibody sequence, potentially with additional transgenes, **aimed at treating solid tumors**
- Transgene is contributing both its OV design and engineering expertise, as well as its proprietary Vaccinia viruses, designed to directly and selectively destroy cancer cells by intracellular replication of the virus in the cancer cell (oncolysis).
- BioInvent is providing its cancer biology and antibody expertise to the collaboration, as well as anti-CTLA-4 antibody sequences generated through its proprietary n-CoDeR®/F.I.R.S.T.™ platforms.
- **Cost and profits are shared 50/50** between Transgene and BioInvent

Clinical status

Phase I → **2020**
(Expected)

PROPRIETARY MANUFACTURING PLATFORM SINCE 1988



Provided courtesy of EMD Millipore Corporation

- Supports fast and flexible production of proprietary programs
- State of the art single use bioreactor (SUB) technology: 40L -1,000L batch sizes
- Approved for Phase I to III production
- Track record of 30 years inspections
- Consistent source of near term revenues from external customers (Signing of manufacturing agreement with Cancer Research UK in 2019)
- BioInvent has produced drug substance for clinical trials in Europe, USA and Japan
- The production facility is located in Lund, Sweden

SUMMARY

HIGHLY INTEGRATED COMPANY



- Discovery engine for antibodies and targets with focus on Immuno-Oncology
- Cell line generation and manufacturing capabilities
- Validated by publications in top-tier journals and partnerships with leading pharma companies such as Pfizer, Transgene, Bayer Pharma, Daiichi Sankyo and Mitsubishi Tanabe Pharma



ROBUST PIPELINE FUELED BY PROPRIETARY RESEARCH ENGINE

- “Multiple shots on goal”
- Broad portfolio: 2 proprietary programs in the clinic – 5 programs in the clinic by 2020
- 50/50 partnership with Transgene to develop first-in-class antibody-expressing oncolytic viruses in solid tumors
- Entered into a Clinical Trial Collaboration and Supply Agreement with MSD to Evaluate BI-1206 in Combination with KEYTRUDA[®] in Advanced Solid Tumors



STRONG INSTITUTIONAL SHAREHOLDER BASE

- a.o. Pfizer, Omega Funds, Institut Mérieux, Van Herk Investments, Rhenman Healthcare Equity
- Concluded combined rights and directed issue in Q1/2019 and raised approximately MSEK 240 before transaction costs



EXPERIENCED MANAGEMENT TEAM WITH BIG PHARMA AND BIOTECH EXPERIENCE

- Broad scientific/clinical expertise
- Significant senior executive experience with strong focus on partnering/deal making



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MANAGEMENT TEAM



Martin Welschhof

Chief Executive Officer
Holdings: 125,000 shares

Ph.D. (Dr.rer.nat.) in recombinant antibody technology. Post-doctoral training at the German Cancer Research Center, Department for Recombinant Antibody Technology. Employed since 2018. Broad international experience from executive positions within the biotech industry, including Director of Technology at Axaron Bioscience AG, Heidelberg, Germany, CEO of Affitech and CEO of Opsona Therapeutics.



Björn Frendéus

Chief Scientific Officer
Holdings: 483,083 shares; 270,258 options

Doctor of Immunology. Employed since 2001. Graduated from the Swedish Foundation for Strategic Research funded Biomedicine programmes within the Infection & Vaccinology programme in 2001. Visiting Professor at University of Southampton.



Andres McAllister

Chief Medical Officer
Holdings: 91,656 options

Doctor in Medicine and Surgery from the Universidad del Rosario (Bogotá), and holds a PhD from the Pasteur Institut/Université Paris. Performed academic work at the Pasteur Institut and the University of California San Francisco on cancer immunotherapy. Andres joins BioInvent from a position as CSO at Debiopharm, and has previously held senior roles at IDM and BioMérieux/Pierre Fabre.



Stefan Ericsson

Chief Financial Officer
Holding: 145,892 shares; 115,825 options

MBA, Lund University. Employed since 1998. Chief Financial Officer since 2016 and has previously served as Director Business Control. He was employed by the Swedish Tax Authority 1996-1997. Previously he worked as an auditor at PricewaterhouseCoopers 1990-1995.



Kristoffer Rudenholm Hansson

Senior Vice President, Technical Operations
Holdings: 522,882; 50,000 warrants; 114,059 opt.

Master of Science in Chemical engineering. Employed since 2016 and responsible for process development and production of antibodies for clinical studies. He has more than 15 years' experience from managing manufacturing of antibodies and other proteins for clinical use. Kristoffer has held a numerous positions within CMC Biologics A/S, DAKO A/S and Symphogen A/S.

Scientific Advisory Board

- **Martin Glennie**, Professor in immunochemistry at the University of Southampton. World-leading scientist in antibody biology. Dr Glennie's group has pioneered characterization of molecular mechanisms underlying therapeutic activity of clinically validated antibodies, forming the basis for development of new generations of antibody drugs.
- **Falk Nimmerjahn**, Professor in experimental immunology and immune therapy at the Friedrich-Alexander University Erlangen-Nürnberg. Leading scientist within Fc:FcγR biology and its impact on the therapeutic efficacy and tolerability of antibodies.
- **Rienk Offringa**, Professor at the German Cancer Research Center. Head of a European consortium engaged in immune stimulating anti-cancer antibodies. Formerly Principal Scientist at Genentech.
- **Tony Tolcher**, former Director of Clinical Research at South Texas Accelerated Research Therapeutics (START) and now active in the company NEXT Oncology. Dr. Tolcher specialises in early phase clinical testing of exploratory anti-cancer drugs.
- **Alexander Rudensky**, Chair of the Immunology Program at Sloan Kettering Institute. Dr Rudensky is a world-leading scientist within the area of regulatory T-cells, specialized in CD4-T cell regulation and homeostasis, and its role in autoimmunity and cancer.

BOARD OF DIRECTORS



Leonard Kruimer

Chairman
Holdings: -

MBA. Provides presently interim management solutions and consulting to companies. He served as a Board Member in BioInvent between 2016-2017. Previously executive and supervisory positions in a number of biotech companies, such as SkylineDx, BBB Therapeutics and ProFibrix. Between 1998-2011, he served as CFO and member of the board of Crucell NV. Chairman of the Board since 2018. Chairman of the Remuneration Committee and member of the Audit Committee.



An van Es Johansson

Board member
Holdings: 76,120 shares

M.D. VP and Head of Medical Affairs at Swedish Orphan Biovitrum AB (Sobi). Previously different executive positions in Clinical Development, Medical Affairs, Business Development and Commercial within Sobi, Eli Lilly, Roche, Pharmacia & Upjohn and biotech companies in USA, the Netherlands, Switzerland and Sweden. Member of the BioInvent Board since 2016. Member of the Remuneration Committee. Member of the Board of AlzeCure.



Dharminder Chahal

Board member
Holdings: 2,587,733 shares

M.Sc. in Aerospace Engineering and M.Sc. in Business Economics. CEO of SkylineDx since 2013. He is also currently the CEO of Quorics, MD at Exponential BV, and Fund Manager at Swanbridge Capital. Extensive board experience within life science in current and previous board roles at Agendia, Bioinvent (2013-2016), deVGen, Innate Pharma, and Octoplus. Member of the Board since 2017. Member of the Audit Committee. Chairman of the Board of DCPrime. Member of the Boards of Isobionics and VitalneXt.



Vessela Alexieva

Board member
Holdings: 20,850 shares

M.Sc. Molecular and functional biology. Born 1959 Lives in Lund, Sweden. Senior Research Engineer. Member of the Board since 2013.



Vincent Ossipow

Board member
Holdings: -

CFA, Ph.D. Venture partner Omega Funds. Former partner Private Equity Sectoral Asset Management. Researcher at University of Geneva. Research analyst at Pictet Bank. Member of the BioInvent Board since 2016.



Elin Jaensson Gyllenbäck

Board member, Employee Representative
Holdings: 20,625 shares

Ph.D. in Immunology. Senior Research Scientist. Member of the Board since 2017.



Bernd Seizinger

Board member
Holdings: -

Doctor of Medicine and Doctor of Neurobiology. Serves currently as chairman and board member in a number of biotech companies in the U.S., Europe and Canada. Previously President & CEO of GPC Biotech, Executive Vice President and Chief Scientific Officer of Genome Therapeutics Corporation and VP of Oncology Drug Discovery and - in parallel - VP of Corporate and Academic Alliances at Bristol-Myers Squibb. Member of the BioInvent Board since 2018. Member of the Remuneration Committee.

Bernd Seizinger cont'd

Chairman of the board in Oxford BioTherapeutics, Co-Founder and Executive Chairman/Acting CEO in CryptoMedix. Board member and Chairman of the Scientific and Clinical Advisory Board in Opsona, board member and Co-Chair of the Scientific Advisory Board of Oncolytics and board member of Aprea and Vaccibody.