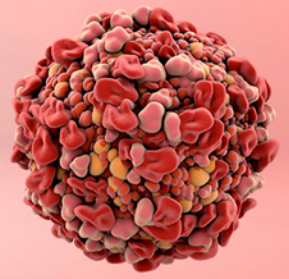
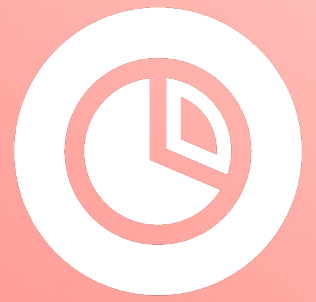


HIGHLIGHT THERAPEUTICS

Unlocking the potential of IO

Overcoming anti-PD1 resistance to create best-in-class intra-tumoral immunotherapy

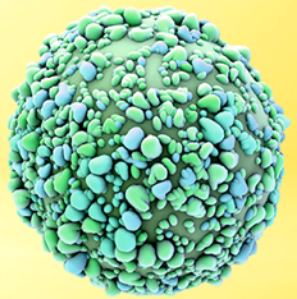
- BO-112 differentiated from other intratumoral innate immune activating agents
  - Unique single agent activity demonstrated in pre-clinical studies
  - Addresses two main mechanisms mediating resistance to anti-PD1 therapies
  - 50% of anti-PD1 resistant melanoma patients had clinical benefit after a few BO-112 injections - similar trends in other solid tumors
  - Compares favorably with lack of clinical efficacy for STING/RIG agonists, potentially superior to TLR9 agonists
- Three opportunities of success in the Phase 2 trials to prove BO-112's superior efficacy in reversing anti-PD1 resistance
- Strong and growing IP through 2036 and beyond in US and EU
- Raising €22M to help deliver results from three Phase 2 / POC studies by 2022 (latest trial)
- Multiple potential strategic exits and options guided by Internationally-experienced management team and advisers



BO-112 offers potential solution to anti-PD1 resistance to transform cancer immunotherapy

The Company

Management, Boards and who we are



Executive Team and Board

Marisol Quintero, PhD, MBA
CEO/Board Member

- Head Biotech and Medicinal Chemistry at Spanish National Cancer Research Centre
- BD and Tech Transfer at Spanish Cancer Research Centre, Fundación Botín, Life Length
- Pharmacy degree (University of Valencia), PhD in Pharmacology (UCL), Executive MBA (Instituto de Empresa)

Carlos Paya MD PhD
Executive Chairman of the Board

- Leading physician-scientist at the Mayo Clinic
- Leadership track record in pharma, biotech, and start-ups
- Strategy, pipelines development, global launches and product life cycle
- Executed Company growth plans, successful fundraising in private/ public markets, and via BD and M&A

Mark Branum, PhD
CMC & Manufacture

- Executive Director of CMC at Immune Design, until acquisition by Merck
- Senior CMC roles at OncoResponse and Theraclone Sciences
- Led academic R&D collaborations
- Ph.D. in biological chemistry (University of Minnesota), post-doctoral studies in biochemistry with Nobel Laureate Aziz Sancar (University of North Carolina)

Michael Doherty
Regulatory Strategy

- Led Global Regulatory Affairs at Roche
- Launch No.1 oncology portfolio with a franchise of monoclonal antibodies and targeted medicines
- Member of the Roche portfolio committee from 2002 to 2016
- Prior positions: Global Head, Pharma Regulatory Affairs, Hoffmann La-Roche and Genentech

Non-Executive Members:
Janwillem Naesens (DROIA), Damia Tormo (COLUMBUS), Shahzad Malik (ADVENT), Matthias Van Woensel (DROIA)

Scientific Advisory Board

Ralph R. Weichselbaum; MD

- Professor of Radiation and Cellular Oncology Chair, Department of Radiation and Cellular Oncology, University of Chicago
- Made discoveries in basic signal transduction after ionizing radiation exposure and, in separate studies, discovered mechanisms of radiation resistance/sensitivity are mediated by cytokine activation in tumors
- Currently investigating the relationship between radiotherapy and immunotherapy

Antoni Ribas, MD, PhD

- Professor of Medicine, professor of Surgery and professor of Molecular and Medical Pharmacology at UCLA
- Director of Tumor Immunology Program at Jonsson Comprehensive Cancer Center; Director of Parker Institute for Cancer Immunotherapy Center, UCLA
- Chair of SWOG Melanoma Committee; member of American Society of Clinical Investigation
- Recipient of AACR Richard and Hinda Rosenthal Award and NCI Outstanding Investigator Award

Ignacio Melero, MD, PhD

- Professor of Immunology of the University of Navarra
- Leads a group working in translational tumor immunotherapy with emphasis on cell therapy, cytokine gene therapy, and immune-stimulatory monoclonal antibodies
- Earlier in his career, contributed to seminal discoveries in the function Natural Killer cells, and T-cell co-stimulation via CD137 (4-1BB)

Michael Doherty

- Led the Global Regulatory Affairs function at Roche through the important growth years where Roche launched the number one oncology portfolio with a franchise of monoclonal antibodies and targeted medicines. Member of the Roche portfolio committee from 2002 to 2016
- Prior positions: Global Head, Pharma Regulatory Affairs,
- Hoffmann La-Roche Ltd., Basel/Genentech, San Francisco

Clinical-stage oncology company maximizing potential of checkpoint therapy

Targeting anti-PD1 resistance to transform cancer immunotherapy

Phase 2 asset BO-112 offers a unique and superior solution to anti-PD1 resistance

Sound clinical strategy including three Phase 2 / POC trials with Merck

Primary and acquired resistance a major barrier to successful cancer immunotherapy

Series B with potential for three significant, parallel inflection points

Clinical-stage oncology company maximizing potential of checkpoint therapy

Targeting anti-PD1 resistance to transform cancer immunotherapy

Phase 2 asset BO-112 offers a unique and superior solution to anti PD1 resistance

- Unique multi-target approach to turn cold tumors hot and visible to immune system
- BO-112 activates selected signaling pathways in tumor microenvironment and specifically and uniquely in tumor cells
- Pre-clinically & clinically superior to other innate immune activators in clinical development (TLRs, RIGI, and STING agonists)
- Backed by robust and growing IP to 2036 and beyond in US and EU

Primary and acquired resistance a major barrier to successful cancer immunotherapy

- Most tumor types don't respond to checkpoint therapy with only 20-40% response rate for single agent in the best cases
- **Primary** resistance - mainly due to lack of T-cells trafficking to tumor ("cold" tumor)
- **Acquired** resistance – due to reduced MHC1 in tumor cell

Development program designed to maximize chances of success

Three clinical programs underway with Merck

Sound clinical strategy including three Phase 2 / POC trials with Merck

- Three separate Phase 2/POC trials being initiated in collaboration with Merck & Co. in patients with anti-PD1 resistance using ORR as primary endpoint
- Additional independent Investigator-led studies including UCLA Phase 1 at the UCLA Jonsson Comprehensive Cancer Center, US
- Proven safety and activity in Phase 1 as monotherapy and in combination with anti-PD1's
- Focus on indications with unmet medical need and where intra-tumoral therapy has advantages over systemic therapies

Series B with potential for three significant, parallel inflection points

- Three opportunities of success in the Phase 2 trials to prove BO-112's superior efficacy in reversing anti-PD1 resistance
- Multiple potential strategic exits
- Highly experienced international management, Board and SAB to drive success

Clinical Development strategy

Maximizing chances of success of BO-112 to unlock the full potential of anti-PD1 therapies

Unlocking the full potential of checkpoint inhibitors

Turning cold tumors hot

BO-112 in combination with anti-PD1antibodies shows potent & durable clinical responses in patients not responding to anti-PD1 antibodies

Stimulation of immune system using anti-PD1 antibodies significantly improves survival in some cancers e.g. melanoma, NSCLC

Most tumor types don't respond to checkpoint therapy - best case single agent response rate 20-40%

Activating immune system can stimulate tumor neoantigens and priming of T cells **Turning cold tumors hot**

STING, RIG1/MDA5, TLR9 trigger tumor cell death, expression of type I IFNs and pro-inflammatory cytokines and recruitment of immune cells

Optimised immune response

BO-112 multi-pathway approach has a duel positive effect

Vanpouille- Box et al, Nat. Reviews Drug Discovery. Sep 2019

Unlocking a large potential oncology market opportunity

Addressing Primary and Acquired immunity

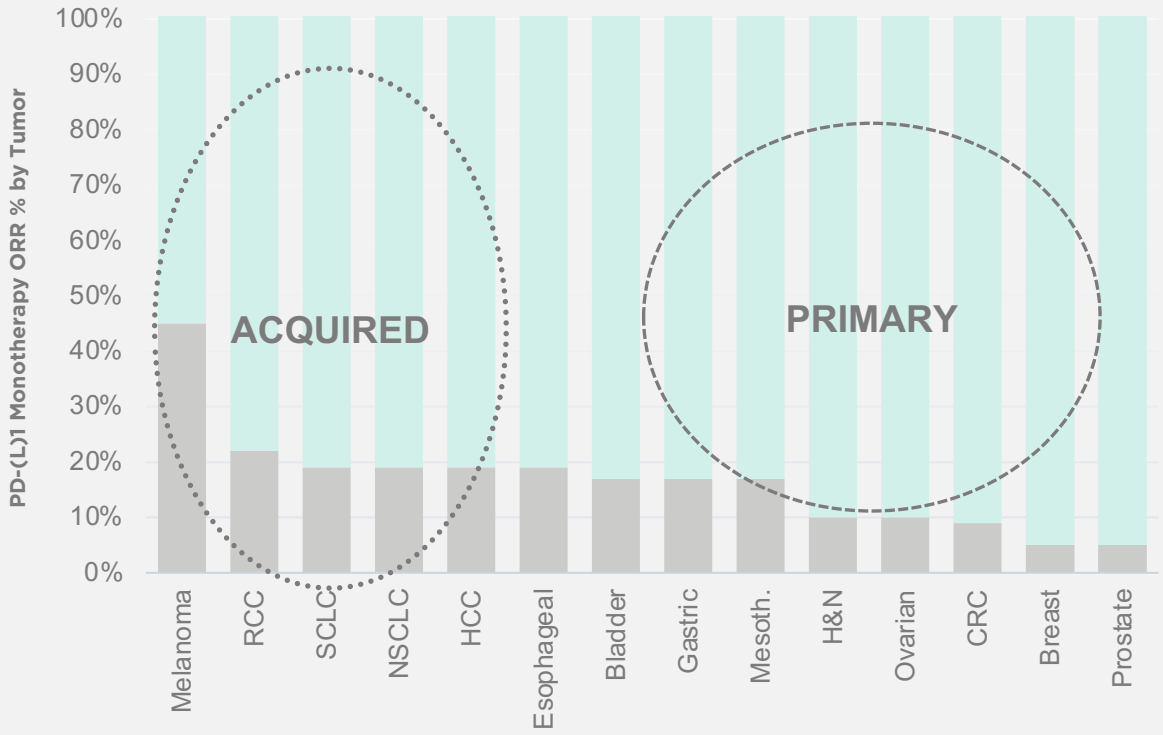
Reverse Acquired anti-PD1 resistance

Positive signal in solid tumors especially melanoma for ORR

SPOTLIGHT 202

Phase 2 liver metastasis from CRC (MSS)- 2nd L

Phase 2 liver metastasis from GC (MSS)-3rd L



Enable anti-PD1 primary resistance in cold tumors

Target liver metastasis which dictate prognosis in two GI malignancies

SPOTLIGHT 203

Melanoma Phase 2 trial-2nd L

Mode of action

No treatment

The tumor is not detected by the immune system and grows without interference

TUMOR

They do not express MHC-1, which needs to be detected by the immune system.

IMMUNE SYSTEM

Macrophages
They are in protumoral mode: they ignore the tumor and allow it to grow.

Dendritic cells
Without MHC-1 they cannot detect the tumor and remain inactive.

Lymphocytes
Not present or inadequately activated to detect and attack the tumor.

Treatment with BO-112

The double stranded RNA simulates a viral particle. It makes tumor cells more sensitive and detectable by the immune system, which is also more active

Intratumoral injection

BO-112
Fragments of double stranded RNA injected directly onto the tumors.

Lymph node

Lymphocytes CD4 + and CD8 +

TUMOR

BO-112 activates a series of intracellular cascades that trigger immunogenic cell death, leading for instance to an increase MHC-1 expression.

MHC-1
Tumor cells increase the expression of MHC-1 facilitating antigen presentation

Antigen

MHC-1

IMMUNE SYSTEM

Dendritic cells
They recognize the antigens presented by MHC-1 and move to lymph nodes to present to lymphocytes.

TUMOR CELLS

TUMOR RECOGNITION

TUMOR DEATH

INFLAMMATION

Lymphocytes
They are recruited to the tumor microenvironment, they recognize the tumor and begin to attack it due to MHC-1 and dendritic cells. Also activated directly by the presence of BO-112.

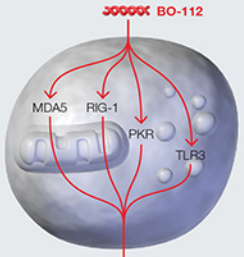
Macrophages
BO-112 changes them to antitumor status. Thus, they destroy and phagocytise the tumor cells.

Cytokines
BO-112 makes both tumor and immune cells produce cytokines. These molecules activate the immune system and intensify the death of tumor cells.

Infographic: Fundamentium

MULTIPLE ACTIVATION

BO-112 activates several complementary intracellular cascades; thus enhancing its effect.



EFFECTS
Tumor recognition
Tumor inflammation
Tumor death

COMBINABLE

This treatment can be combined with other different therapies to achieve a higher anti-tumoral effect.

IMMUNOTHERAPY
- Innate immunity BO-112
- +
- Acquired immunity Check point inhibitors

CONVENTIONAL TREATMENTS
- +
- Radiotherapy
- +
- Chemotherapy
- ...

SPOTLIGHT CLINICAL TRIALS

	Phase 1/1b	Phase 2	Indication
SPOTLIGHT 101	B0-112 mono ✓		Melanoma, leiomyosarcoma, breast cancer
SPOTLIGHT 102	BO-112 +anti-PD1 ✓		NSCLC, SCCHN, melanoma, RCC
SPOTLIGHT 202	BO-112+ pembro	MERCK	Colorectal cancer with liver mets
SPOTLIGHT 202	BO-112+ pembro	MERCK	IGastric-GEJ cancer with liver mets
SPOTLIGHT 203	BO-112+ pembro	MERCK	Melanoma*
IST	BO-112 + nivolumab UCLA		Resectable soft tissue sarcoma pre-surgery*

SPOTLIGHT
CLINICAL TRIALS

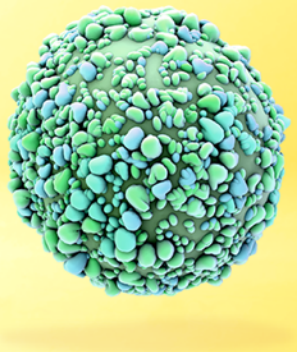
SPOTLIGHT 101	Phase 1	BO-112 monotherapy
SPOTLIGHT 102	Phase 1b	BO-112 + anti-PD1 combination in anti-PD1 resistant patients
SPOTLIGHT 202	Phase 2	BO-112 + pembrolizumab combination in Liver Metastases
SPOTLIGHT 203	Phase 2	BO-112 + pembrolizumab combination in melanoma

SPOTLIGHT

CLINICAL TRIALS

SPOTLIGHT 101 Phase 1

SPOTLIGHT 102 Phase 1b



SPOTLIGHT 101

- Phase 1
- BO-112 monotherapy

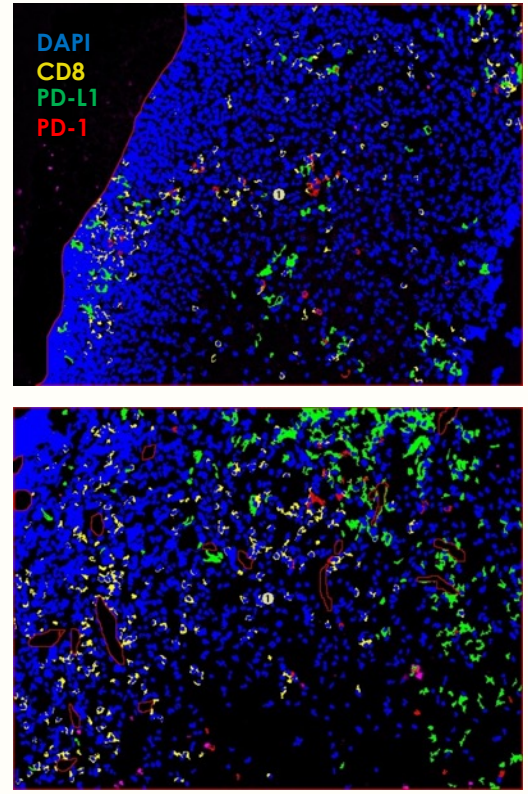
Study design

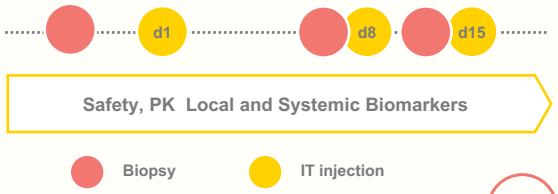
- BO-112 (0.6 mg and 1mg) administered intratumorally up to 3 sequential times into a single lesion (median lesion size- 4 cm) to patients with solid tumors:
  - melanoma, leiomyosarcoma, and breast cancer
- Primary endpoint: safety and tolerability
- Secondary endpoint: tumor biomarkers of biological activity (apoptosis/necrosis & T-cell infiltrate)
- 16 patients in 3 Study cohorts
  - 6 patients: 0.6 mg single IT administration
  - 3 patients: 0.6 mg three consecutive IT administrations (same lesion)
  - 7 patients: 1.0 mg three consecutive IT administrations (same lesion)

Results

- Tumor Biomarkers post treatment demonstrate clear clinical benefit:
  - Increases in tumor cell death observed in 15/16 patients (despite only 1-3 injections)
  - Increases in CD4+ and CD8+ T cell infiltrates observed in 6 and 3 patients, respectively
  - non-injected lesions show increased tumor necrosis
  - 52 different genes associated with immune response were upregulated in the tumor
- Increased peripheral blood biomarker activity post treatment:
  - Increased (> 15% vs. baseline) CD8+, CD4+ T cells, CD4+ T regs, NK, DC, pDC, monocytes and B cells in PBMNCs from 14/16 subjects
- Safety and tolerability well tolerated with mild flu-like symptoms

Pre and post-treatment images from multiplex analysis of a tumor biopsy.





SPOTLIGHT 101

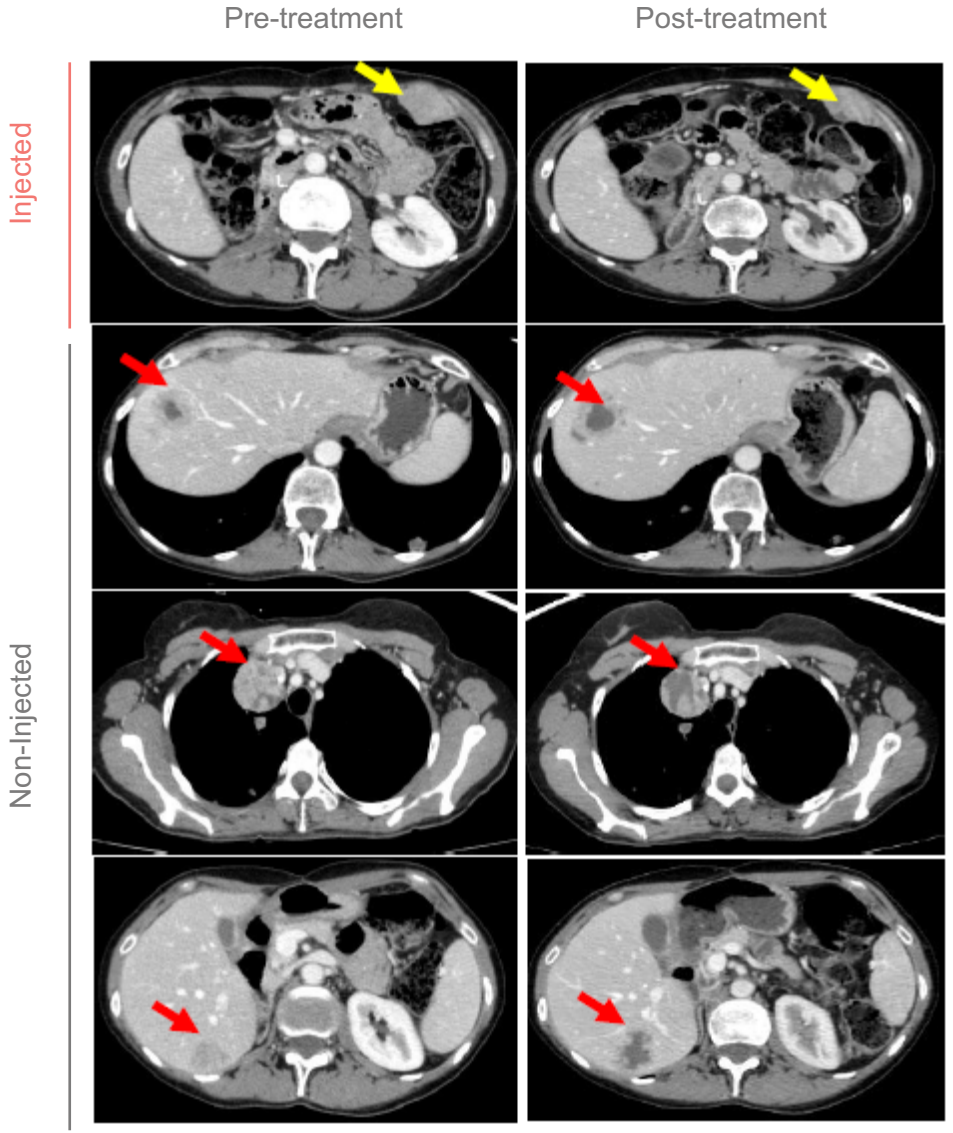
Phase 1

BO-112 monotherapy

Abscopal effects observed with BO112 monotherapy

Increased necrosis in non-injected metastatic lesions from 46 year-old female with stage IV leiomyosarcoma and progressive disease after several lines of chemotherapy including an anti PD1/LAG 3 combination.

Pre and post images from CT-scans



SPOTLIGHT 102

Phase 1b

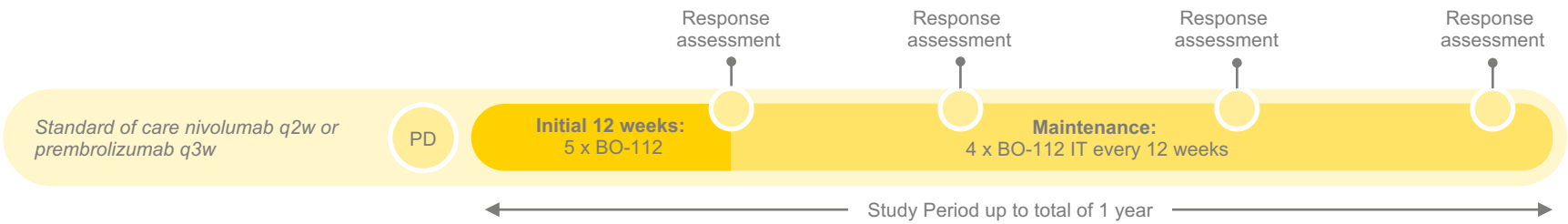
BO-112 + anti-PD1 combination in anti-PD1 resistant patients

Study design

- Regimen: Addition of intratumoral BO-112 to anti-PD1 therapy
- Inclusion criteria: anti-PD1 resistance (Radiological progression while on anti-PD1 therapy) - toughest to treat
- Sample size: 28 patients with metastatic disease
  - NSCLC 13, SCCHN 4, melanoma 10, & RCC 1
  - 71% had visceral (39% lung, 25% liver) or bone lesions
  - 43% of patients had received 2 or more prior lines of treatment
- 20/28 (71%) patients had only 1 lesion injected throughout the study
- Primary objective: safety and tolerability of combination
- Secondary objectives: immune responses, evidence of clinical benefit
- First efficacy assessment performed early: after only 4-5 injections

Results

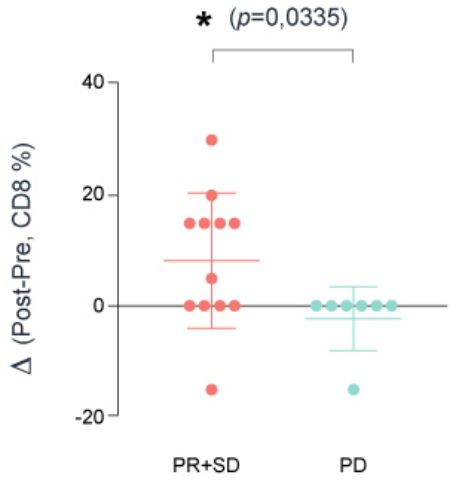
- Increased anti-tumor CD8+T lymphocytes and genes associated with T cell cytotoxic effects and antigen presentation post-BO-112 correlates with ORR
- Evidence of Clinical Benefit:
  - BO-112 reversed primary anti-PD1 resistance in:
    - 50% (5/10) of Melanoma patients: 20% ORR (PR) & 30% SD*,
    - 100% (1/1 RCC pt: ORR (PR)
    - 47% (8/17) of NSCLC & SCCHN patients: SD
  - Systemic tumor reduction also observed in non injected distal lesions
  - One patient (characterized as a SD) is a PR based on best response in target lesions
- No additional side effects



SPOTLIGHT 102

Phase 1b

BO-112 + anti-PD1 in anti-PD1 resistant solid tumors



77% (17/22) of patients progressing to anti-PD1 became durable SD or ORR; melanoma: 50% DCR; (20% ORR*)

Changes in CD8 T cell infiltrates in the tumor correlates with clinical benefit

Injection frequency & relevance vs competition in melanoma

- 2/10 and 3/10 of anti-PD1 primary resistant melanoma patients showed durable PRs or SD, respectively with BO-112 injected only up to 4-5 injections before the efficacy assessment (12 weeks)
- Combination of CMP-001 (TLR9 agonist, Checkmate) + pembro in a similar population reported*
- ORR of 7.7% 4 injections first 12 weeks
- ORR 22.5% 8 injections first 12 weeks
- *Abstract CT144. Milhem et al. AACR 2018

SPOTLIGHT 101

SPOTLIGHT 102

Conclusions

Monotherapy

- Favorable safety, clinical & biomarker activity observed after single intratumoral injection
- Abscopal effects with monotherapy very hard to observe in solid tumors

BO-112+ anti-PD1 in anti-PD1 resistant patients

- 77% clinical benefit in patients from different solid tumors with up to 30% ORR in melanoma
- Clinical signal across all studied indications, meaningful responses in melanoma and patients with liver metastases
- Post-treatment changes in CD8+ T cell infiltrate in tumor is a biomarker to predict responses

Next steps

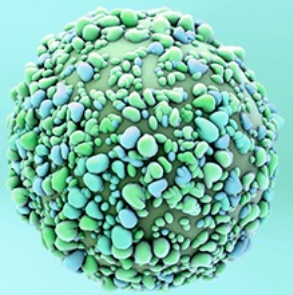
- Focus on melanoma and patients with liver metastases
- ORR as primary endpoint
- Unmet medical need in 2L in CRC, 3L Gastric, and 2L melanoma
- Potential for accelerated approval if ORR similar or superior to Spotlight 001 & Spotlight 002
- 3 separate Phase 2/POC trials (liver metastases in patients with CRC, liver metastases in patients with GC, and melanoma)

SPOTLIGHT

CLINICAL TRIALS

Spotlight 202 Phase 2

Spotlight 203 Phase 2



SPOTLIGHT 202

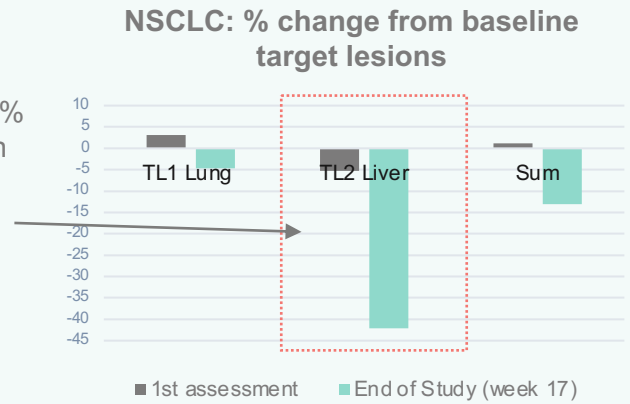
- Phase 2 colorectal and gastric cancer with liver metastasis
- BO-112 + pembrolizumab in collaboration with Merck - overcoming primary resistance

Success enables liver mets as potential defining indication for registration of BO-112 in combination with anti-PD1 therapy for patients with CRC and GC. This concept could be used for other indications such as melanoma and NSCLC.

Rationale for liver metastasis indication

- Liver metastasis is the most common metastasis in colorectal (CRC) and gastric cancer (GC)
  - Poor prognosis; high unmet need; rapid read out
  - Variable levels of immune cell infiltration (associated with treatment outcomes), usually “cold”
  - Single organ type for injections minimizes organ-specific heterogeneity of tumor microenvironment
- Evidence of safety and activity from SPOTLIGHT 101 and 102 in anti-PD1 resistant patients:

More than 40% size reduction of liver lesión injected



- Monotherapy: Increase in necrosis observed in liver metastases from patient with adenoid cystic carcinoma after 2 injections of BO-112

Study overview

1. Open-label, non-comparative, two-stage study of BO-112 in combination with pembrolizumab in up to 26 3rd line anti-PD1 naïve patients with liver metastases from CRC
2. Open-label, non-comparative, two stage study of BO-112 in combination with pembrolizumab in up to 43 2nd line anti-PD1-naïve patients with liver metastases from Gastric/GEJ cancer
   - Trial started enrolment June 2020
   - Sites: Belgium, Germany, Italy, Spain
   - Primary endpoints: ORR and AEs ≥ grade 3
   - Secondary endpoints: disease control rate (DCR), duration of response, PFS, OS at 6 months, AEs all grades

- Collaboration with Merck & Co.

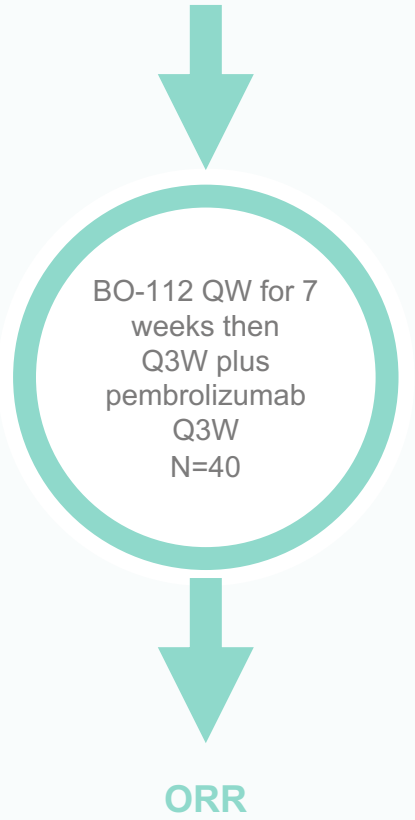
MERCK

SPOTLIGHT 203

- Phase 2 in 2L Melanoma
- BO-112 + pembrolizumab in 2L melanoma resistant to anti-PD1's

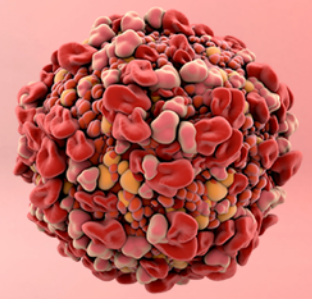
Study overview

- Phase 2/POC, open-label, single arm clinical study to evaluate the efficacy and safety of intra-tumoral administration of BO-112 in combination with pembrolizumab in patients that have progressed on anti-PD1-based therapy as first line in refractory unresectable malignant melanoma stage III or IV
- Indication: 2nd line melanoma
- Q4 2020 start
- 40 patients
- Sites: France, Germany, Italy, Spain (UK, US, Netherlands, Israel, Belgium to follow)
- Primary endpoint: ORR
- Secondary endpoints: disease control rate (DCR), duration of response (DOR), progression-free survival (PFS), overall survival (OS), and iRECIST ORR, DCR, DOR and PFS



Investigator-led studies

UCLA Phase 1 Sarcoma Clinical Trial



UCLA Investigator-led Phase 1 study of nivolumab + BO-112 in Sarcoma

- Third-party support and validation

Study overview

- Phase 1 clinical trial to study side effects of Nivolumab + BO-112 before surgery for treatment of resectable soft tissue sarcoma
- Rationale:
  - Immunotherapy with mAb (e.g. nivolumab) may help immune system attack the cancer and may interfere with ability of tumor cells to grow and spread
  - Immunotherapy with BO-112 may induce changes in immune system and may interfere with ability of tumor cells to grow and spread; giving nivolumab + BO-112 before surgery may work better in treating patients with soft tissue sarcoma compared to nivolumab alone
- Q4 2020 start
- 25 patients
- Sites: US
- Primary endpoint: frequency and severity of AEs and dose-limiting toxicities
- Secondary endpoints: immune-oncologic impact of combined regimen of nivolumab and BO-112 and pathologic treatment effect

Led by Dr. Anusha Kalbasi, physician-scientist and radiation oncologist, UCLA Department of Radiation Oncology & UCLA Jonsson Comprehensive Cancer Center

UCLA Jonsson Comprehensive Cancer Center

Use of proceeds

Series B Use of Proceeds

€22 million raise to complete and follow through three separate Phase 2/POCs

Overcoming anti-PD1 primary resistance in cold tumors

€6.25m
CRC & GC anti-PD1 naïve with liver mets Phase 2

SPOTLIGHT 202

Addressing primary/acquired anti-PD1 resistance

€5.25m
2L Melanoma Phase 2

SPOTLIGHT 203

ISTs: €2 million

- Sarcoma (IST-UCLA)
- HCC (IST- UCLA)
- Other ISTs: TBD

Working capital €15 million

- CMC & Manufacture
- Talent recruitment for trial execution
- Administrative and financing costs
- IP activities

Current financial status

- €11m Series A investment by DROIA Oncology Ventures (2014); with a follow-up of €9m by Advent, Columbus and DROIA in 2019
- €7 million - cash / cash equivalents as of Jan 2020
- Current cash runway through Q4 2020

Increasing sector focus underlines significant potential value

Developing a competitive position

- Checkmate and Idera (TLR9 agonist) targeting solid tumors
- Clinical package shows BO-112 uniquely able to modify immune pathway, making tumor cells more susceptible to therapy
  - BO-112 demonstrated similar efficacy with fewer injections
  - Potentially superior efficacy combining tumor intrinsic pathways with innate immunity activation
  - Lower injection requirement = barrier to entry for competitors

- BO-112 differentiated from other intratumoral innate immune activating agents
  - Unique single agent activity demonstrated in pre-clinical studies
  - Addresses two main mechanisms mediating resistance to anti-PD1 therapies
  - 50% of anti-PD1 resistant melanoma patients had clinical benefit after a few BO-112 injections - similar trends in other solid tumors.
  - Compares favorably with lack of clinical efficacy for STING/RIG agonists, potentially superior to TLR9 agonists
- Three opportunities of success in the Phase 2 trials to prove BO-112's superior efficacy in reversing anti-PD1 resistance
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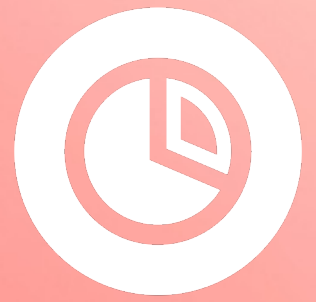
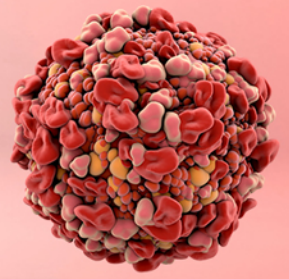
- Multiple potential strategic exits and options guided by Internationally-experienced management team and advisers



BO-112 offers potential solution to anti-PD1 resistance to transform cancer immunotherapy

HIGHLIGHT THERAPEUTICS



Marisol Quintero, CEO
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