SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934

For the month of June 2017

_____

BioLineRx Ltd.

(Translation of registrant's name into English)

_____

2 HaMa'ayan Street
Modi'in 7177871, Israel
(Address of Principal Executive Offices)

_____

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F ☑ Form 40-F ☐

Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934:

Yes ☐ No ☑

The registrant hereby files as Exhibit 1 to this Report on Form 6-K its new corporate presentation which contains, among other things, disclosures regarding the registrant's planned phase 3 registrational study for the use of BL-8040 in autologous stem cell mobilization.

This Form 6-K, including all exhibits hereto, is hereby incorporated by reference into all effective registration statements filed by the registrant under the Securities Act of 1933.

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BioLineRx Ltd.

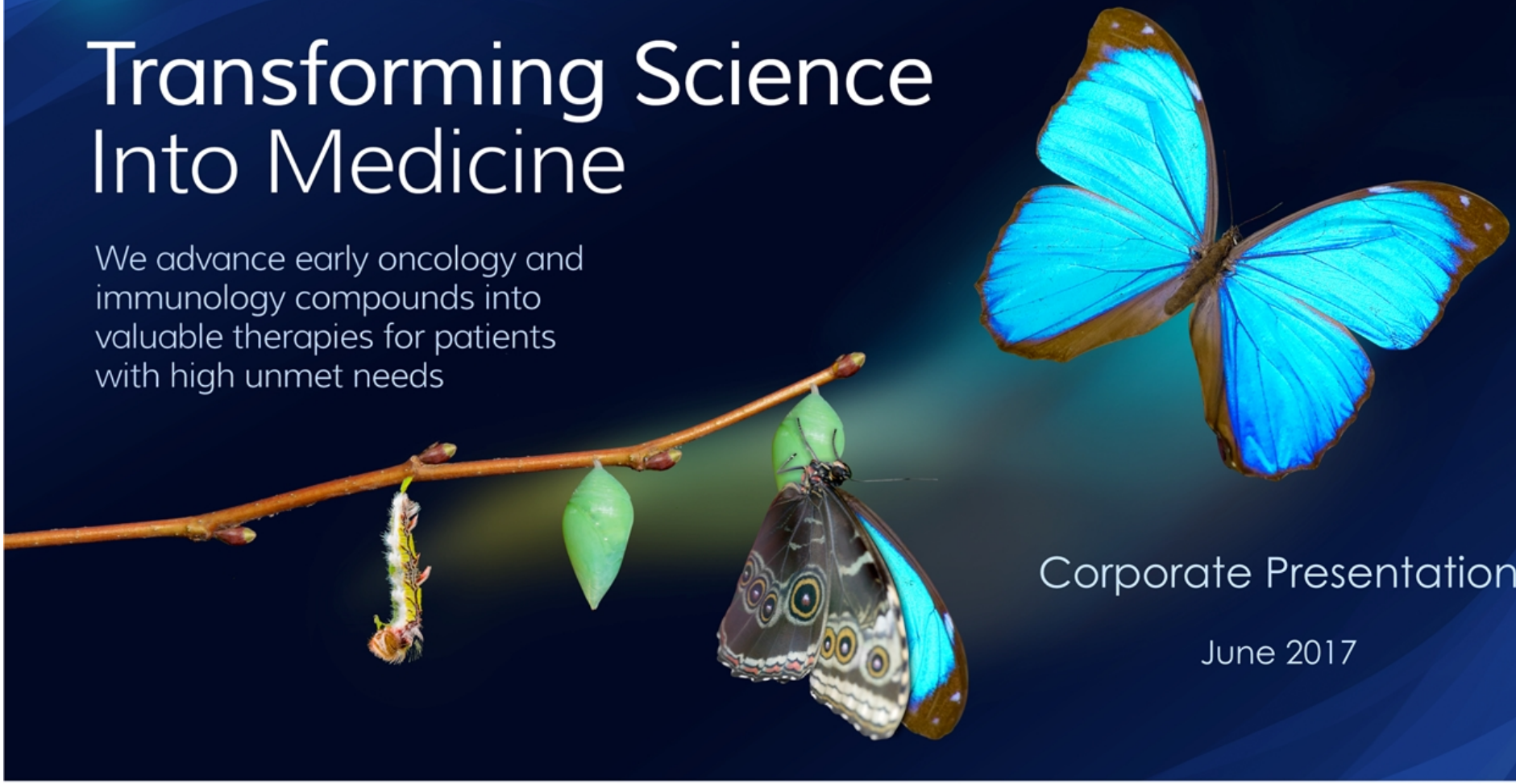
By: /s/ Philip Serlin
Philip Serlin
Chief Executive Officer

Dated: June 12, 2017

Exhibit 1

Transforming Science Into Medicine

We advance early oncology and immunology compounds into valuable therapies for patients with high unmet needs



Corporate Presentation

June 2017

BIOLINERX

Forward-Looking Statements

This presentation contains "forward-looking statements." These statements include words like "may," "expects," "believes," "plans," "scheduled," and "intends," and describe opinions about future events. These forward-looking statements involve known and unknown risks and uncertainties that may cause the actual results, performance or achievements of BioLineRx to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements.

BioLineRx Snapshot

- Drug development company focused on oncology & immunology:
  - BL-8040 (CXCR4 antagonist) with robust clinical program in immuno-oncology, AML and bone marrow transplantation
  - AGI-134 (alpha-Gal immunotherapy) activating a patient-specific, anti-tumor response to patient's own cancer neo-antigens
  - Immunology/fibrosis franchise under collaboration with Novartis Pharma

- Significant collaborations with leading pharma companies
  - Strategic collaboration with **Novartis** for joint development of innovative assets
  - Immunotherapy collaboration with **Genentech** in multiple oncology indications (BL-8040 & Atezolizumab)
  - Immunotherapy collaboration with **Merck** in pancreatic cancer (BL-8040 & Keytruda)

Main Pipeline Assets

Transforming Science Into Medicine

BL-8040

Best-in-class CXCR4 antagonist for multiple oncology indications

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BL-8040 Highlights

- Best-in-class CXCR4 antagonist
  - Platform molecule with MOA relevant in multiple tumors
  - Most advanced compound targeting CXCR4
- Partnerships with leading companies and institutions (Genentech, Merck, MDACC)
- Multiple clinical studies ongoing or in final planning stages
  - Multiple studies under immunotherapy partnerships with Genentech and Merck
    - Data readouts in 2017 and 2018
  - Large phase 2b study in AML consolidation treatment line running at full steam
    - Data readout in H2 2019; potential interim analysis in H2 2018
  - Initiation of phase 3 registrational study in autologous SCM planned for H2 2017
- Received Orphan Designation from FDA for AML & SCM
- Potential for multiple phase 3 studies under immunotherapy partnerships

BL-8040 Clinical Development Program

STUDY	INDICATION	Pre-Clinical	Phase 1	Phase 2	Phase 3
IMMUNOTHERAPY COMBINATION					
COMBAT	Pancreatic (Pembrolizumab)	Merck collab			
BL-8040.11	Pancreatic (Pembrolizumab)	MDACC collab			
MORPHEUS	Pancreatic (Atezolizumab)	H2/2017 initiation – Genentech collab			
MORPHEUS	Gastric (Atezolizumab)	H2/2017 initiation – Genentech collab			
MORPHEUS	NSCLC (Atezolizumab)	H2/2017 initiation – Genentech collab			
ACUTE MYELOID LEUKEMIA (AML)					
BLAST	AML Consolidation				
BATTLE	AML Maintenance (Atezolizumab)	H2/2017 initiation – Genentech collab			
STEM CELL MOBILIZATION					
BL-8040.07	SCM as Single Agent (Allogeneic)				
GENESIS	SCM (Autologous)	H2/2017 initiation			

ONGOING

PLANNED

Transforming Science Into Medicine

BL-8040 in Immuno-Oncology

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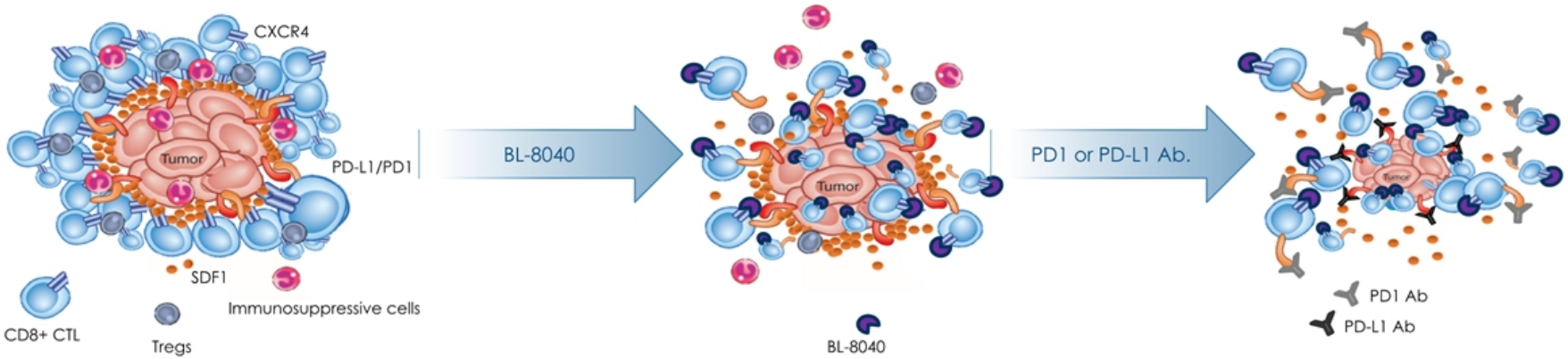
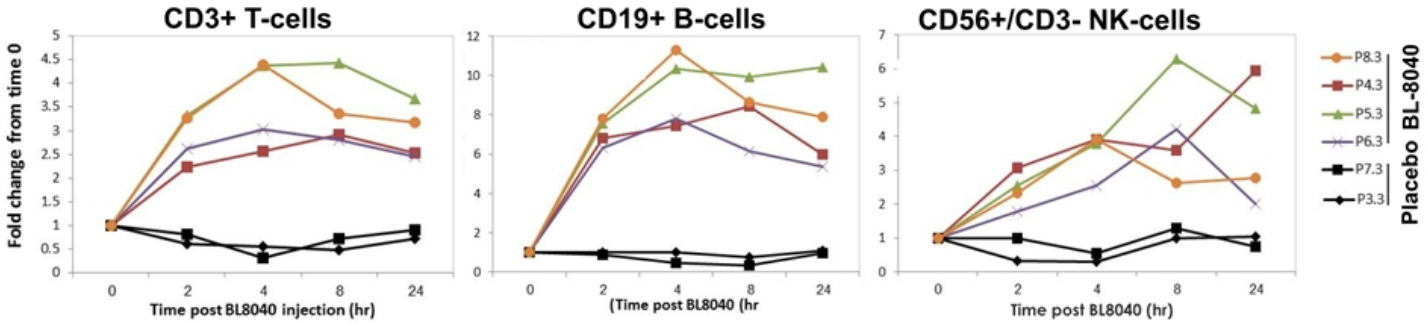
BL-8040's MoA in Cancer Immunotherapy

- Immunostimulant - BL-8040 is a powerful mobilizer of immune cells from the bone marrow and lymph nodes (T-cells, B-cells, immature dendritic-cells and NK-cells)
- Potentiator - BL-8040 increases infiltration of immune cells into tumors (exhibiting a synergistic effect with anti PD1/PD-L1 immune checkpoint inhibitors)
- Microenvironment modifier - BL-8040 affects the tumor microenvironment by decreasing CXCR4-mediated migration of immune suppressor cells (i.e. MDSCs, Tregs)



BL-8040 is a Powerful Mobilizer of Immune Cells
(clinical data)

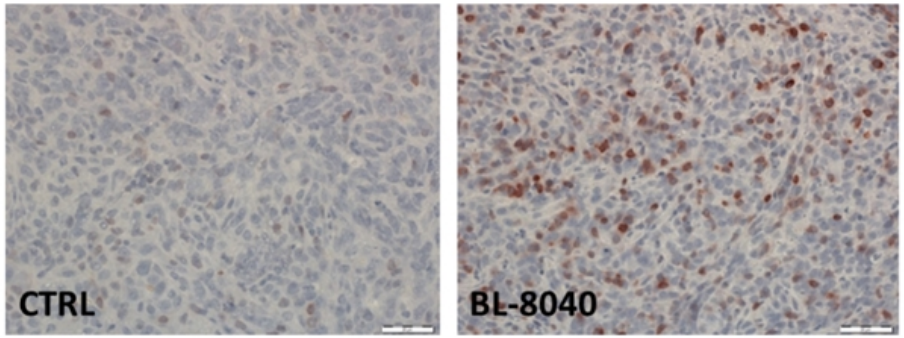


- Healthy volunteers were treated with BL-8040 or placebo
- Single administration of BL-8040 triggered substantial mobilization
- Long receptor occupancy results in prolonged effect (≥ 24 hours)

BL-8040 Increases T-Cell Infiltration into Tumors
(mice model)

- Model: Orthotropic syngeneic tumors in pancreas of C57BL/6 male mice
- Treatment with BL-8040 for 10 consecutive days

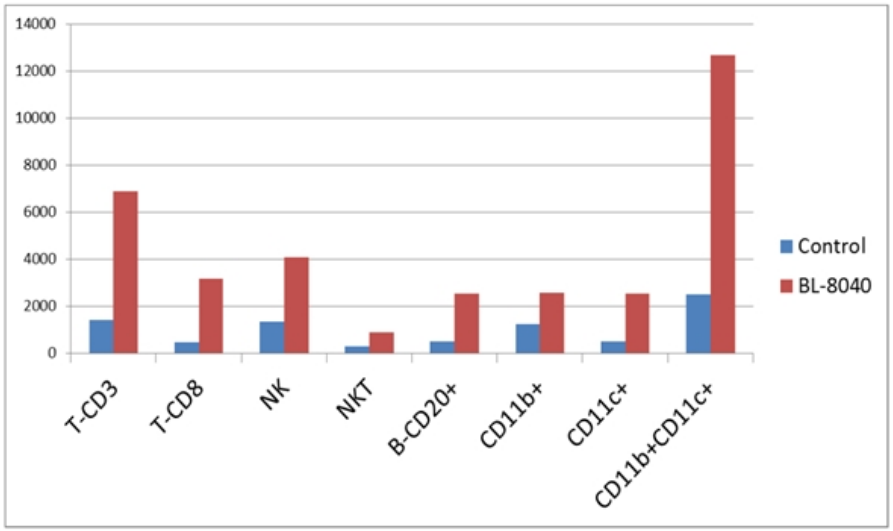
Treatment with BL-8040 induces accumulation of CD3+ T-cells in PDA tumors

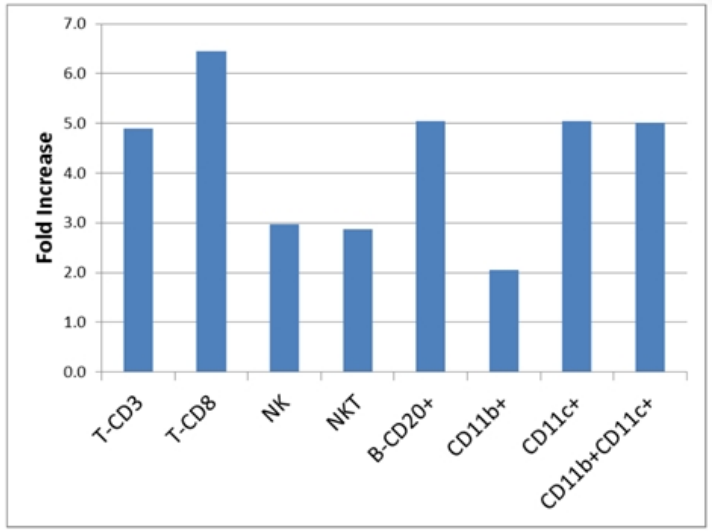


IHC: αCD3

BL-8040 Increases T-Cell Infiltration into Tumors (cont.)

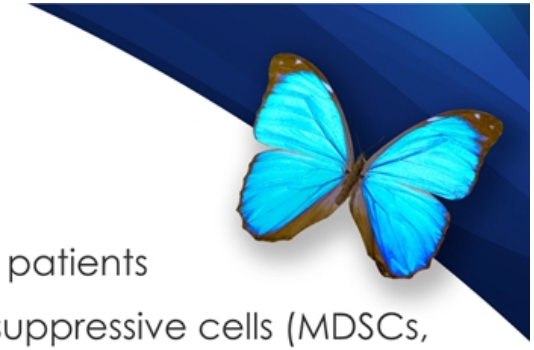
- FACS analysis confirmed enrichment of immune cells within the tumor



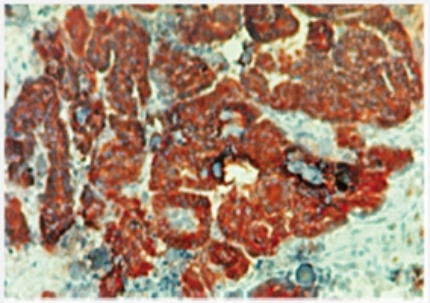


* Tumor sections were enzymatically digested and single cell suspensions were analyzed by FACS
** Values in the table represent absolute cell count

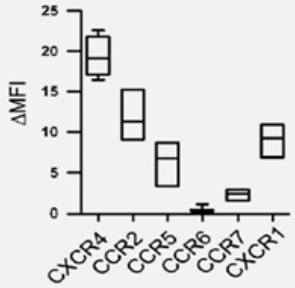
BL-8040 Affects the Tumor Microenvironment
(CXCR4/SDF-1 Immuno-Suppressive Role in Cancer)



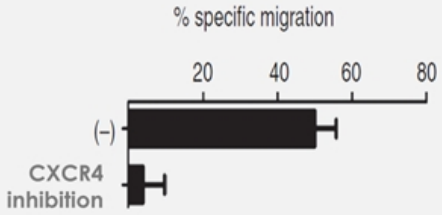
- SDF-1 expression is an independent predictor of poor survival in cancer patients
- CXCR4/SDF-1 axis is key pathway mediating the attraction of immuno-suppressive cells (MDSCs, Tregs, pDCs) to the tumor environment
- CXCR4 inhibition selectively reduces infiltration of Tregs into tumors and inhibits the migration of MDSCs to the tumor



Ovarian epithelial carcinoma cells express functional SDF-1



High CXCR4 expression in cancer–isolated MDSCs



MDSCs migration is inhibited by CXCR4 blockade

Righi E. et al., *Cancer Res* 2011;
Zou W et al., Nature Medicine, 2001;
Obermajer et al., Cancer Res, 2011

Immunotherapy Collaboration with Genentech

- Four phase 1b studies planned to investigate combination of BL-8040 with Genentech's Tecentriq™ (Atezolizumab - anti-PDL1 immune checkpoint inhibitor)
  - Genentech to sponsor and conduct three phase 1b studies in multiple solid tumors
  - BioLineRx to sponsor and conduct phase 1b study in (maintenance) AML
  - Open-label, repeated administration studies in up to 60 patients each
- Study endpoints
  - Clinical response, safety and tolerability
  - Multiple pharmacodynamic parameters
- Studies are expected to commence in H2 2017; top-line results expected in 2019

Immunotherapy Collaboration with Merck

- Phase 2a study to examine combination of BL-8040 with Merck's Keytruda® (anti-PD1 immune checkpoint inhibitor)
  - Up to 30 patients with metastatic pancreatic adenocarcinoma
  - Open-label, single-arm trial with sites in the US, Israel and South Korea
- Study endpoints
  - Clinical response, safety and tolerability
  - Multiple pharmacodynamic parameters, including ability to improve infiltration of T cells into tumor and their reactivity
- Study commenced at end of Q3 2016
  - Partial results expected H2 2017
  - Top-line results expected H2 2018

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BL-8040 in AML

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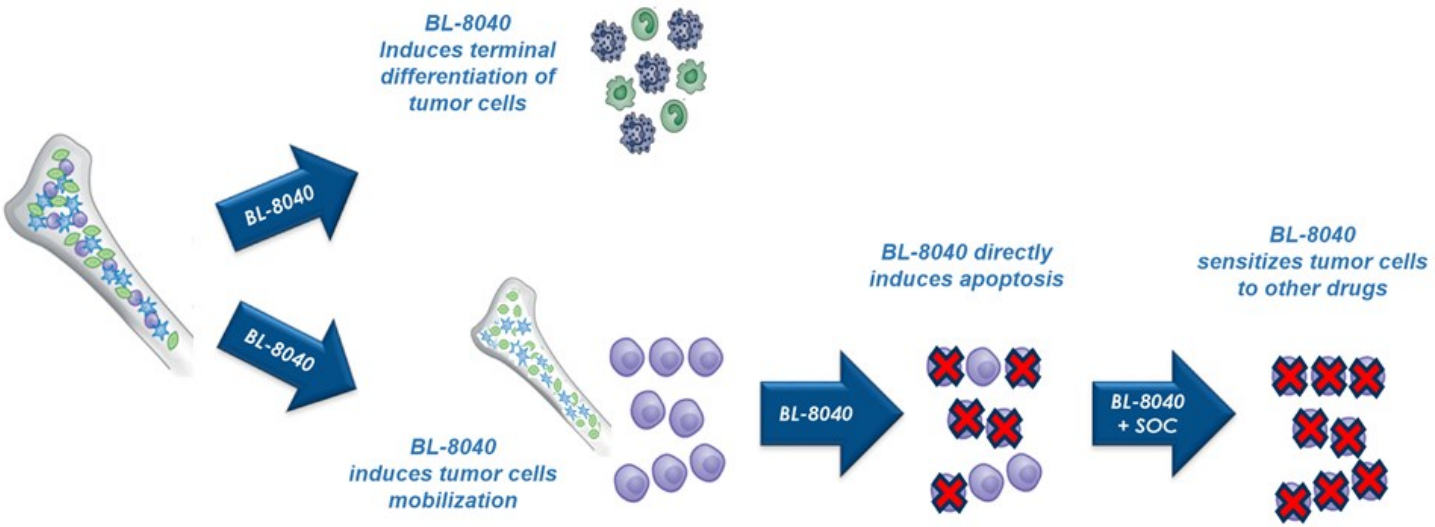
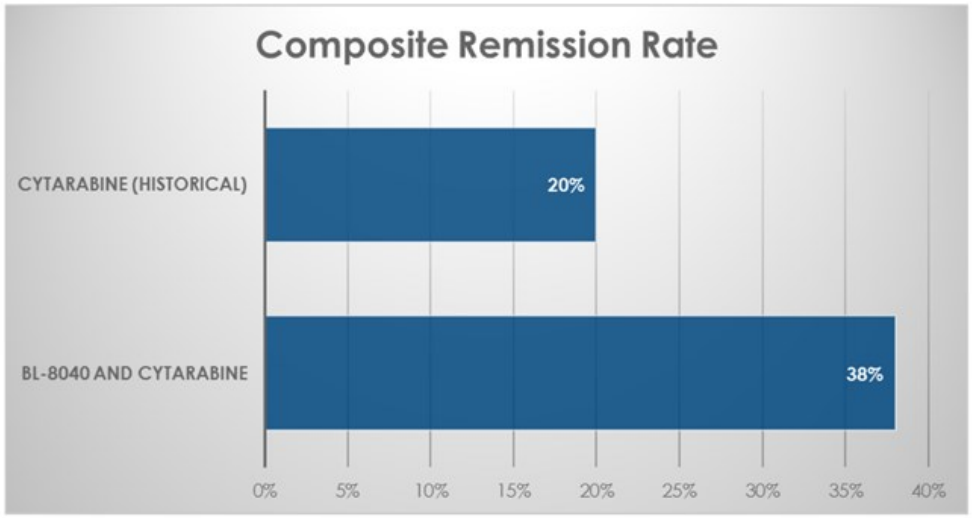
BL-8040 Mechanism of Action in AML

- Binds CXCR4 with high affinity (1-10 nM)
- Maintains extended inhibition of CXCR4 through long receptor occupancy (>24 hours)
- BL-8040 induces apoptosis of AML blasts by down-regulation of survival factors
- Bone-marrow clearance - eliminates minimal residual disease



BL-8040 in AML – Background and Direction

- Company conducted successful proof-of-concept phase 2a study in relapsed/refractory AML (45 patients)
  - Showed robust bone marrow clearance, induction of apoptosis and terminal differentiation of AML cells
  - Excellent safety and tolerability



AML – Clinical Development Status

- Results support accelerated development in AML space with potential for elimination of minimal residual disease (MRD)
- Consolidation AML phase 2b study ongoing
  - 194 patients, double-blind, placebo controlled at ~25 sites in Germany
  - Enrollment ongoing: potential interim results in 2018; top-line results by end of 2019
- Maintenance AML phase 1b study (under Genentech collaboration) in late planning stages
  - Combination with Atezolizumab as maintenance therapy for high-risk, elderly AML patients
  - Up to 60 patients, open label study at multiple leading sites in the US
  - Expected to commence in H2 2017

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BL-8040 in SC Mobilization

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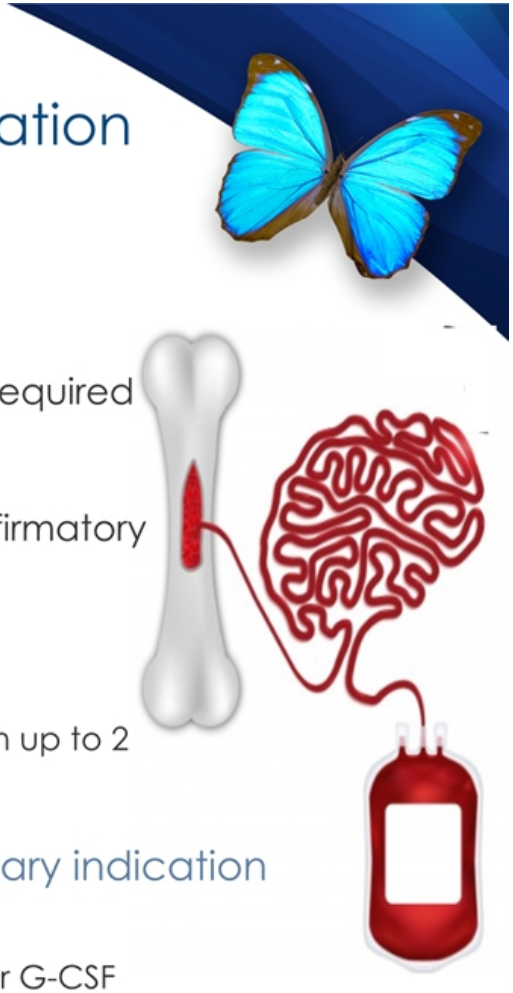
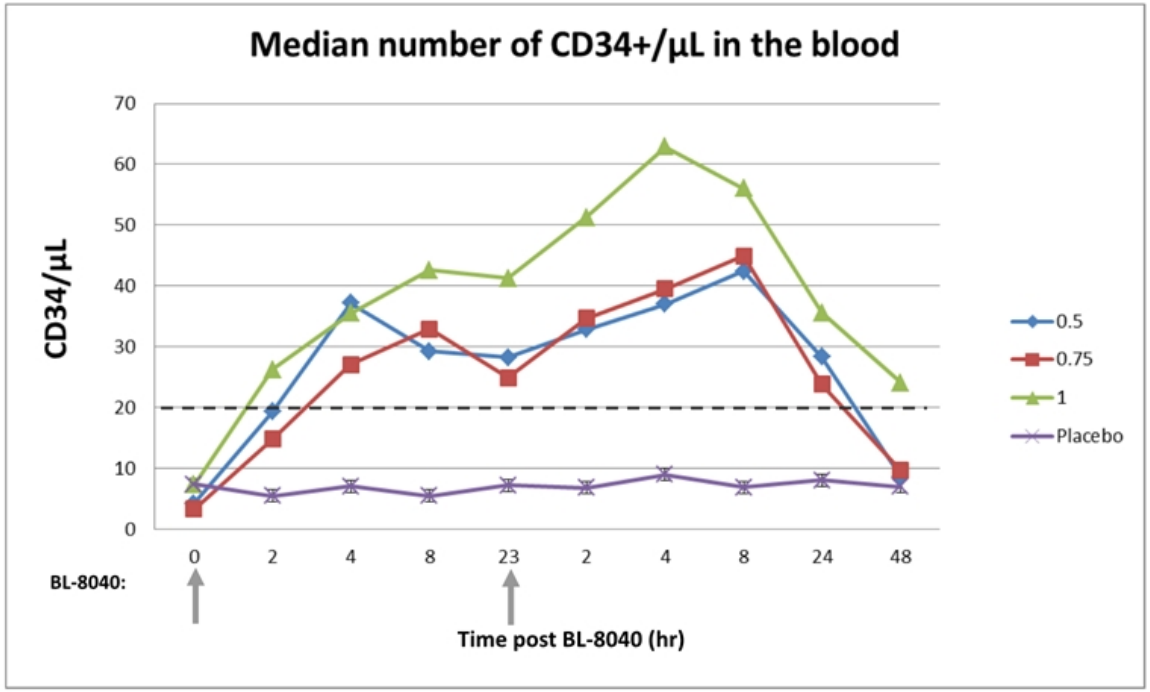
Stem Cell Mobilization for Autologous Transplantation

- G-CSF is current standard for autologous stem cell mobilization
  - 4-6 daily injections of G-CSF, plus 1-4 apheresis sessions required
  - 50-70% of patients are poor mobilizers
  - For poor mobilizers, 1-4 daily injections of Mozobil on top of G-CSF are required
- Fast route to registration in autologous SCM
  - Registrational study expected to commence in H2 2017 based on confirmatory meeting with FDA held in April 2017:
    - BL-8040 plus G-CSF will be compared to G-CSF plus placebo
    - Study expected to enroll ~200 patients in total
    - Primary endpoint: proportion of patients who mobilize ≥6 million CD-34+ cells in up to 2 leukapheresis sessions in MM patients
- Phase 2 allogeneic transplantation study ongoing as complementary indication
  - Successful partial results recently announced
    - Single injection of BL-8040 mobilizes sufficient amounts of cells without need for G-CSF
  - Topline results by end of 2017



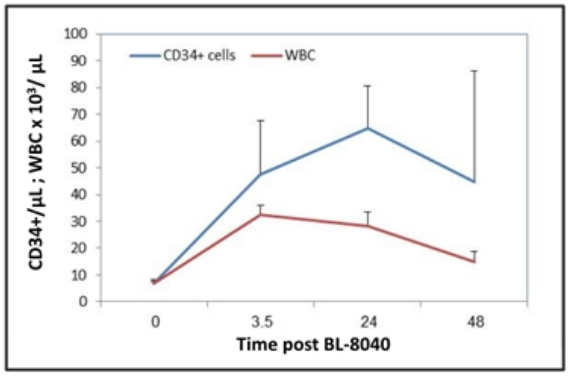
BL-8040 is Powerful Mobilizer of CD34+ Cells

- Substantial HSC mobilization from BM to PB was recorded
- Consistent pattern of mobilization across all subjects treated with BL-8040



Single BL-8040 Administration Results in Robust Collection of Stem Cells Using Single Apheresis

Subject #	Whole blood processed (L)	% CD34+ cells	CD34+/KG (Donor weight)	CD34+/KG (70kg recipient weight)
5001	9.8	0.75	4,091,848	5,091,429
5002	16.0	1.01	11,964,615	11,998,800
5003	16.6	0.85	13,667,866	14,917,500
5004	16.2	0.76	10,154,834	11,794,114
5005	16.6	0.78	11,366,255	15,230,781
5006	16.5	0.87	13,068,548	14,711,451
5007	17.5	0.64	11,076,197	9,652,114
5008	16.7	0.61	9,623,736	9,994,937
Median	**16.5 ± 2.3 L**	**0.77 ± 0.13 %**	**11.2×10^6 ($\pm 2.8 \times 10^6$)**	**11.9×10^6 ($\pm 3.5 \times 10^6$)**



CD34+ PB levels 24 hr post BL-8040 are still high even after leukapheresis

- Leukapheresis started 4 hrs post BL-8040 injection using the Spectra Optia® Apheresis System
- The median amount of collected stem cells was higher than 11×10^6 per kg

CXCR4 Competitor Landscape

Compound (Company)	**Dev. Stage**	**Molecule Type**	**Indications** (under development)	**AML**	**SCM**	**IO**
BL-8040 (BioLineRx)	Phase 2	Peptide (sc)	Auto/Allo SCM; AML (r/r, consolidation, maintenance); Solid tumors (gastric, pancreatic, NSCLC)	Ph 2	Ph 3 ready	Ph 1/2 (+Pembro/+Atezo)
Mozobil (Genzyme/Sanofi)	Launched	Small molecule (IV)	Auto SCM; AML; Solid tumors (pancreatic, ovarian and colorectal cancers)	Ph 1/2	Launched	-
LY-2510924 (Eli Lilly)	Phase 2	Peptide (IV)	r/r AML; solid tumors	Ph 1	-	Ph 1 (+Durvalumab)
Ulocuplumab (BMS)	Phase 2	Ab (IV)	AML	Ph 1/2	-	Terminated
X4P-001 (X4 Pharmaceuticals)	Phase 2/3	Small molecule (oral)	WHIM syndrome; RCC, melanoma; ovarian cancer	-	-	Ph 1/2 (+Pembro/+Nivo)

BL-8040 is Best-in-Class vs. Competitors

	BL-8040	Mozobil	Ulocuplumab
Affinity for CXCR4	**1-10 nM**	**84 nM**	**5nM**
CXCR4 Binding site	**Extracellular domains in the CXCR4 receptor**	**Trans-membrane regions in the CXCR4 receptor**	**Extracellular domains in the CXCR4 receptor**
Molecule Type	**Peptide**	**Small molecule**	**Ab**
Plasma half-life	**1-3 hr**	**~3-5 hr**	**More than 24hr**
Receptor occupancy	**More than 24 hr**	**~2 hr**	**Not published**
Cancer Cell Death	**Remarkable apoptosis in samples from clinical study patients** (Phase 2 study rrAML)	**Has no effect on cancer cell apoptosis** (Reum H et al., 2015)	**Apoptosis of AML cells. Modest effect in patients.** (ASH 2013)
Mobilization (fold increase leukocytes/ blast)	**4/8** (Phase 2 in rrAML)	**1.8/2.8** (Uy G.L. et al., Blood 2017; Phase 1/2 in rrAML)	**2/5** (Becker P.S. et al; Blood 2014; Phase1 in rrAML)
T-Cell Infiltration into Tumors	**Infiltration was demonstrated in preclinical murine models**	**Infiltration was demonstrated in preclinical murine models**	**Not published**

Other remarks re BL-8040 (Abraham M et al., 2017):

- BL-8040 induces apoptosis of AML blasts by down-regulating ERK BCL-2, MCL-1 and cyclin-D1
- BL-8040 synergizes with FLT3 and BCL-2 inhibitors to induce AML cell death

Superior Neutral Inferior

BL-8040 Summary

- Most advanced antagonist of CXCR4, an exciting and validated target
- Robust platform for multiple oncology indications
  - Immunotherapy
  - AML
  - Stem-cell mobilization/transplantation
- Significant efficacy demonstrated in numerous clinical studies
- Partnerships with Genentech and Merck in immuno-oncology
- Registrational study in autologous SCM expected to start in H2 2017

Transforming Science Into Medicine

AGI-134

Alpha-Gal immunotherapy, activating anti-tumor response to patient's own neoantigens

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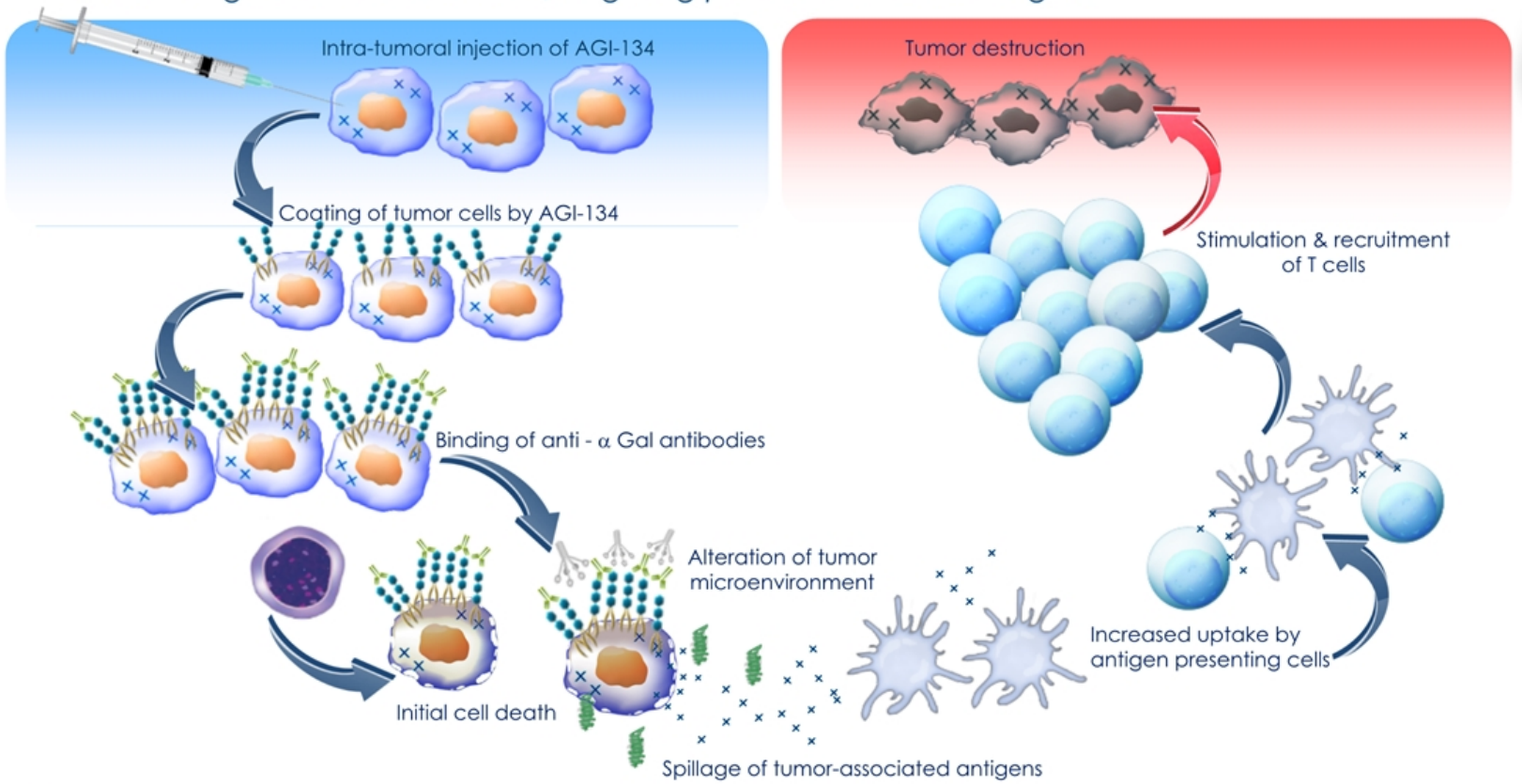
AGI-134 Highlights

- Unique mechanism harnessing naturally occurring immune machinery
- Promotes systemic anti-tumor response against patient's own tumor antigens
- Applicable for large array of tumors
- Targets primary tumor, as well as existing and potential future metastases
- Reduces immuno-suppressive nature of tumor microenvironment
- Near-clinical stage (following pre-IND meeting)
  - Phase 1 in solid tumors expected to initiate in H1 2018; final preparations underway
- Proposed initial indications: melanoma, liver, head and neck, colorectal, breast cancer, lymphoma
  - Studies to include substantial biomarker identification

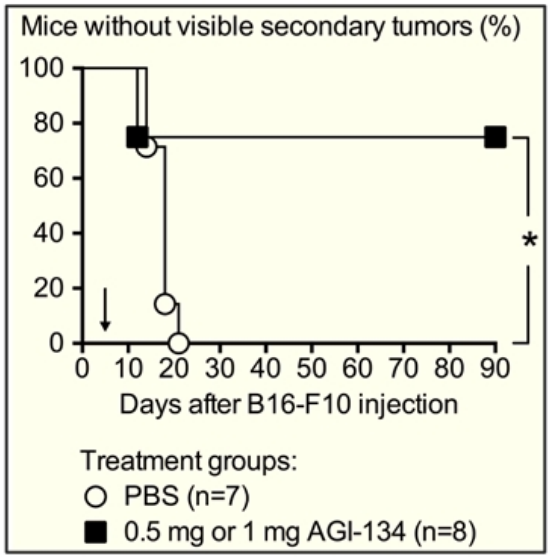
AGI-134 Mechanism of Action

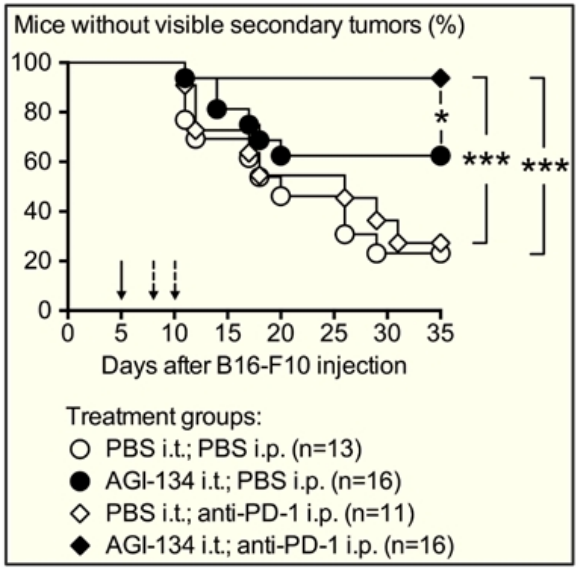
Transforming cold into hot tumors, targeting patient's own neoantigens



AGI-134: Key Efficacy Findings

- In vitro and in vivo studies have validated the underlying steps of the MOA
- Single dose of AGI-134 demonstrated systemic effect by protecting mice from secondary tumor development for over 90 days
- Combination of AGI-134 with immune checkpoint inhibitor (PD-1) gave increased efficacy over either agent alone





AGI-134: Unique MOA Among Intratumoral Agents

	Oncolytic viruses	PAMPs	AGI-134
Injected tumor cells identified by **naturally occurring pre-existing antibodies**			✓
Antibody-bound tumor cells **destroyed by activated complement and ADCC**			✓
Tumor **neoantigens release** by spilling	✓		✓
Antibody-activated complement system creates **pro-inflammatory milieu in the tumor microenvironment**			✓
Complement **chemo-attractants** recruit immune cells to the tumor			✓
Activation of antigen presenting cells and increased (APCs) **uptake of tumor antigens**	✓	✓	✓
APCs induce a follow-on systemic immune response by the **stimulation and clonal expansion of T cells**	✓	✓	✓

AGI-134 Summary

- Novel and demonstrated mechanism of action
- Technology potential
  - Addresses wide range of poorly treated solid tumors
  - Transforms "cold" into "hot" tumors
  - Targets patient's neoantigens
- Strong pre-clinical data, clear development pathway discussed with MHRA and FDA
- Near-clinical stage, with first-in-man study expected to initiate H1 2018
- Phase 1/2 development plan designed to include comprehensive biomarker strategy
- Demonstrated synergy with immune checkpoint inhibitors

- Acquisition of Agalimmune provides BioLineRx with several earlier-stage projects, as well additional capabilities to augment focus on immunology and oncology

Transforming Science Into Medicine

Corporate

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BioLineRx Management

- Philip A. Serlin, CPA, MBA – Chief Executive Officer
  - Served as the Company's CFO and COO from 2009 to 2016. Previously CFO and COO of Kayote Networks and CFO of Tescom Software Systems Testing. Background includes senior positions at Chiaro Networks and at Deloitte in Tel Aviv, and at the SEC in Washington, D.C.
- Mali Zeevi, CPA – Chief Financial Officer
  - Served as the Company's Senior Director of Finance and Reporting 2009-2016. Previously Vice President Finance at Tescom Software Systems Testing and manager at PriceWaterhouseCoopers.
- David Malek, MBA – Chief Business Officer
  - Joined the Company in 2011 as Vice President of Business Development. Previously in various management positions at Sanofi-Aventis, including Director of Oncology - New Products and Business Development.
- Ella Sorani, PhD – VP Development
  - Joined the Company in January 2017. Previous 16 years served in a number of management positions in the global R&D division at Teva Pharmaceutical Industries. In most recent position, led global development of one of Teva's leading innovative late stage compounds.
- Abi Vainstein, MD – VP Clinical and Medical Affairs
  - Served as the Company's Senior Medical Director from 2014 to 2016. Previously Director and Clinical Program Leader for COPAXONE®, and several other senior medical positions at Teva Pharmaceutical Industries.

Strategic Collaboration with Novartis

- Novartis selected BLRX as its partner for asset identification and early development
  - Exclusive first look at all Israeli-based projects scouted by BioLineRx
  - Co-develop selected projects through clinical proof-of-concept (POC)
- Unique collaboration provides lasting shareholder value and key insights
  - 3 projects brought under collaboration so far, in areas of fibrosis and inflammation
- Financial highlights:
  - Upfront $10 million equity investment in BLRX
  - Upon selection of clinical project (or when a project reaches IND), BioLineRx receives:
    - $5 million option fee (non-dilutive)
    - 50% of remaining R&D expenses up to POC (in equity at a premium to market)
  - Novartis receives right of first negotiation for full out-license upon clinical POC

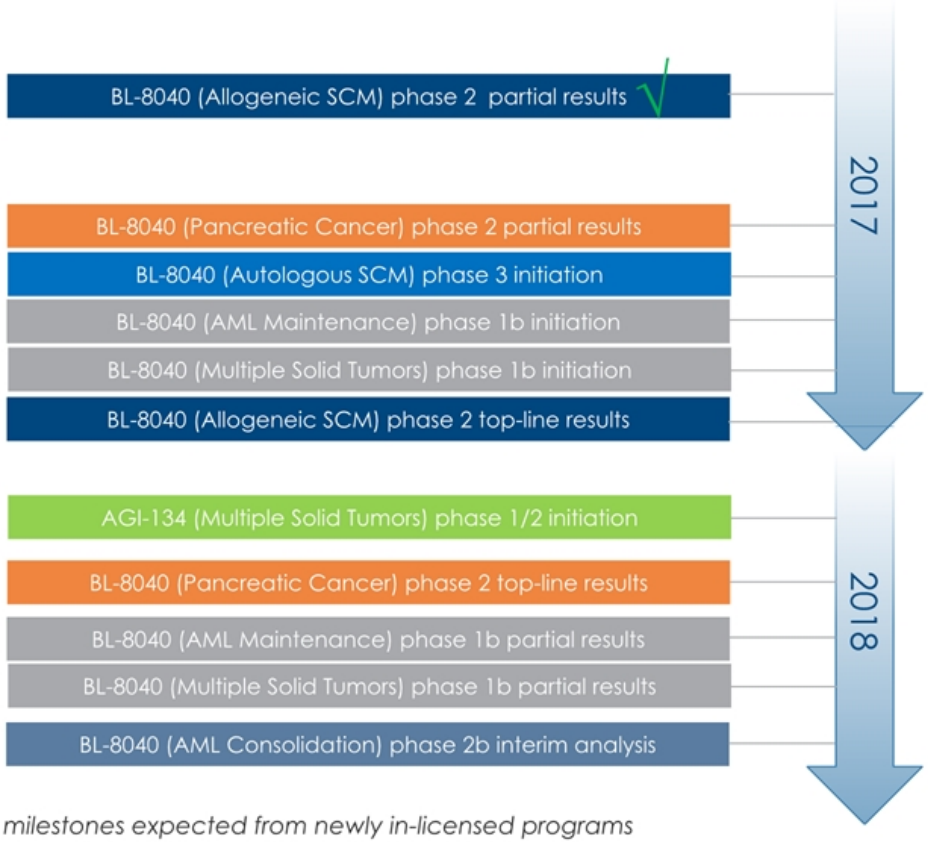
Financial Summary

- Cash position
  - $55 million as of April 30, 2017
  - Existing financial resources fund operational requirements into 2019

- Capital structure
  - Traded on NASDAQ and TASE (Symbol: BLRX)
  - 96 million shares outstanding; 104 million fully diluted
  - US shareholders represent ~70% of investor base, including key life-sciences investors

- Other
  - ~50 employees, approximately 2/3 with advanced degrees
  - Analyst coverage: JMP Securities, HC Wainwright, Maxim Group

Principal Expected Development Milestones in 2017/2018



Does not include milestones expected from newly in-licensed programs

Takeaways……

- Focus on oncology and immunology (mainly immuno-oncology)
- 9 clinical studies ongoing or planned for next 12-18 months
- Read-out from 3-4 phase 2 studies over next 12-18 months
- Initiation of phase 3 registrational study expected in H2 2017
- Significant collaborations with 3 of the leading global pharma companies
- Anticipated new clinical/advanced pre-clinical compounds to enter pipeline
- Continued execution of strategic transactions as opportunities arise

Thank You

BIOLINERX