Corporate Overview

The information in this slide deck is current as of February 27, 2018, unless otherwise noted. The information in this slide deck is qualified in its entirety by reference to MacroGenics' Annual, Quarterly and Current Reports filed with the SEC. MacroGenics undertakes no obligation to update any of the information herein.
Legal Notices

Cautionary Note on Forward-Looking Statements

Any statements in these materials about future expectations, plans and prospects for MacroGenics ("Company"), including statements about the Company’s strategy, future operations, clinical development of the Company’s therapeutic candidates, milestone or opt-in payments from the Company’s collaborators, the Company’s anticipated milestones and future expectations and plans and prospects for the Company and other statements containing the words "subject to", "believe", "anticipate", "plan", "expect", "intend", "estimate", "project", "may", "will", "should", "would", "could", "can", the negatives thereof, variations thereon and similar expressions, or by discussions of strategy constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the uncertainties inherent in the initiation and enrollment of future clinical trials, expectations of expanding ongoing clinical trials, availability and timing of data from ongoing clinical trials, expectations for regulatory approvals, other matters that could affect the availability or commercial potential of the Company’s product candidates and other risks described in the Company’s filings with the Securities and Exchange Commission. In addition, the forward-looking statements included in this press release represent the Company's views only as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so, except as may be required by law. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.

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Committed to Developing Life-changing Medicines

Cutting-edge Therapeutics
- Seven immuno-oncology clinical candidates
- Innovative combinatorial approaches
- Innate and adaptive immune system engagement

Proprietary Antibody-based Platforms
- DART® and TRIDENT™ multi-specific mAb technologies
- Fc Optimization to enhance mAb potency
- Applicability across broad therapeutic domains

Resourced for Success
- Well capitalized: $305M pro forma cash @ 12/31/17
- Multiple alliances with leading biopharmas
- Commercial scale GMP manufacturing facility
- 330 Employees @ 2/28/18 (Rockville, MD & SF Bay Area)
## Our Growing Immuno-Oncology Pipeline

*Retain major market commercial rights for 8 of 9 development candidates*

<table>
<thead>
<tr>
<th>Program (Target)</th>
<th>Indication</th>
<th>Program</th>
<th>Pre-IND</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Collaborator</th>
<th>Our Commercial Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margetuximab (HER2)</td>
<td>Breast (HER2+) “SOPHIA”</td>
<td>Green Cross</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Worldwide, excl. South Korea</td>
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<tr>
<td></td>
<td>Gastric (+anti-PD-1)</td>
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<tr>
<td>Flotetuzumab (CD123 x CD3)</td>
<td>AML/MDS</td>
<td>Servier</td>
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<td>North Amer., Japan, Korea, India</td>
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<tr>
<td></td>
<td>AML (+MGA012)</td>
<td>Planned</td>
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<tr>
<td>MGA012 (PD-1)</td>
<td>Solid Tumors</td>
<td>Incyte((b))</td>
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<tr>
<td>MGD013 (PD-1 x LAG-3)</td>
<td>Solid Tumors/Heme Mal.</td>
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<td>Worldwide</td>
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<tr>
<td>MGD019 (PD-1 x CTLA-4)</td>
<td>Solid Tumors</td>
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<td>Worldwide</td>
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<tr>
<td>Enoblituzumab (B7-H3)</td>
<td>Solid Tumors (+anti-PD-1)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Worldwide</td>
<td></td>
</tr>
<tr>
<td>MGD009 (B7-H3 x CD3)</td>
<td>Solid Tumors</td>
<td></td>
<td></td>
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<td></td>
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<td>Worldwide</td>
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<tr>
<td></td>
<td>Solid Tumors (+MGA012)</td>
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<tr>
<td>MGC018 (B7-H3)((a))</td>
<td>Solid Tumors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Worldwide</td>
<td></td>
</tr>
<tr>
<td>MGD007 (gpA33 x CD3)</td>
<td>Colorectal</td>
<td>Servier option</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Worldwide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colorectal (+MGA012)</td>
<td>Planned</td>
<td></td>
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</tr>
</tbody>
</table>

\(a\) ADC based on duocarmycin payload with cleavable peptide linker licensed from Synthon Biopharmaceuticals.

\(b\) MacroGenics retains rights to develop its pipeline assets in combination with MGA012 and to manufacture a portion of global clinical and commercial supply needs of MGA012.
Significant Value-creating Opportunities in 2018

**B7-H3 Franchise**
- Unique target with attractive expression profile
- Three clinical molecules with complementary MOAs

**MGD013 (PD-1 x LAG-3)**
- First clinical bispecific that targets multiple checkpoints
- Growing interest in LAG-3 based combos

**Flotetuzumab (CD123 x CD3)**
- Encouraging Ph. 1 single agent activity in R/R AML
- Registration path to be defined

**Margetuximab (HER2)**
- Ph. 3 SOPHIA mBC study (vs. trastuzumab) futility passed; fully enroll by YE2018
- Encouraging Ph. 2 gastric data (w/anti-PD-1)
# Margetuximab: Potential Best-in-Class Anti-HER2 mAb

*Leveraging immune modulation through Fc optimization*

<table>
<thead>
<tr>
<th>Candidate</th>
<th>• Fc-optimized anti-HER2 mAb</th>
</tr>
</thead>
</table>
| Function/MoA | • Inhibits HER2 signaling (consistent with trastuzumab)  
• Fc optimization: enhances Fc-mediated activities, including ADCC  
  - *Increases* binding to activating *FcyR, CD16A*, including low-affinity allele  
  - *Decreases* binding to inhibitory *FcyR, CD32B*  
• Designed to be FcyR allele-independent |
| Lead Indications | • Ph. 3 SOPHIA study (HER2+ metastatic breast cancer)  
• Ph. 1b/2 combo study with PD-1 (HER2+ gastric cancer) |
| Partner | • MacroGenics has global rights (ex-South Korea) |
Phase 3 Study to Establish Superiority to Trastuzumab

Jan. 2018 futility analysis passed✓; Enrollment completion expected 4Q18

**HER2+ mBC**
1–3 Prior Treatment Lines in Metastatic Setting (including prior treatment with multiple other anti-HER2 agents)

**PI Choice of Chemotherapy**
( capecitabine, eribulin, gemcitabine or vinorelbine)

**Arm 1**
margetuximab + chemotherapy

**Arm 2**
trastuzumab + chemotherapy

1:1 Randomization
(n = 530)

# of Global sites: ~200

**Sequential primary endpoints: Progression-Free Survival & Overall Survival:**
PFS (N=257, HR=0.67, α=0.05, power=90%)
OS (N=385, HR=0.75, α=0.05, power=80%)
# 3rd/4th Line HER2+ mBC Represents Attractive Entry Point

<table>
<thead>
<tr>
<th></th>
<th>1st Line</th>
<th>2nd Line</th>
<th>3rd/4th Line</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual # of Patients</strong>&lt;sup&gt;(a)&lt;/sup&gt;</td>
<td>~25,000</td>
<td>~19,000</td>
<td>~15,000</td>
</tr>
<tr>
<td><strong>Standard of Care</strong></td>
<td>trastuzumab + pertuzumab + taxane (docetaxel)</td>
<td>T-DM1 (ado-trastuzumab emtansine)</td>
<td>No consensus (lapatinib+capecitabine; trastuzumab+different chemo)</td>
</tr>
<tr>
<td><strong>Median OS</strong></td>
<td>56.5 months&lt;sup&gt;(b)&lt;/sup&gt;</td>
<td>30.9 months&lt;sup&gt;(c)&lt;/sup&gt;</td>
<td>15.8 months&lt;sup&gt;(d)&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Median PFS</strong></td>
<td>18.5 months&lt;sup&gt;(b)&lt;/sup&gt;</td>
<td>9.6 months&lt;sup&gt;(c)&lt;/sup&gt;</td>
<td>3.3 months&lt;sup&gt;(e)&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>ORR</strong></td>
<td>80.2%&lt;sup&gt;(b)&lt;/sup&gt;</td>
<td>43.6%&lt;sup&gt;(c)&lt;/sup&gt;</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

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<sup>(a) Top 7 Pharma Markets (US, EU5, Japan) – Source *inVentiv Health*</sup>

<sup>(b) Baselga, et al. – CLEOPATRA Study Group; Perjeta package insert</sup>

<sup>(c) Verma, et al. – EMILIA Study Group; Kadcyla package insert</sup>

<sup>(d) Krop, et al., *The Lancet* (June 2017) – TH3RESA Study Group</sup>

<sup>(e) Krop, et al., *The Lancet* (May 2014) – TH3RESA Study Group</sup>
**Phase 1b/2 Study in Adv./Metastatic Gastric Cancer**

*Enrolling add’l 25 gastric cancer patients, based on interim data at ASCO GI*

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### Dose Escalation ✓

(n=3-6 per margetuximab dose)

- margetuximab 10 – 15 mg/kg q3w + pembrolizumab 200 mg q3w

### Dose Expansion

(margetuximab 15 mg/kg q3W + pembrolizumab 200 mg q3W)

- Gastric (n=25) ✓
- Gastroesophageal Junc. (n=26) ✓
- Gastric IHC 3+ (n=25)

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**Treatment**

- Potential for chemotherapy-free regimen
- Margetuximab and pembro administered Day 1 of every 3 week cycle

**Inclusion/Exclusion Criteria**

- Received ≥ 1 prior line of chemotherapy treatment
- No prior immunotherapy

**Endpoints**

- Primary: safety, tolerability and efficacy (as evaluated by ORR) of combo
- Secondary: PFS, PFS-6, OS-6/OS, Immunogenicity

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## HER2+ Gastric Cancer Therapeutic Landscape

### Comparative benchmark data

<table>
<thead>
<tr>
<th>Agent (Study)</th>
<th>1st Line</th>
<th>2nd Line</th>
<th>3rd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC</td>
<td>SOC</td>
<td>Ongoing</td>
<td>Failed</td>
</tr>
<tr>
<td><strong>Trastuzumab + Chemo</strong>&lt;sup&gt;(a)&lt;/sup&gt; (TOGA)</td>
<td><strong>Ram. + Taxane</strong>&lt;sup&gt;(b)&lt;/sup&gt; (RAINBOW)</td>
<td><strong>Marge.+ Pembro.</strong>&lt;sup&gt;(d)&lt;/sup&gt; (Ongoing Ph.2)</td>
<td><strong>T-DM1</strong>&lt;sup&gt;(e)&lt;/sup&gt; (GATSBY)</td>
</tr>
<tr>
<td>ORR</td>
<td>47%</td>
<td>28%</td>
<td><strong>32%</strong></td>
</tr>
<tr>
<td>Median PFS</td>
<td>6.7 mos.</td>
<td>4.4 mos.</td>
<td><strong>5.5 mos.</strong></td>
</tr>
<tr>
<td>Median OS</td>
<td>13.1 mos.</td>
<td>9.6 mos.</td>
<td><strong>Not reached</strong></td>
</tr>
<tr>
<td>&gt; Grade 3 TRAEs</td>
<td>68%&lt;sup&gt;(Black Box Warn.)&lt;/sup&gt;</td>
<td>Overall: N/A 41% Neutropenia 15% Hypertension 12% Fatigue&lt;sup&gt;(Black Box Warn.)&lt;/sup&gt;</td>
<td><strong>11.9%</strong></td>
</tr>
<tr>
<td>Gastric/GEJ Patient Mix</td>
<td>80/20%</td>
<td>80/20%</td>
<td>75/25%</td>
</tr>
</tbody>
</table>

**Notes:**
- SOC = Standard of Care
- (a) Data from Herceptin package insert; Bang, et al., *Lancet*, 2010; Black box warning: cardiomyopathy, infusion reactions, embryo-fetal toxicity and pulmonary toxicity.
- (b) Data from Cyramza package insert; Wilkes et al., *Lancet Oncology*, 2014; Black box warning: hemorrhage, GI perforation, impaired wound healing.
- (c) Data from Cyramza package insert; Fuchs, et al., *Lancet*, 2014.
- (d) Data presented at ASCO GI 2018. 11.9% of all patients in dose escalation (n=67, including GEJ) had ≥ Grade 3 treatment-related AEs. mPFS, mos. and ORR for gastric cancer pts only (n=25).
- (e) Data from Thuss-Patience, et al., *Lancet Oncology*, 2017; Black box warning: hepatotoxicity, cardiac toxicity, embryo-fetal toxicity.
- (g) Note: Avelumab (anti-PD-L1) failed 3L JAVELIN Gastric300 study (Merck KGaA and Pfizer press release, November 28, 2017).
- (i) Keytruda package insert; KEYNOTE-059, ESMO 2017.
Promising Activity in Gastric Cancer Subpopulation

35% ORR in HER2 3+ gastric cancer (78% DCR)\(^{(a)}\)

MGA012 Global Collaboration with Incyte

*Significantly expands and accelerates MGA012 (anti-PD-1) development efforts*

- Incyte gains exclusive, worldwide development and commercialization rights to MGA012 in all indications

- MacroGenics receives:
  - Upfront cash payment of $150M
  - Up to $750M in milestone payments ($420M development and regulatory, $330M commercial)
  - Tiered royalties of 15 – 24% on future sales of MGA012
  - Right to develop its pipeline assets in combination with MGA012
  - Right to manufacture portion of global MGA012 clinical and commercial supply

February 27, 2018
## MGA012: Anti-PD-1 mAb

*Backbone foundation for combination studies*

| Candidate | • Humanized proprietary anti-PD-1 mAb  
  – Hinge stabilized humanized IgG4 |
|-----------|----------------------------------------------------------------------------------|
| Rationale | • Basis for combination immunotherapy with proprietary assets  
  • Innovative development collaboration structure |
| Indications | • Multiple solid tumors |
| Development | • Dose escalation data presented at SITC 2017  
  – Acceptable safety profile  
  – Evidence of anti-tumor activity  
  • Combo study with MGD009 initiated |
| Partner | • Incyte has global rights, including responsibility for monotherapy trial(s) |
Broad MGA012 Combination Opportunities

Each may individually combine their proprietary agents w/MGA012

Potential Combinations

IDO1
GITR
OX40
Arginase
BRD
JAK1
Pi3Kdelta
+ Future Candidates

MGA012 (anti-PD-1) Combinations

margetuximab
enoblituzumab
flotetuzumab
MGD007
MGD009
MGC018
+ Future Candidates
DART and TRIDENT: Leading Multi-specific Platforms

- Robust, flexible platforms
  - Multiple applications across different disease areas
  - Predictable manufacturability
  - Long-term stability
  - Ability to tailor half-life and valency

- Multiple DART molecules in clinical testing

- Validating partnerships with large biopharma

(a) Crystallography of Pfizer’s P-Cadherin x CD3 DART molecule. The two antigen binding sites (shown by red dot circles) are separated from each other by approximately 30 Å and are facing away from each other at an angle of approximately 90°. Source: Root, et al., Antibodies 2016, 5, 6; March 4, 2016.
## Multiple Oncology DART Molecules in Ph. 1 Development

<table>
<thead>
<tr>
<th>Features</th>
<th>flotetuzumab</th>
<th>MGD007</th>
<th>MGD009</th>
<th>PF-06671008</th>
<th>MGD013</th>
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</thead>
<tbody>
<tr>
<td><strong>Targets</strong></td>
<td>CD123 x CD3</td>
<td>gpA33 x CD3</td>
<td>B7-H3 x CD3</td>
<td>P-cadherin x CD3</td>
<td>PD-1 x LAG-3</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td><img src="image" alt="Flotetuzumab" /></td>
<td><img src="image" alt="MGD007" /></td>
<td><img src="image" alt="MGD009" /></td>
<td><img src="image" alt="PF-06671008" /></td>
<td><img src="image" alt="MGD013" /></td>
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<tr>
<td><strong>MoA</strong></td>
<td>Redirected T-Cell Killing</td>
<td></td>
<td></td>
<td>Checkpoint Co-blockade</td>
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<tr>
<td><strong>Current Dosing</strong></td>
<td>Continuous IV</td>
<td></td>
<td></td>
<td>Intermittent dosing (qW or longer)</td>
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<tr>
<td><strong>Indications</strong></td>
<td>AML, MDS</td>
<td>Colorectal cancer</td>
<td>Solid tumors</td>
<td>Solid tumors</td>
<td>Solid tumors, heme malig.</td>
</tr>
<tr>
<td><strong>MacroGenics’ Commercial Rights</strong></td>
<td>North America, Japan, Korea, India</td>
<td>North America, Japan, Korea, India</td>
<td>Worldwide</td>
<td>Royalties/Milestones</td>
<td>Worldwide</td>
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<tr>
<td><strong>Collaborator</strong></td>
<td>Servier</td>
<td>Servier (Option)</td>
<td>—</td>
<td>Pfizer</td>
<td>—</td>
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</table>
# Flotetuzumab: CD123 x CD3 DART Molecule

<table>
<thead>
<tr>
<th><strong>Candidate</strong></th>
<th>Humanized CD123 x CD3 DART molecule</th>
</tr>
</thead>
</table>
| **Function/MoA** | Redirected T-cell killing against targeted leukemia cells  
  – Elimination of leukemic stem cells  
  – Sparing of normal hematopoietic stem cells  
  – Capable of engaging any T-cell without HLA-restriction |
| **Indications** | Lead: AML and MDS  
  Other hematologic neoplasms including B-cell ALL |
| **Development** | Phase 1 study ongoing in US and EU  
  Data presented at ESMO and ASH 2017  
  – Preliminary anti-leukemic activity  
  – Durable responses  
  – Acceptable tolerability |
| **Partner** | MacroGenics retains full rights in North America, Japan, Korea & India  
  Servier has exclusive rights in all other territories |
Flotetuzumab: Phase 1 Study Design

Interim data presented at ASH 2017

**Phase 1 Study Design**

- **Dose Escalation**
  - Single Patient Dose Escalation
  - (3, 10, 30, 100 ng/kg/day)

  **Dose and Schedule Selected ✓**

- **Dose Escalation**
  - 3 + 3 Multi-patient Dose Escalation
  - 4 wk cycles

  **Dose Expansion**
  - (Currently enrolling N=24 each cohort)
    - Expansion Cohort R/R AML
    - Expansion Cohort (Hypomethylation Failure MDS)

**Dose and Schedule**

- **Week 1 Lead-in Dose**
  - 30 ng/kg/day x 3 Days
  - 100 ng/kg/day x 4 Days

- **Weeks 2 – 4 (Cycle 1)**
  - 500 ng/kg/day x 21 Days

- **Cycle 2 and Beyond**
  - 500 ng/kg/day
  - 4 Days On/3 Days Off

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Anti-Leukemic Activity at Threshold Dose ≥ 500 ng/kg/day†

Evaluable patients who received ≥ one cycle of flotetuzumab and had post-treatment bone marrow biopsy

Dose Escalation – ESMO 2017

- Rapid responses after single cycle of therapy in majority of patients that respond (cycles ≤ 2)
- Anti-leukemic activity observed in 8/14 pts (57%)
- CR/CRi/MLF/PR rate: 6/14 pts (43%)
- CR rate: 4/14 (28%) (CR/CRi)

Ongoing Dose Expansion – ASH 2017

- Six of eight relapse/refractory AML patients (75%) have evidence of anti-leukemic activity
- Three patients achieved CR/CRi/MLF and were still ongoing as of data cut-off

CR = Complete Response; CRm = molecular CR; CRi = Complete Response with incomplete hematological improvement; MLF = Morphologic Leukemia-free state; PR = Partial Response; SD/OB = Stable Disease/Other Anti-Leukemic Benefit; TF = Treatment Failure (ENL)

† ESMO 2017 data cut-off: August 1, 2017; ASH data cut-off: December 4, 2017.
Flotetuzumab Phase 1 Duration of Response*

Data presented at ASH 2017

- Durable responses in patients that achieve MLF, CRi, CR
- Duration of response ranges from 1.0 to 5.8 months, with 5 patients still ongoing*

CR = Complete Response; CRi = Complete Response with incomplete hematological improvement; MLF = Morphologic Leukemia-free state
* Data cut-off date: November 30, 2017.
**PD-1/PD-L1 Expression in R/R AML Patients**

*Flotetuzumab + MGA012 (anti-PD-1) combo rationale*

**↑PD-L1 at Baseline Associated with ↓Flotetuzumab Activity**

Patients on Flotetuzumab with Residual Disease: ↑PD-L1+ AML Blasts w/Stable CD123 Expression

* From poster presentation at ASH 2017.

Flotetuzumab + MGA012 combo study to commence 1H2018

* From poster presentation at ASH 2017.
### MGD013: First Bispecific Checkpoint Molecule in Clinic

| **Candidate** | Humanized, proprietary PD-1 x LAG-3 DART molecule  
 Hinge-stabilized human IgG4  
 Benchmarks favorably against leading mAbs |
| **Rationale** | Reactivation of exhausted T cells |
| **Patient Population** | Patients with solid or liquid tumors:  
 Progressed on prior checkpoint inhibitor  
 Not targeted by PD-1/LAG-3 monoclonal antibody combination  
 PD-1 monotherapy or PD-1/LAG-3 combinations demonstrate activity |
| **Function/MoA** | Reactivation of exhausted T cells |
| **Indications** | Multiple solid tumors and hematological malignancies |
| **Development** | Phase 1 study ongoing (dose escalation) |
| **Partner** | MacroGenics retains global rights |
MGD013: Significant Opportunity

Industry Enthusiasm for LAG-3 + PD-1 Combo

Validated Bispecific Platform

DART Format Advantage Drives Synergy

February 27, 2018
MGD013: Synergistic T-cell Activation

**DART enhances T-cell activation vs. anti-PD-1 + anti-LAG-3 mAbs**

*IFN-γ release by 25 nM MGA012 = 3276±744 pg/ml.

**Enhancement of Primary T-cell Response Following SEB Stimulation**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Relative IFN-γ Induction (% of 25 nM MGA012, mean ± sem)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGD013 (PD-1 x LAG-3 DART)</td>
<td></td>
</tr>
<tr>
<td>MGA012 + MG Anti-LAG-3</td>
<td></td>
</tr>
<tr>
<td>Nivo* + 25F7*</td>
<td></td>
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<tr>
<td>MGA012 Anti-PD-1</td>
<td></td>
</tr>
<tr>
<td>Nivo* Anti-PD-1</td>
<td></td>
</tr>
<tr>
<td>MG's Anti-LAG-3</td>
<td></td>
</tr>
<tr>
<td>BMS' Anti-LAG-3 (25F7* )</td>
<td></td>
</tr>
<tr>
<td>Control IgG</td>
<td></td>
</tr>
</tbody>
</table>

*25 nM*  
| 6.25 nM  
| 1.56 nM  
| 0.39 nM  
| 0.09 nM  
| 0.024 nM 
| 0.006 nM |

**Ratio-paired t-test (25 nM group):**

* *p = 0.0262  
** *p = 0.0022

NS = not significant  
No. of subjects = 11–13
## Comprehensive B7-H3 Franchise

*MacroGenics retains global rights*

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Enoblituzumab</th>
<th>MGD009</th>
<th>MGC018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intended MoA</strong></td>
<td>Fc-optimized mAb</td>
<td>B7-H3 x CD3 DART (Fc-bearing)</td>
<td>B7-H3 Antibody-Drug Conjugate</td>
</tr>
<tr>
<td></td>
<td>Fc-mediated tumor cell killing</td>
<td>Recruitment and expansion of T cells</td>
<td>Direct tumor killing</td>
</tr>
<tr>
<td></td>
<td>Potential enhancement of adaptive immune responses</td>
<td>Potent redirection of T cells to kill tumor cells</td>
<td>Leverage Synthon’s linker/payload</td>
</tr>
<tr>
<td><strong>Current Development Status</strong></td>
<td>Combo studies</td>
<td>Phase 1 dose escalation</td>
<td>2018 IND planned</td>
</tr>
<tr>
<td></td>
<td>Monotherapy</td>
<td>Combo study with MGA012 initiated</td>
<td></td>
</tr>
</tbody>
</table>

*February 27, 2018*
Rationale for Targeting B7-H3 in Cancer

**Tumor Cells**
- Direct expression by primary and metastatic tumors
- Role in mediating migration, invasion, resistance and tumor metabolism

**CSCs**
- Expression on cancer stem cell population

**Tumor Vasculature**
- Expression on tumor vasculature and stroma

**T Cells**
- Role in T cell immune modulation

February 27, 2018
Confirmed High Penetrance in Broad Set of Solid Tumors

*Minimal/no expression on normal tissues*

<table>
<thead>
<tr>
<th>Fixed Tumor MicroArray</th>
<th>IHC Summary of Samples Screened</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>B7-H3 Positive</strong></td>
<td><strong>2+ or Above</strong></td>
</tr>
<tr>
<td><strong>Potential Indications:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head and Neck</td>
<td>19/19 100%</td>
<td>19/19 100%</td>
</tr>
<tr>
<td>Kidney Cancer</td>
<td>77/78 99%</td>
<td>75/78 96%</td>
</tr>
<tr>
<td>Glioblastoma</td>
<td>65/66 98%</td>
<td>63/66 95%</td>
</tr>
<tr>
<td>Thyroid Cancer</td>
<td>34/35 97%</td>
<td>33/35 94%</td>
</tr>
<tr>
<td>Mesothelioma</td>
<td>41/44 93%</td>
<td>39/44 89%</td>
</tr>
<tr>
<td>Melanoma</td>
<td>132/146 90%</td>
<td>94/146 64%</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>88/99 89%</td>
<td>51/99 52%</td>
</tr>
<tr>
<td>Pancreas Cancer</td>
<td>69/78 88%</td>
<td>45/78 58%</td>
</tr>
<tr>
<td>Bladder</td>
<td>134/156 86%</td>
<td>123/156 79%</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>324/379 85%</td>
<td>300/379 79%</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>189/249 76%</td>
<td>156/249 63%</td>
</tr>
<tr>
<td>Ovarian Cancer</td>
<td>59/79 75%</td>
<td>36/79 46%</td>
</tr>
</tbody>
</table>

Target expression on both tumor cells and tumor vasculature
Enoblituzumab Studies in B7-H3+ Tumors

**Anti-PD-1 Combo Study**

- **Dose Escalation**
  - Cohorts 1-3
  - 3, 10, 15 mg/kg enoblituzumab + 2 mg/kg pembrolizumab
  - (✓ Dosing completed)

- **Dose Expansion**
  - Bladder (n=16)
  - NSCLC (n≈30-40)
  - SCCHN (n≈30-40)
  - Melanoma (n=16)

**Neoadj. Prostate Study**

- Single arm trial with early stopping rules for safety
  - High-Risk PC (Gleason ≥ 7, RP Eligible) (n=16)
  - Enoblituzumab Weekly 15 mg/kg IV x 6
  - Radical Prostatectomy

**Study Endpoints**

- Apoptosis (TUNEL staining)
- Cell proliferation (Ki-67 staining)
- CD8+, CD4+ T cell and Treg infiltration
- Proportion of pathological CRs
- PSA response rates
- Time to PSA recurrence
MGD009 Studies in B7-H3⁺ Tumors

Includes first combination study of DART + MGA012 (anti-PD-1 mAb)

Dose Escalation Ongoing:
3+3+3 Design
(Open to Selected B7-H3⁺ Tumor Types)

**Cohorts 1-7**
0.3 - 100 µg/kg MGD009 q2w

Dose Expansion

**Six Tumor Cohorts** (*n=*16 each)
NSCLC, Bladder, SCCHN,
Mesothelioma, Melanoma, Prostate

---

Dose Escalation:
3+3+3 Design
(Open to Selected B7-H3⁺ Tumor Types)

**Cohorts 1-5**
3-30 µg/kg MGD009 q2w
(w/3 µg/kg LiD)
+ 3 mg/kg q2w MGA012

Dose Expansion

**Six Tumor Cohorts** (*n=*20 each)
NSCLC, RCC, Sarcoma,
Mesothelioma, Prostate,
High-Mutational Load Tumors
## Anticipated Pipeline Progress Through 2018

<table>
<thead>
<tr>
<th>Program</th>
<th>2017 Achievements</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>margetuximab</td>
<td>✓ Complete Ph. 1b/2 gastric enrollment (60 pts.)</td>
<td>✓ Reported Ph. 1b/2 gastric data (ASCO GI)</td>
</tr>
<tr>
<td>(HER2 mAb)</td>
<td></td>
<td>✓ Completed SOPHIA futility (&quot;Go&quot;)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Complete SOPHIA enrollment (4Q)</td>
</tr>
<tr>
<td>flotetuzumab</td>
<td>✓ Provided clinical update at ESMO (oral)</td>
<td>□ Initiate combo study with MGA012 (2Q)</td>
</tr>
<tr>
<td>(CD123 x CD3 DART)</td>
<td>✓ Present updated clinical data at ASH (oral)</td>
<td>□ Present full expansion cohort data (2H)</td>
</tr>
<tr>
<td></td>
<td>✓ Established rationale for combining w/MGA012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Complete SOPHIA enrollment (4Q)</td>
<td></td>
</tr>
<tr>
<td>MGA012</td>
<td>✓ Announced strategic collaboration w/Incyte</td>
<td>TBA - Incyte leads development</td>
</tr>
<tr>
<td>(PD-1 mAb)</td>
<td>✓ Presented dose escalation data at SITC</td>
<td></td>
</tr>
<tr>
<td>MGD013</td>
<td>✓ Commenced enrollment of Ph. 1 study</td>
<td>□ Establish dose/schedule (2H)</td>
</tr>
<tr>
<td>(PD-1 x LAG-3 DART)</td>
<td>✓ Present updated clinical data at ASH (oral)</td>
<td>□ Initiate dose expansion cohorts (2H)</td>
</tr>
<tr>
<td>MGD019</td>
<td>✓ Completed GLP tox study</td>
<td>□ Submit IND (2H)</td>
</tr>
<tr>
<td>(PD-1 x CTLA-4 DART)</td>
<td>✓ Established dose/schedule, initiated dose expan.</td>
<td></td>
</tr>
<tr>
<td>enoblituzumab</td>
<td>✓ Advanced expansion cohorts</td>
<td>□ Report PD-1 combo data</td>
</tr>
<tr>
<td>(B7-H3 mAb)</td>
<td></td>
<td>□ Update on neoad. prostate study</td>
</tr>
<tr>
<td>MGD009</td>
<td>✓ Advanced dose escalation</td>
<td>✓ Commenced combo with MGA012</td>
</tr>
<tr>
<td>(B7-H3 x CD3 DART)</td>
<td></td>
<td>□ Establish monotherapy dose/schedule</td>
</tr>
<tr>
<td>MGC018</td>
<td>✓ Completed GLP tox study</td>
<td>□ Initiate dose expansion cohorts</td>
</tr>
<tr>
<td>(B7-H3 ADC)</td>
<td></td>
<td>□ Initiate Phase 1 study (2H)</td>
</tr>
<tr>
<td>MGD007</td>
<td>✓ Complete enrollment of dosing cohorts</td>
<td>□ Present clinical data</td>
</tr>
<tr>
<td>(gpA33 x CD3 DART)</td>
<td></td>
<td>□ Commence combo with MGA012</td>
</tr>
</tbody>
</table>
Financial Overview

- $305M Cash, cash equivalents and investments as of 12/31/17
- Historical financial details:

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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</thead>
<tbody>
<tr>
<td>R&amp;D Expense</td>
<td>$47</td>
<td>$70</td>
<td>$98</td>
<td>$122</td>
<td>$147</td>
</tr>
<tr>
<td>Total Operating Expenses</td>
<td>58</td>
<td>86</td>
<td>121</td>
<td>152</td>
<td>180</td>
</tr>
<tr>
<td>Cash &amp; Investments</td>
<td>117</td>
<td>158</td>
<td>339</td>
<td>285</td>
<td>305</td>
</tr>
<tr>
<td>Net Cash Gain (Burn)(a)</td>
<td>(17)</td>
<td>(36)</td>
<td>(23)</td>
<td>(56)</td>
<td>(15)</td>
</tr>
</tbody>
</table>

- Historical non-dilutive funding received from collaboration partners(b):

(a) Before any equity issuance (any premium on equity issued is included).
(b) Includes upfront, milestone, maintenance and opt-in payments and R&D reimbursement as well as premium paid on equity sold.
Thank You!

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