AMGEN AT ASH 2017: DEVELOPING LEADERSHIP IN BISPECIFIC THERAPIES

DECEMBER 9, 2017
SAFE HARBOR STATEMENT

This presentation contains forward-looking statements that are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements, including statements about estimates of revenues, operating margins, capital expenditures, cash, other financial metrics, expected legal, arbitration, political, regulatory or clinical results or practices, customer and prescriber patterns or practices, reimbursement activities and outcomes and other such estimates and results. Forward-looking statements involve significant risks and uncertainties, including those discussed below and more fully described in the Securities and Exchange Commission (SEC) reports filed by Amgen, including Amgen's most recent annual report on Form 10-K and any subsequent periodic reports on Form 10-Q and Form 8-K. Please refer to Amgen's most recent Forms 10-K, 10-Q and 8-K for additional information on the uncertainties and risk factors related to our business. Unless otherwise noted, Amgen is providing this information as of December 9, 2017 and expressly disclaims any duty to update information contained in this presentation.

No forward-looking statement can be guaranteed and actual results may differ materially from those we project. Our results may be affected by our ability to successfully market both new and existing products domestically and internationally, clinical and regulatory developments involving current and future products, sales growth of recently launched products, competition from other products including biosimilars, difficulties or delays in manufacturing our products and global economic conditions. In addition, sales of our products are affected by pricing pressure, political and public scrutiny and reimbursement policies imposed by third-party payers, including governments, private insurance plans and managed care providers and may be affected by regulatory, clinical and guideline developments and domestic and international trends toward managed care and healthcare cost containment. Furthermore, our research, testing, pricing, marketing and other operations are subject to extensive regulation by domestic and foreign government regulatory authorities. We or others could identify safety, side effects or manufacturing problems with our products, including our devices, after they are on the market. Our business may be impacted by government investigations, litigation and product liability claims. In addition, our business may be impacted by the adoption of new tax legislation or exposure to additional tax liabilities. If we fail to meet the compliance obligations in the corporate integrity agreement between us and the U.S. government, we could become subject to significant sanctions. Further, while we routinely obtain patents for our products and technology, the protection offered by our patents and patent applications may be challenged, invalidated or circumvented by our competitors, or we may fail to prevail in present and future intellectual property litigation. We perform a substantial amount of our commercial manufacturing activities at a few key facilities, including in Puerto Rico, and also depend on third parties for a portion of our manufacturing activities, and limits on supply may constrain sales of certain of our current products and product candidate development. In addition, we compete with other companies with respect to many of our marketed products as well as for the discovery and development of new products. Discovery or identification of new product candidates cannot be guaranteed and movement from concept to product is uncertain; consequently, there can be no guarantee that any particular product candidate will be successful and become a commercial product. Further, some raw materials, medical devices and component parts for our products are supplied by sole third-party suppliers. Certain of our distributors, customers and payers have substantial purchasing leverage in their dealings with us. The discovery of significant problems with a product similar to one of our products that implicate an entire class of products could have a material adverse effect on sales of the affected products and on our business and results of operations. Our efforts to acquire other companies or products and to integrate the operations of companies we have acquired may not be successful. We may not be able to access the capital and credit markets on terms that are favorable to us, or at all. We are increasingly dependent on information technology systems, infrastructure and data security. Our stock price is volatile and may be affected by a number of events. Our business performance could affect or limit the ability of our Board of Directors to declare a dividend or our ability to pay a dividend or repurchase our common stock.

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## AGENDA

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<th>Introduction</th>
<th>David Reese, M.D.—Senior Vice President, Translational Sciences and Oncology</th>
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<td>Immuno-Oncology Programs</td>
<td>Gregory Friberg, M.D.—Vice President, Global Development and Oncology Therapeutic Area Head</td>
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| Q&A | David Reese  
Gregory Friberg  
Anthony Stein, M.D.—City of Hope, Duarte, CA |
INTRODUCTION

DAVID REESE, M.D.
SENIOR VICE PRESIDENT, TRANSLATIONAL SCIENCES AND ONCOLOGY
2017 ASH: AMGEN CLINICAL HIGHLIGHTS

• Overall Survival of Relapsed/Refractory Multiple Myeloma Patients Treated With Carfilzomib and Dexamethasone vs Bortezomib and Dexamethasone: Results From the Phase 3 ENDEAVOR Study According to Age Subgroup
  – Abstract #1885, Poster Presentation, Saturday, Dec. 9, at 5:30 p.m., Building A, Level 1, Hall A2

• Overall Survival of Patients With Relapsed Multiple Myeloma Treated With Carfilzomib and Dexamethasone Versus Bortezomib and Dexamethasone According to Prior Line of Therapy and Previous Exposure to Bortezomib: Secondary Analysis of the Phase 3 ENDEAVOR Study
  – Abstract #1850, Poster Presentation, Saturday, Dec. 9, at 5:30 p.m., Building A, Level 1, Hall A2

• Maintenance Therapy With Blinatumomab in Adults With Relapsed/Refractory B-Precursor Acute Lymphoblastic Leukemia (ALL): Overall Survival in Adults Enrolled In a Phase 3 Open-Label Trial
  – Abstract #2552, Poster Presentation, Sunday, Dec. 10, at 6:00 p.m., Building A, Level 1, Hall A2

• Overall Survival (OS) of Patients With Relapsed/Refractory Multiple Myeloma (RRMM) Treated With Carfilzomib, Lenalidomide, and Dexamethasone (KRd) Versus Lenalidomide and Dexamethasone (Rd): Final Analysis From the Randomized Phase 3 ASPIRE Trial
  – Abstract #743, Oral Presentation, Monday, Dec. 11, at 2:45 p.m., Building C, Level 1, Hall C1
2017 ASH: AMGEN PRECLINICAL HIGHLIGHTS

- CD33/CD3-Bispecific T-Cell Engaging (BiTE®) Antibody Constructs Efficiently Target Monocytic CD14+HLA-DRlow IDO+AML-MDSCs
  - Abstract #1363, Poster Presentation, Saturday, Dec. 9, at 5:30 p.m., Building A, Level 1, Hall A2
- Evaluation of a FLT3 BiTE® for Acute Myeloid Leukemia
  - Abstract #1354, Poster Presentation, Saturday, Dec. 9, at 5:30 p.m., Building A, Level 1, Hall A2
- Generation of a Half-life Extended Anti-CD19 BiTE® Antibody Construct Compatible With Once-weekly Dosing for Treatment of CD19-positive Malignancies
  - Abstract #2815, Poster Presentation, Sunday, Dec. 10, at 6:00 p.m., Building A, Level 1, Hall A2
- Preclinical Characterization of AMG 424, a Novel Humanized T Cell–Recruiting Bispecific Anti-CD3/CD38 Antibody
  - Abstract #500, Oral Presentation, Sunday, Dec. 10, at 4:30 p.m., Building B, Level 3, B308-B309
- AMG 592 is an Investigational IL-2 Mutein That Induces Highly Selective Expansion of Regulatory T cells
  - Abstract #696, Oral Presentation, Monday, Dec. 11, at 2:45 p.m., Building C, Level 1, C108-C109
AMGEN’S STRENGTHS IN IMMUNOLOGY, ONCOLOGY AND BIOLOGICS FORM A DIFFERENTIATED POSITION IN IMMUNO-ONCOLOGY

- Pioneering approaches such as IMLYGIC® and BiTE® platform have the potential to address significant unmet needs beyond initial indications
- PD-1/PD-L1 inhibition is becoming a key component of therapy for many tumors; however, many nonresponders will remain
  - Tumors such as breast, colon and prostate are largely “non-immune responsive”
- BLINCYTO® is our first BiTE® and the only currently approved bispecific molecule
  - Under priority review for treatment of B-cell precursor ALL patients with MRD, which may allow eradication of residual disease
- We are rapidly advancing 12 clinical BiTE® programs, including extended half-life molecules compatible with weekly dosing
  - BiTE® molecules are also attractive for combination approaches with checkpoint inhibitors
- IMLYGIC® clinical data in combination with Yervoy® and Keytruda® in melanoma support pursuit of other solid tumors
- CAR-T, ADC, bispecific Ab programs progressing

PD-1 = programmed cell death protein 1; PD-L1 = programmed death-ligand 1; MRD = minimal residual disease; CAR-T = chimeric antigen receptor enhanced T cells; ADC = antibody drug conjugate; Ab = antibody
OUR ONCOLOGY STRATEGY: DEBULK, INFLAME, ENHANCE

Pursuing differentiated cancer therapies with large effect sizes

Precision Oncology

Debulk
Targeted Therapy (Small Molecule, Antibody)

Immuno-Oncology

Inflame
BiTE®, CAR-T, Oncolytic Virus

Enhance
BiTE®, CAR-T, Oncolytic Virus + Checkpoint Inhibitor (Anti-PD-1/PD-L1s)
OUR ONCOLOGY STRATEGY: DEBULK, INFLAME, ENHANCE

Pursuing differentiated cancer therapies with large effect sizes
AMG 176 IS A FIRST-IN-CLASS SMALL MOLECULE MCL-1 INHIBITOR

Mcl-1 Is a Compelling Oncology Target

- Among top 10 genes most significantly amplified in cancer
- Like Bcl-2, Mcl-1 inhibits pro-cell death components of the intrinsic apoptosis pathway
- Key survival factor in multiple myeloma and other malignancies
- Expression can drive resistance to chemotherapy and targeted agents
- Previously “undruggable” target
- Attractive for combination therapy

Once-Weekly Dosing of AMG 176 in Multiple Myeloma Xenografts

AMG 176 currently in Phase 1 for hematologic malignancies

Bcl-2 = B-cell lymphoma 2; Mcl-1 = myeloid cell leukemia 1; Hughes, et.al., AACR Annual Meeting 2017; April 1-5, 2017; Washington, D.C.

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OUR ONCOLOGY STRATEGY: DEBULK, INFLAME, ENHANCE

Precision Oncology

Debulk

Targeted Therapy
(Small Molecule, Antibody)

Immuno-Oncology

Inflame

BiTE®, CAR-T, Oncolytic Virus

Enhance

BiTE®, CAR-T, Oncolytic Virus
+ Checkpoint Inhibitor
(Anti-PD-1/PD-L1s)

Pursuing differentiated cancer therapies with large effect sizes
BITE® MECHANISM OF ACTION: ENGAGEMENT OF ENDOGENOUS T CELLS TO TARGET TUMOR CELLS

BiTE® MECHANISM OF ACTION: ENGAGEMENT OF ENDOGENOUS T CELLS TO TARGET TUMOR CELLS

Anti-Target Antibody

BiTE®

Anti-CD3 Antibody

Tumor Cell

Redirected Lysis

T-Cell Activation

Serial Lysis of Tumor Cells

Apoptosis

Proliferation of T Cells


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WE HAVE CONVICTION IN THE BITE® PLATFORM

• BiTE® therapy harnesses the patient’s immune system, directly engaging T cells to specifically target cancer cells
  – Clinically validated in hematologic malignancies (relapsed or refractory B-cell precursor ALL)
  – Additional hematologic and solid tumor clinical studies ongoing

• Provides an off-the-shelf therapy
  – Avoids the need for *ex vivo* expansion or manipulation
  – Efficacy and safety of half-life extension (HLE) technology being evaluated in the clinic

• May offer highest clinical value in rational combinations/sequences
  – BiTE® activity may be improved by anti-PD-1/PD-L1 Abs in some settings
  – Clinical programs designed to incorporate combinations and sequencing early

• We are in a competitive position for new indications
  – Advancing a suite of molecules against high-value targets in important indications
WE HAVE ESTABLISHED A COMPREHENSIVE AND INDUSTRIALIZED BITE® PLATFORM

High-Resolution Target Discovery

Conversion to BiTE®

Efficacy and Safety Evaluation

Human Ab Generation in XenoMouse®

Improved Half-Life/ Biodistribution

Combination With Additional Immunotherapeutics

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**BITE® FORMATS IN DEVELOPMENT**

<table>
<thead>
<tr>
<th>First-Generation BiTE®</th>
<th>Half-Life Extended BiTE®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecule incorporates CD3 and Target Antigen Binding Regions</td>
<td>Molecule incorporates CD3 and Target Antigen Binding Regions; addition of HLE domain prolongs <em>in vivo</em> half-life</td>
</tr>
<tr>
<td>Actual or Modeled <em>in vivo</em> Half-Life: 1–4 hours</td>
<td>Modeled <em>in vivo</em> Half-Life: Approximately 7 days</td>
</tr>
</tbody>
</table>

- **Dosing:** Continuous infusion
- **Dosing:** Weekly infusion

*CD = cluster of differentiation; VH = variable domain, heavy chain; VL = variable domain, light chain; Fc = fragment crystallizable*

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AMGEN’S BITE® PLATFORM STRATEGY

• Expand BLINCYTO® into DLBCL
• Expand aggressively into acute myeloid leukemia and multiple myeloma (multiple targets)
• Determine HLE BiTE® solid tumor activity
• Combine with PD-1/PD-L1 inhibitors early and often
• Compare/contrast BiTE® and CAR-T approaches on selected high-priority tumor targets
  – Amgen is uniquely positioned

DLBCL = diffuse large B-cell lymphoma
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TWELVE FIRST- AND SECOND-GENERATION BiTE® MOLECULES ARE CURRENTLY IN THE CLINIC OR IND-ENABLING TOXICOLOGY

**Pre-IND**

First-Generation BiTE® Format

- Prostate
- Leukemia
- Lymphoma
- Melanoma
- Multiple Indications

**Phase 1**

- BLINCYTO® CD19 Lymphoma
- AMG 330 CD33 Leukemia
- AMG 420 BCMA Multiple Myeloma
- AMG 596 EGFRviii Brain
- AMG 673 CD33 Leukemia
- AMG 701 BCMA Multiple Myeloma
- AMG 757* Multiple Indications

**Hematologic Malignancies**

**Solid Tumors**

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**First-Generation BiTE® Format**

- AMG 701 BCMA
- AMG 596 EGFRviii

**Half-Life Extended BiTE® Format**

- AMG 673 CD33

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*Not yet enrolling patients
EGFRviii = epidermal growth factor receptor variant iii
BCMA = B-cell maturation antigen; IND = investigational new drug
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POSSIBILITY FOR ONCE-WEEKLY DOSING WITH AN ANTI-CD33 HALF-LIFE EXTENDED BiTE®

- Multiple HLE-BiTE® molecules were generated and evaluated *in vitro* and *in vivo*
  - Retain comparable *in vitro* and *in vivo* activity to first-generation BiTE® molecules
  - Compatible with once-weekly dosing, eliminating the need for continuous IV administration

Arvedson T, et al. AACR Annual Meeting 2017; April 1-5, 2017; Washington, D.C.; IV = intravenous

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TWO POTENT BCMA-TARGETING BITE® MOLECULES FOR MULTIPLE MYELOMA ARE IN PHASE 1 TESTING

AMG 701 provides a survival benefit at all doses in a mouse xenograft model

AMG 701 induces a dose-dependent decrease in BCMA+ cells in cynomolgus bone marrow

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**Group 1**
5, 5 µg/kg

**Group 2**
5, 25 µg/kg

**Group 3**
5, 75 µg/kg

Dosing: Day 1: 5 µg/kg (all groups). Days 2, 5, 8: 5 µg/kg (Gr 1), 25 µg/kg (Gr 2) or 75 µg/kg (Gr 3)

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BLINCYTO® MAY PROVIDE A HIGHLY ACTIVE AND TOLERABLE IMMUNOTHERAPY FOR DLBCL

- Proven activity in DLBCL
  - Single-agent efficacy in initial BLINCYTO® trials in advanced patients
    - 43% ORR; 11.6-month duration of response*
  - Differentiated from CAR-Ts
    - Testing clinical value in sequence/combinations earlier in treatment paradigm
- Safety profile should be acceptable in multiple clinical settings
  - AE profile is relatively consistent across studies
  - Should be combinable with PD-1/PD-L1 Abs
- Off-the-shelf therapy
  - Product does not require harvesting, manufacturing and induction
  - HLE-BiTE® in development for DLBCL

OUR ONCOLOGY STRATEGY IS FOCUSED ON DEBULKING, INFLAMING AND ENHANCING IMMUNITY TO TUMORS

**Precision Oncology**
- **Debulk**
  - Targeted Therapy (Small Molecule, Antibody)

**Immuno-Oncology**
- **Inflame**
  - BiTE®, CAR-T, Oncolytic Virus
- **Enhance**
  - BiTE®, CAR-T, Oncolytic Virus
  - Checkpoint Inhibitor (Anti-PD-1/PD-L1s)

Goal is to develop novel cancer therapies with large effect size
IMLYGIC®:
FIRST AND ONLY APPROVED ONCOLYTIC VIRAL THERAPY

IMLYGIC® INJECTION

LOCAL CONTROL
IMLYGIC® is designed to replicate in cancer cells, leading to oncolysis.

IMMUNE ACTIVATION
Oncolyis releases TDA, virally derived GM-CSF, and replicates IMLYGIC®, which may promote an antitumor immune response.

TDA = Tumor-derived antigens.
GM-CSF = Granulocyte-macrophage colony-stimulating factor.

ANTIGEN PRESENTATION

CANCER INFILTRATION AND DESTRUCTION

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IMLYGIC® + ANTI-PD-1 PHASE 1B EFFICACY IS ASSOCIATED WITH INFLAMED TUMORS AND INCREASED TUMOR T CELLS

Safety was consistent with the known toxicities of each agent individually

<table>
<thead>
<tr>
<th>IMLYGIC® + Keytruda® (N = 21)</th>
<th>Confirmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients With a Response</td>
<td>13</td>
</tr>
<tr>
<td>Response Rate, % (95% CI)</td>
<td>62 (38–82)</td>
</tr>
<tr>
<td>Best Overall Response, n (%)</td>
<td></td>
</tr>
<tr>
<td>Complete Response</td>
<td>7 (33)</td>
</tr>
<tr>
<td>Partial Response</td>
<td>6 (29)</td>
</tr>
<tr>
<td>Stable Disease</td>
<td>3 (14)</td>
</tr>
<tr>
<td>Progressive Disease</td>
<td>5 (24)</td>
</tr>
<tr>
<td>Disease Control Rate, n (%)</td>
<td>16 (76)</td>
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SUMMARY

- Pioneering clinical programs form a differentiated position in immuno-oncology
- First-in-class Mcl-1 inhibitor AMG 176 in Phase 1 for hematologic malignancies
- BLINCYTO® is our first BiTE® and the only currently approved bispecific antibody
  - BiTE® molecules are off-the-shelf therapies
  - HLE-BiTE® molecules are compatible with weekly dosing
  - Advancing 12 molecules with early positive indicators in solid tumors
- IMLYGIC® is the first and only approved oncolytic viral therapy
  - Significant opportunities in combination with checkpoint inhibitors
    - Enrolling Phase 3 melanoma study with Keytruda®
    - Pursuing “inflame” and “enhance” approach in various tumor types
- Multiple modalities being pursued—not an “either-or” scenario
  - BiTE® molecules, CAR-Ts, small molecules, bispecifics, ADCs
- Data generated in the next 24 months will provide key insights
Q&A
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