UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **March 7, 2016**

Idera Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in Charter)

Delaware	**001-31918**	**04-3072298**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

167 Sidney Street
Cambridge, Massachusetts 02139
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(617) 679-5500**

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

On March 7, 2016, we uploaded a presentation to our website, www.iderapharma.com, discussing the state of the Company. We may rely on all or part of this presentation any time we are discussing the current state of the Company in communications with investors or at conferences. A copy of the presentation is attached to this Current Report on Form 8-K as Exhibit 99.1 (the "Slides").

By filing this Current Report on Form 8-K and furnishing the information contained herein, the Company makes no admission as to the materiality of any information in this report that is required to be disclosed solely by reason of Regulation FD.

The information contained in the Slides is summary information that is intended to be considered in the context of the Company's Securities and Exchange Commission ("SEC") filings and other public announcements that the Company may make, by press release or otherwise, from time to time. The Company undertakes no duty or obligation to publicly update or revise the information contained in this report, although it may do so from time to time as its management believes is warranted. Any such updating may be made through the filing of other reports or documents with the SEC, through press releases or through other public disclosure.

In accordance with General Instruction B.2 of this Current Report on Form 8-K, the information presented in Item 7.01 of this Current Report on Form 8-K and Exhibit 99.1 shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, unless the Company specifically states that the information is to be considered "filed" under the Exchange Act or incorporates it by reference into a filing under the Securities Act of 1933, as amended, or the Exchange Act.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

See Exhibit Index attached hereto.

SIGNATURE

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

Idera Pharmaceuticals, Inc.

Date: March 7, 2016

By: /s/ Mark J. Casey
Mark J. Casey
Senior Vice President,
General Counsel and Secretary

EXHIBIT INDEX

Exhibit No.	Description
99.1	Investor presentation uploaded to Idera Pharmaceuticals, Inc. website on March 7, 2016

Exhibit 99.1

Forward Looking Statements

- This presentation contains forward-looking statements that involve substantial risks and uncertainties. Any statements in or made orally during this presentation about future expectations, plans and prospects for the company, including statements regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “target,” “potential,” “would,” “could,” “should,” “continue,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. Important factors that may cause or contribute to such differences include the factors set forth under the captions “Risk Factors” in our most recent quarterly report on Form 10-Q that we filed with the U.S. Securities and Exchange Commission for the period ended September 30, 2015. The forward-looking statements contained in this presentation reflect our current views with respect to future events, and we assume no obligation to update any forward-looking statements except as required by applicable law.

Targeting Medicines for Patients

Committed to advancing patient care

Focused on serious unmet needs in Cancers & Rare Diseases

Leading scientific discovery in TLR Immune Modulation and Antisense

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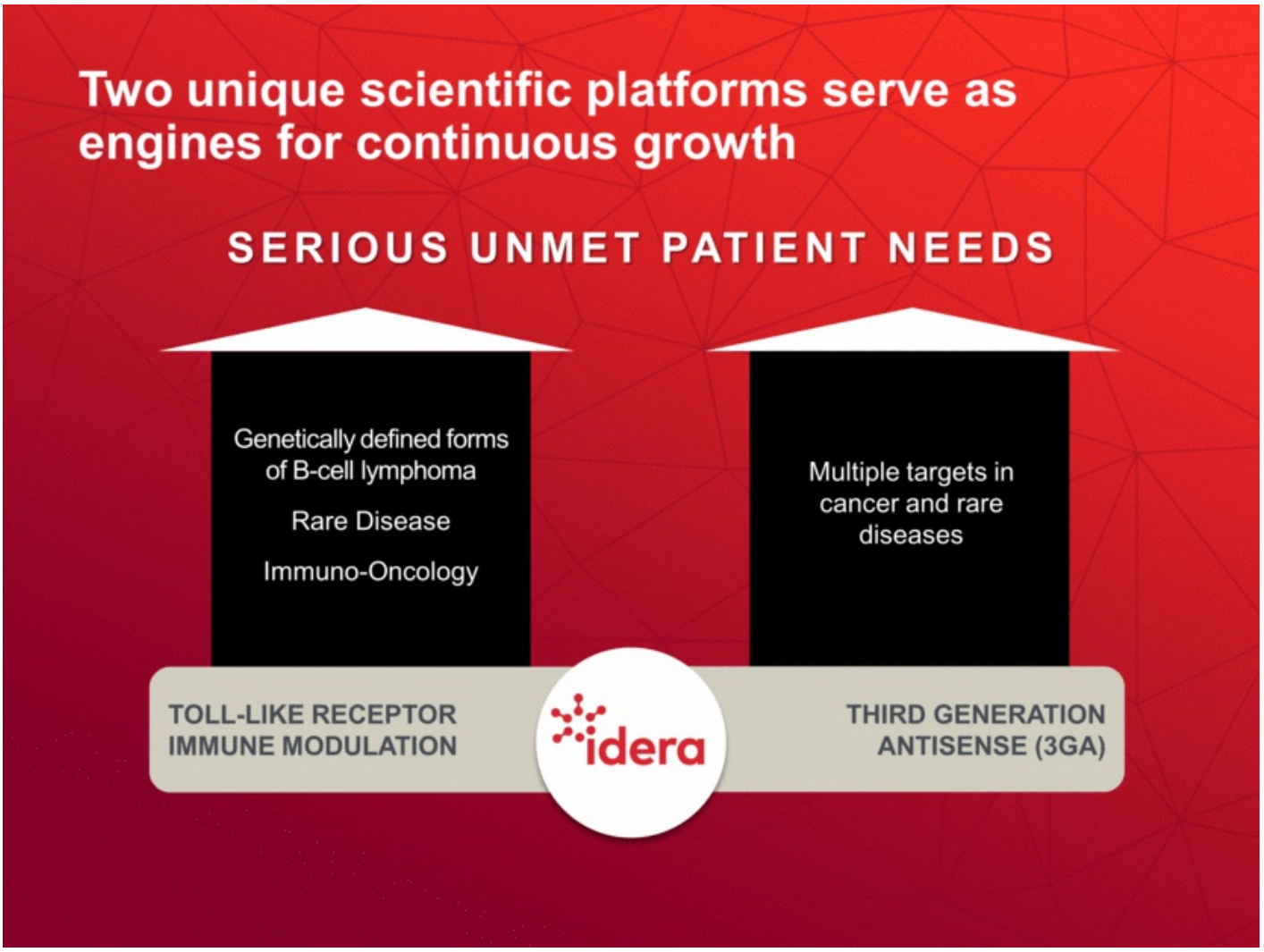
Two unique scientific platforms serve as engines for continuous growth



Delivered on the Promises in 2015

Facilitated the Transition from Scientific Organization to Clinical Development Company with Commercial Goals

- Presented first positive IMO-8400 safety and efficacy data in B-cell lymphoma target
- Initiated clinical studies in Melanoma and Dermatomyositis
- Named first gene targets for 3rd Generation Antisense development platform (3GA)
- Announced first collaboration for 3GA platform
- Instituted new corporate culture
- Re-built leadership team and strengthened employee base

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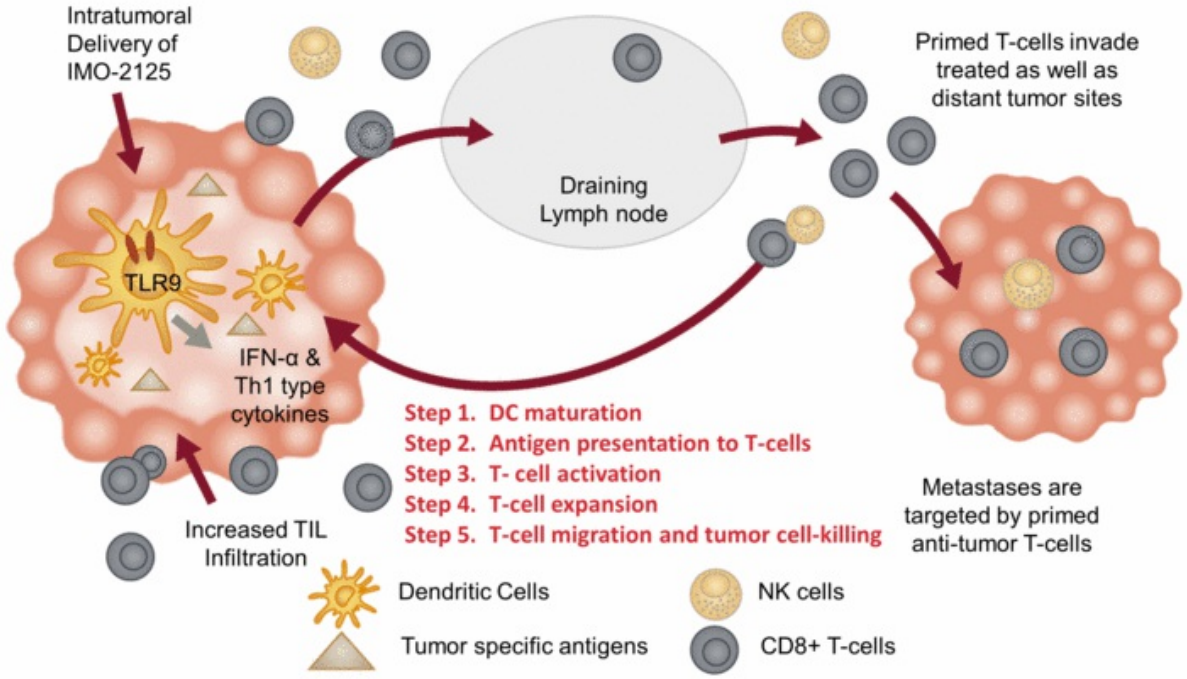
Immuno-Oncology Clinical Development Program

TLR9 Agonist to Induce the Immune System

Therapeutic Rationale

- IMO-2125 triggers interferon-alpha expression resulting in immune activation in the tumor microenvironment
- Emerging class of checkpoint inhibitors (CPIs)
  - Designed to block pathways that inhibit anti-tumor immune responses
  - PD-1 and CTLA-4 inhibitors are FDA approved for the treatment of certain cancers
  - Numerous other CPI's in clinical development (IDO1, TIM3, LAG3, OX40, STING)
- Despite this advancement, many barriers remain in tumor microenvironment limiting efficacy
- Intratumoral administration of IMO-2125 in preclinical models has stimulated dendritic cell maturation and T-cell activation in the tumor microenvironment, leading to increased local and systemic antitumor immune responses and tumor regression both alone and as well as in CPI combinations

Intratumoral IMO-2125 Mechanism of Action



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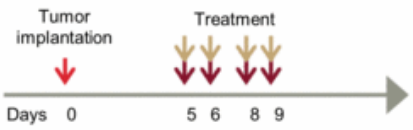
Intratumoral IMO-2125 and CTLA-4 induce systemic anti-tumor response in multiple preclinical studies

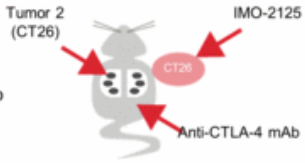


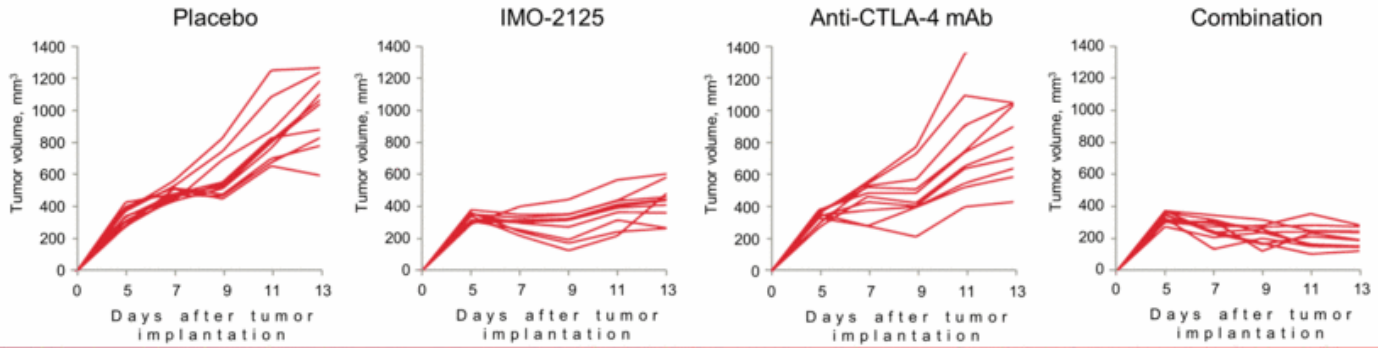
Tumor implantations:
1. Solid tumor (2 x 10^7 CT26, s.c., right flank)
2. Lung metastases (3 x 10^6 CT26, i.v.)

IMO-2125:
2.5 mg/kg i.t. injection (Tumor 1)

Anti-CTLA-4 mAb:
10 mg/kg i.p. injection

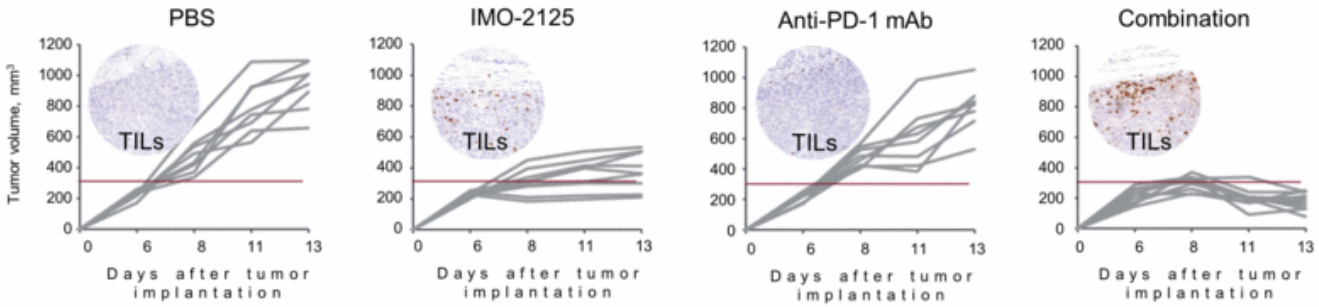
Groups:
1. Placebo
2. IMO-2125
3. Anti-CTLA-4 mAb
4. IMO-2125 + anti-CTLA-4 mAb



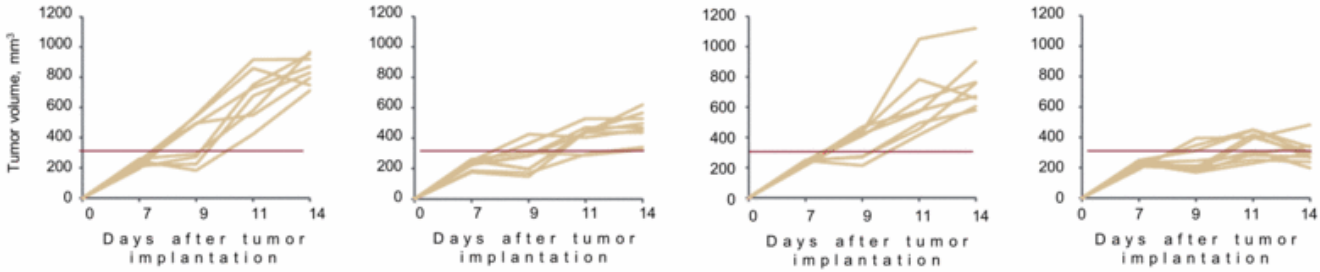


IMO-2125 and anti-PD-1 mAb preclinical combo demonstrated improved tumor growth inhibition in both treated and distant tumors vs. monotherapy

Treated tumors



Distant tumors



IMO-2125/ipilimumab in melanoma underway

- Phase I Dose Escalation:
  - Recruit patients to cohorts (3+3 design with Bayesian component) of increasing IMO-2125 dose levels in combination with ipilimumab at its approved dose/schedule
  - IMO-2125 intratumoral injection to be administered weekly X 3 in first 4 week cycle, then once every 3 weeks in subsequent 3 week cycles for 9 weeks
  - Approximately 24 melanoma patients who have relapsed after prior therapy
- Phase 2:
  - Approximately 30 pts with metastatic melanoma
  - Preliminary assessment of efficacy in addition to biomarker analyses

Progress Underway

- Execution of open-label Phase 1/2 clinical trial with MDACC
- Will continue to analyze both translational and clinical safety and efficacy data from this ongoing study
  - Tumor biopsies will be evaluated for immune activation by flow cytometry and immuno-histochemistry in both treated and distant tumors
- Formulate and execute broader immuno-oncology development program
  - Identifying next studies to execute
    - Additional treatable tumor types
    - Other CPI combinations based on extensive pre-clinical modeling both in house and through academic partnerships

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Toll Like Receptor (TLR) Antagonism Clinical Programs

Genetically-defined B-cell Lymphomas

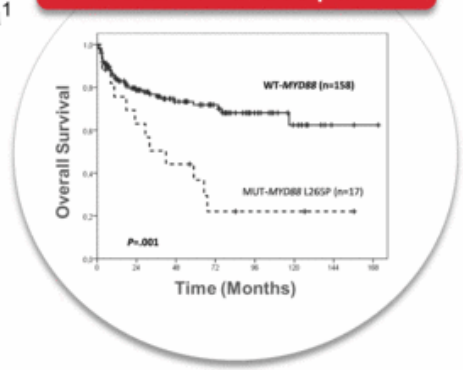
Waldenström's Macroglobulinemia (WM)

- Rare and slow-growing form B-cell lymphoma[1]
- ~1,000-1,500 new cases diagnosed annually in US[1]
- 90% carry MYD88 L265P mutation[2]
- Serious complications include anemia, retinopathy and peripheral neuropathy[1]

Diffuse Large B-Cell Lymphoma (DLBCL)

- Fast growing and potentially lethal form of B-cell lymphoma[1]
- ~20,000 new cases diagnosed annually in US[3]
- ~10% carry MYD88 L265P mutation[4,5]
- Data show poor prognosis in MYD88 L265P+ population[6]

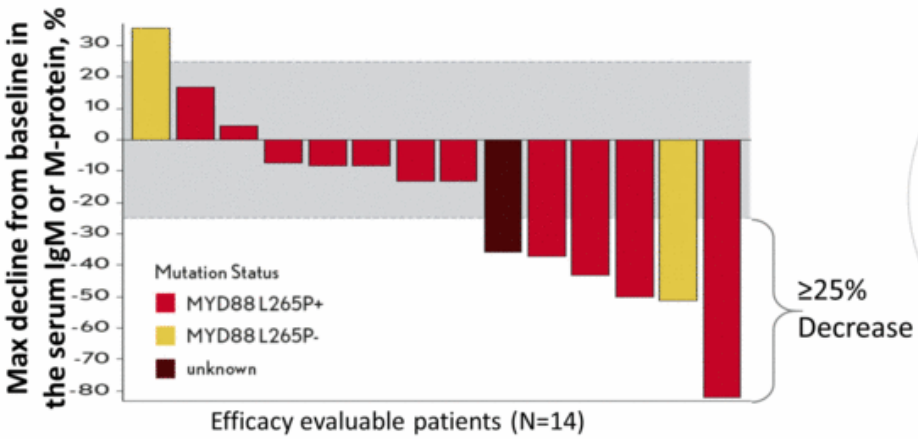
Survival is impaired in MYD88 L265P+ DLBCL patients[6]

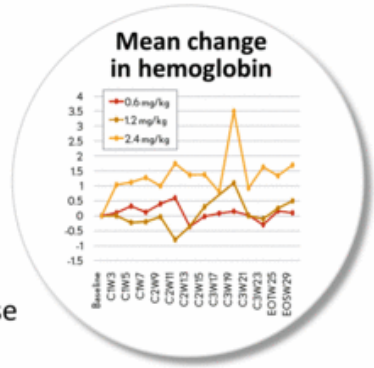


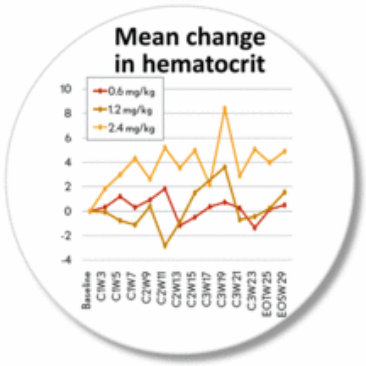
MYD88 L265P mutation also present in chronic lymphocytic lymphoma (5-10%)[7], splenic marginal zone lymphoma (13%)[8], primary CNS lymphoma (36%)[9], and other cancers

[1] American Cancer Society; [2] Treon SP, et al. N Engl J Med. 2012.; [3] Cultrera JL, et al. Cancer Control. 2012.; [4] Wang, et al. Blood Lymph Canc 2013. [5] Rosenwald A, et al. N Engl J Med. 2002. [6] Fernandez- Rodriguez C, et al. Leukemia. 2014. [7] Puente, et al. Nature. 2011. [8] Yan, et al. Haematologica. 2011. [9] Montesinos-Rongen, et al. Acta Neuropathol. 2011.

Demonstration of Clinical Activity with IMO-8400







- In the highest dose cohort studied to date (1.2 mg/kg twice a week):
  - Among 6 evaluable patients, 3 had responses and 2 had stable disease
  - Median time to first response was ~10.5 weeks
  - Improvements in symptoms, hemoglobin and bone marrow were seen
  - One of these responders was refractory to ibrutinib

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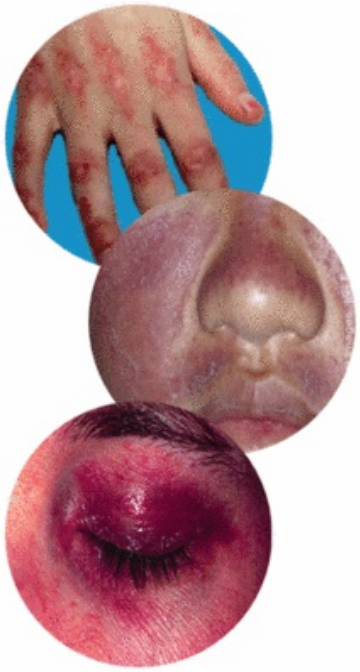
We have not yet reached IMO-8400's MTD

- IMO-8400 was generally well tolerated at all dose levels tested
- Most reported adverse events (AEs) were mild or moderate (grade 1 or 2)
- The most common AEs observed were fatigue, injection site erythema, headache, injection site pain, nausea and pain in extremity
- Grade 3 AEs reported as possibly or probably related to study drug included neutropenia, anemia and arthritis
  - 1 of 8 patients treated with 2.4 mg/kg in the safety population had a dose-limiting toxicity (DLT) deemed possibly related to study drug. This patient experienced a grade 3 probable flare of pre-existing arthritis

Progress Underway

- Continued to enroll additional patients into the previous highest dosing cohort to capitalize on investigator enthusiasm and momentum, while we:
- Amended both DLBCL and WM study protocols to evaluate higher and more convenient dosing (2.4 mg/kg once weekly and 3.6 mg/kg once weekly)
- Development strategy centered on demonstrating efficacy in DLBCL which represents the most significant patient population facing greatest unmet medical need
- Data analysis from open label studies will enable periodic updates at various medical congresses

Applying TLR Platform to Rare Disease



Dermatomyositis

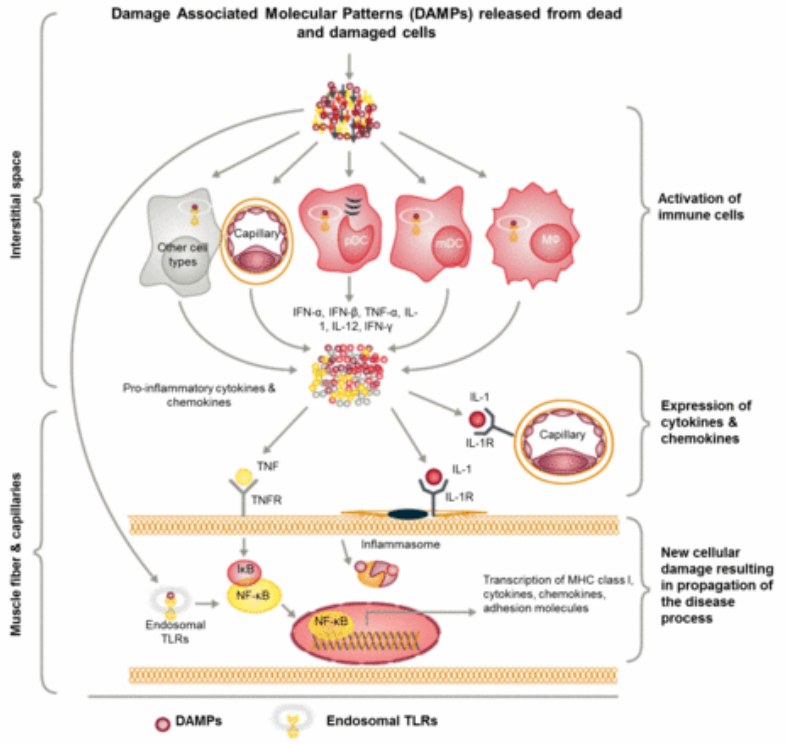
Therapeutic Rationale

- Cell damage may be caused by stress, injury or infection
- Onset typically occurs between ages 40-60 years
- Symptoms can be severely disabling, and include:
  - Muscle weakness, skin rash and/or calcinosis, joint pain, and difficulty swallowing
- Corticosteroids and immunosuppressive drugs have limited efficacy and serious side effects
- ~25k patients in U.S.

Opportunity

- TLR antagonism may disrupt the autoimmune cycle of tissue damage to improve disease symptoms

TLRs Play Role in Pathogenesis of DM



- Damaged skeletal muscle and skin tissue release Damage Associated Molecular Patterns (DAMPs)
- DAMPs bind to and initiate immune signaling through TLRs 7, 8 and 9 in skeletal muscle fibers and immune cells
- TLR signaling induces pro-inflammatory cytokines, driving downstream effects including damage to capillaries and hypoxia in affected tissue, inhibition of new muscle fiber formation, and cell death

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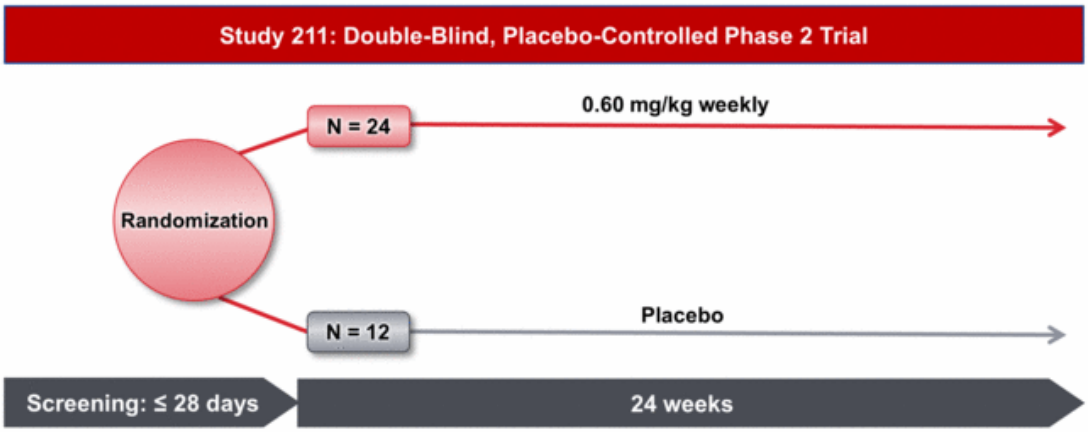
Rayavarapu, et al. Skeletal Muscle, 2013.

DM Phase 2 Study Underway



Study Design

- 24-week randomized, double-blinded placebo-controlled assessment

Major Eligibility Criteria

- DM diagnosis, aged 18-75 years, active skin and muscle disease, stable regimen of con-meds

Primary endpoint

- CDASI activity score

Exploratory endpoints

- MMT-8, 10-meter run walk, Timed Up and Go test, Four Stair Climb, 5D itch scale, SF-36 health survey

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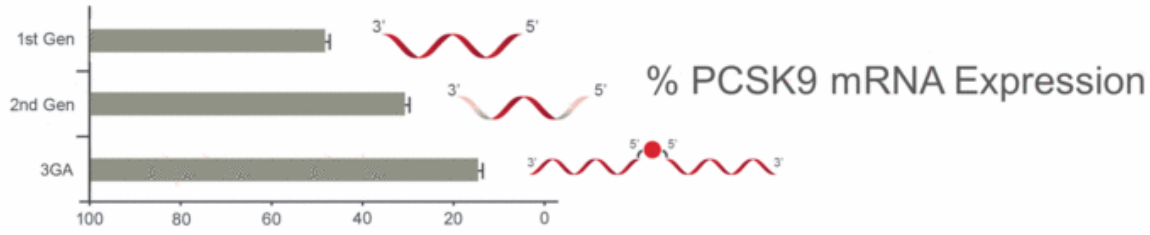
Third Generation Antisense (3GA) Platform

Why is third generation antisense (3GA) needed?

3GA Platform Built upon the lessons learned from Idera's Pioneering work with 1st and 2nd Generation Antisense

- To realize the full potential of antisense technology for the treatment of diverse diseases
- To overcome the limitations of the first and second generation antisense technology
  - Immunotoxicity
  - Therapeutic Index



Assays were conducted with antisense constructs in Hepa 1-6 cells; RNA levels were quantified by qPCR

Our 3GA disease prioritization process

Key Considerations

- Gene target associated with the disease
- Over expression of the gene correlates with disease
- Gene target/pathway proof-of-concept established
- Gene target/pathway not “druggable” with small molecules or antibodies
- Rare disease and oncology indications with commercial viability
- Possibility of local delivery to the site of gene expression
  - Bladder, Ocular, Intratumoral, Lungs, GI/Colon

3GA platform is ready to realize the full potential of antisense technology

- 3GA is designed to address the shortcomings/limitations of 1st and 2nd generation ASO
- Distinct mechanism with potent gene knockdown
- Rapid process from target selection to potential drug candidate
- We expect 1 to 2 targets per year to push into IND enabling studies for certain cancers and rare diseases
- We believe we can further exploit the 3GA technology through partnerships with companies whose interests lie outside of oncology and rare diseases
- First license agreement entered into in 2015 with GSK for renal targets

Experienced Leadership

SUDHIR AGRAWAL, D.Phil. ~ *President, Research*

LOUIS ARCUDI ~ *Chief Financial Officer*

MARK CASEY ~ *General Counsel*

JILL CONWELL ~ *Human Resources*

ROBERT DOODY ~ *IR & Comms*

CLAYTON FLETCHER ~ *Strategy & BD*

JOANNA HOROBIN, MB, ChB ~ *Chief Medical Officer*

VIN MILANO ~ *Chief Executive Officer*

Growing Development Pipeline Advancing

DEVELOPMENT PROGRAM	PRECLINICAL	PHASE 1	PHASE 2	PIVOTAL
TLR Antagonism – IMO-8400				
Waldenström's macroglobulemia				
Diffuse large B-cell lymphoma (MYD88 L265P+)				
Dermatomyositis				
TLR Agonism – IMO-2125				
Refractory/Relapsed Melanoma w/ CTLA4				
Additional Tumor Types / CPI Combos	*Planning underway*			

RESEARCH PROGRAM	PRECLINICAL	PHASE 1	PHASE 2	PIVOTAL
THIRD GENERATION ANTISENSE				
NLRP				
DUX4				

Current Cash Position to fund operations into 3Q 2017

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Thank You

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