Third Quarter 2018 Financial Results

November 1, 2018

Agios Conference Call Participants

Prepared Remarks

Introduction

- RENEE LECK, Associate Director, Investor Relations

Business Highlights & 2018 Key Milestones

- DAVID SCHENKEIN, M.D., Chief Executive Officer

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- CHRIS BOWDEN, M.D., Chief Medical Officer

TIBSOVO® Launch Update

- STEVE HOERTER, Chief Commercial Officer

Third Quarter 2018 Financial Results

- ANDREW HIRSCH, Chief Financial Officer

Forward Looking Statements

This presentation and various remarks we make during this presentation contain forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements include those regarding Agios' plans, strategies and expectations for its and its collaborator's preclinical, clinical and commercial advancement of its drug development programs including IDHIFA® (enasidenib), TIBSOVO® (ivosidenib), AG-881, mitapivat, AG-270 and AG-636; the potential benefits of Agios' product candidates; its key milestones for 2018; its plans regarding future data presentations; its financial guidance regarding the period in which it will have capital available to fund its operations; and the potential benefit of its strategic plans and focus. The words "anticipate," "believe," "could," "estimate," "expect," "hope," "intend," "may," "milestone," "path," "plan," "possible," "potential," "predict," "prepare," "project," "strategy," "will," "would," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements are subject to numerous important factors, risks and uncertainties that may cause actual events or results to differ materially from Agios' current expectations and beliefs. For example, there can be no guarantee that any product candidate Agios or its collaborator, Celgene, is developing will successfully commence or complete necessary preclinical and clinical development phases, or that development of any of Agios' product candidates will successfully continue. There can be no guarantee that any positive developments in Agios' business will result in stock price appreciation. Management's expectations and, therefore, any forward-looking statements in this presentation and various remarks we make during this presentation could also be affected by risks and uncertainties relating to a number of other important factors, including: Agios' results of clinical trials and preclinical studies, including subsequent analysis of existing data and new data received from ongoing and future studies; the content and timing of decisions made by the U.S. FDA and other regulatory authorities, investigational review boards at clinical trial sites and publication review bodies; Agios' ability to obtain and maintain requisite regulatory approvals and to enroll patients in its planned clinical trials; unplanned cash requirements and expenditures; competitive factors; Agios' ability to obtain, maintain and enforce patent and other intellectual property protection for any product candidates it is developing; Agios' ability to maintain key collaborations, such as its agreements with Celgene and CStone Pharmaceuticals; and general economic and market conditions. These and other risks are described in greater detail under the caption "Risk Factors" included in Agios' public filings with the Securities and Exchange Commission. Any forward-looking statements contained in this presentation and various remarks we make during this presentation speak only as of the date hereof, and Agios expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Business Highlights & 2018 Key Milestones

David Schenkein, M.D., Chief Executive Officer

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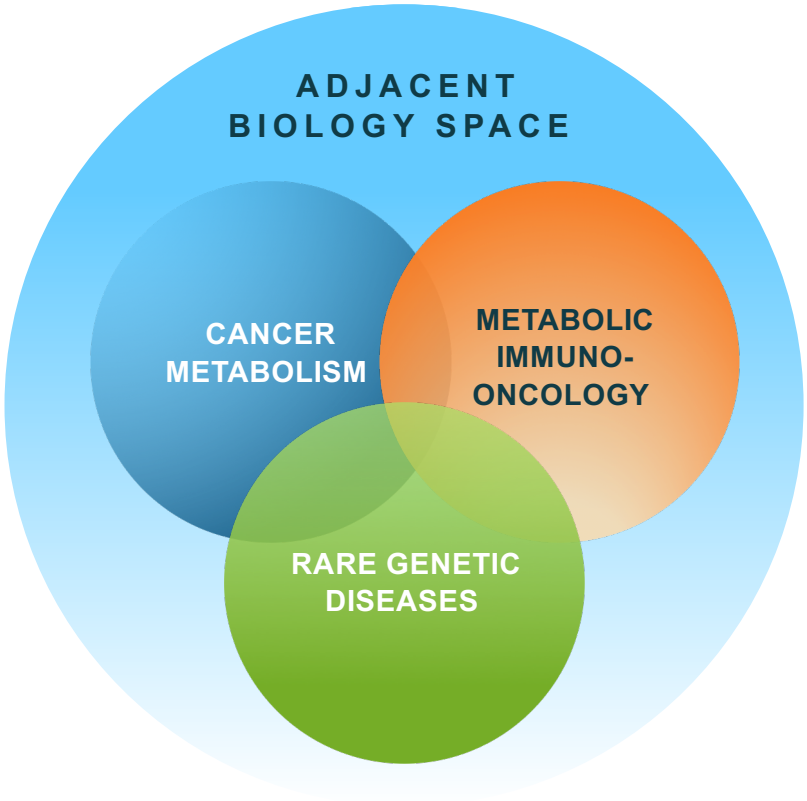
Driven By a Clear Vision and Values



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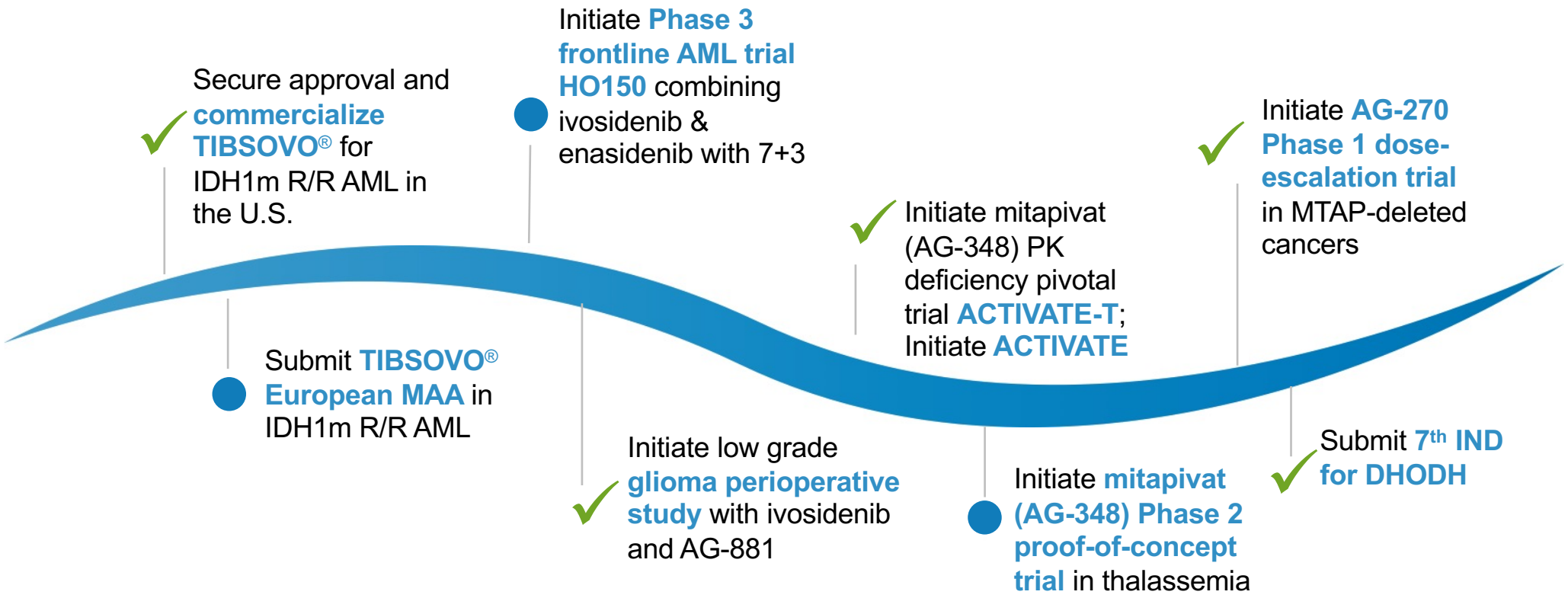
Agios is passionately committed to applying our scientific leadership in the field of cellular metabolism to transform the lives of patients with cancer and rare genetic diseases.

2018 Key Milestones



Our Pipeline

CLINICAL PROGRAMS	INDICATION	DRUG DISCOVERY	EARLY STAGE CLINICAL DEVELOPMENT	LATE STAGE CLINICAL DEVELOPMENT	APPROVED	PRIMARY COMMERCIAL RIGHTS
IDHIFA® ***enasidenib*** (IDH2m Inhibitor)	R/R AML				●	agios Celgene Agios U.S. Co-promotion and Royalty
	Frontline AML			●		
TIBSOVO® ***ivosidenib*** (IDH1m Inhibitor)	R/R AML				●	agios
	Frontline AML			●		
	Cholangio			●		
	Glioma		●			
AG-881 (pan-IDHm Inhibitor)	Glioma		●			agios
mitapivat (PK (R) Activator)	PK Deficiency			●		agios
AG-270 (MAT2A Inhibitor)	MTAP-deleted Tumors		●			agios Celgene
RESEARCH PROGRAMS						
AG-636 (DHODH)			●			agios
CM Research Programs		●				agios
RGD Research Programs		●				agios
Metabolic IO Research Programs		●				agios Celgene

Clinical Development Progress

Chris Bowden, M.D., Chief Medical Officer

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Today's Clinical News

1. Plan to submit an a supplemental new drug application for single agent TIBSOVO® (ivosidenib) in newly diagnosed AML patients not eligible for standard treatment by the end of January 2019

2. Full enrollment for Phase 3 AGILE trial (ivosidenib combination with azacitidine in newly diagnosed AML patients ineligible for intensive chemotherapy) now expected to complete in 2020 vs. previous guidance of 2021 based on FDA agreement on event free survival primary endpoint

3. Mitapivat pivotal program (ACTIVATE and ACTIVATE-T) expected to complete enrollment in 2019

Multiple Opportunities Across IDHm Hematologic and Solid Cancers Originating from Agios Research Platform

ACUTE MYELOID LEUKEMIA

IDH2m R/R
IDHIFA® (enasidenib) Approved

IDH1m R/R
TIBSOVO® (ivosidenib) Approved

IDH1m Frontline Non-IC
ivosidenib + Aza Phase 3 (AGILE) Ongoing

IDHm Frontline IC-Eligible
ivo/ena + 7+3 Phase 3 (HO150) Q4 2018 Start

IDHm Frontline Non-IC
ivo/ena + Aza Phase 1/2 Enrollment Complete

IDHm Frontline IC-Eligible
ivo/ena + 7+3 Phase 1b Enrollment Complete

CHOLANGIOCARCINOMA

IDH1m R/R
ivosidenib Phase 3 (ClarIDHY) Ongoing

IDH1m R/R
ivosidenib Phase 1 Enrollment Complete

LOW GRADE GLIOMA

IDH1m
ivosidenib & AG-881 Perioperative Study Ongoing

IDH1m
ivosidenib Phase 1 Enrollment Complete

IDH1m
AG-881 Phase 1 Enrollment Complete

OTHER INDICATIONS

MYELODYSPLASTIC SYNDROMES

IDHm R/R ivosidenib Phase 1 Enrollment Complete

CHONDROSARCOMAS

IDH1m R/R ivosidenib Phase 1 Enrollment Complete

Fourth Quarter Clinical Data Presentations

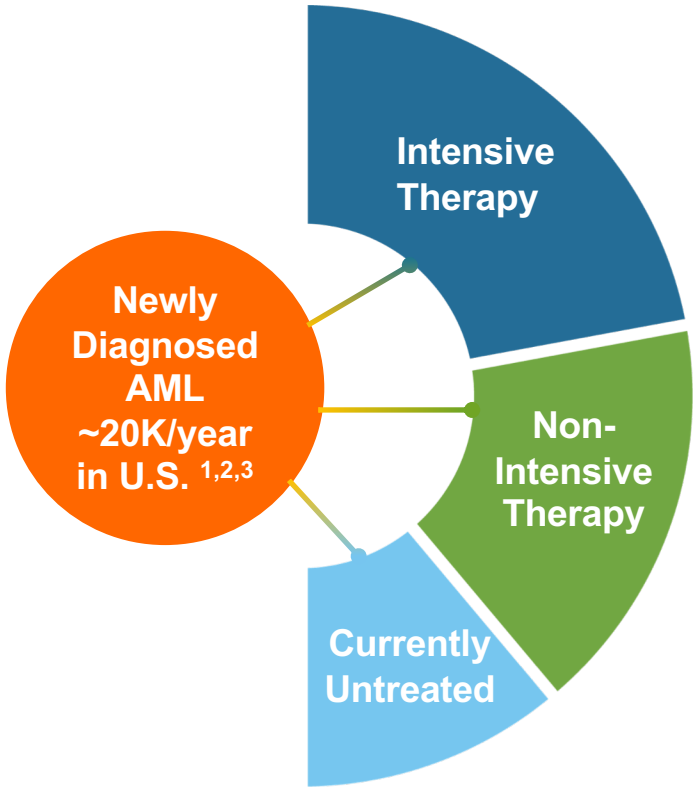
SNO oral presentation – updated data from Phase 1 trial of AG-881 in IDH1m solid tumors, including glioma

ASH oral presentation – updated data in untreated AML from the Phase 1 study of ivosidenib in IDH1m hematologic malignancies

ASH oral presentation – updated data in IDHm newly diagnosed AML from the Phase 1 combination trial of ivosidenib or enasidenib with standard-of-care intensive chemotherapy

ASH poster presentation - updated data in MDS from the Phase 1 study of ivosidenib in IDH1m hematologic malignancies

Broad Clinical Development Strategy in Frontline AML



- HOVON 150 Phase 3 planned
- Phase 1 combo study ongoing
- Broad IST strategy

- AGILE Phase 3 ongoing, EFS endpoint
- Phase 1 combo study ongoing
- Broad IST strategy

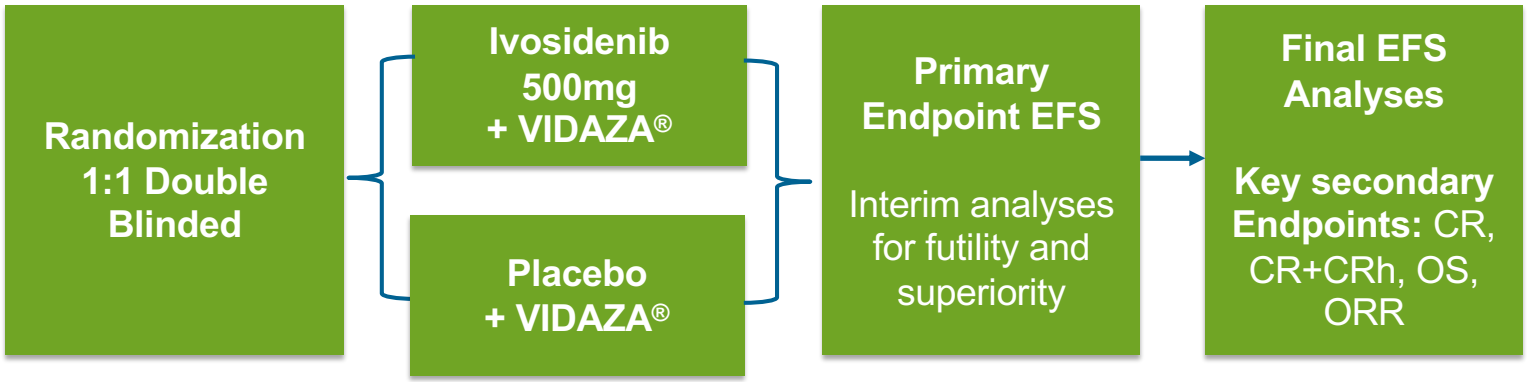
- sNDA submission expected by end of Jan. 2019

Sources:1) SEER. Cancer Stat Facts: AML 2015. 2) American Cancer Society. AML 2017. 3) Kumar C. Genetic Abnormalities and Challenges in the Treatment of Acute Myeloid Leukemia. *Genes Cancer*. 2011; 2:95–107 AML O/S: Klepin, et al, JCO, 32

Phase 3 Frontline AGILE Ongoing

AGIOS study for IDH1 mutation in acute myeloid LEukemia

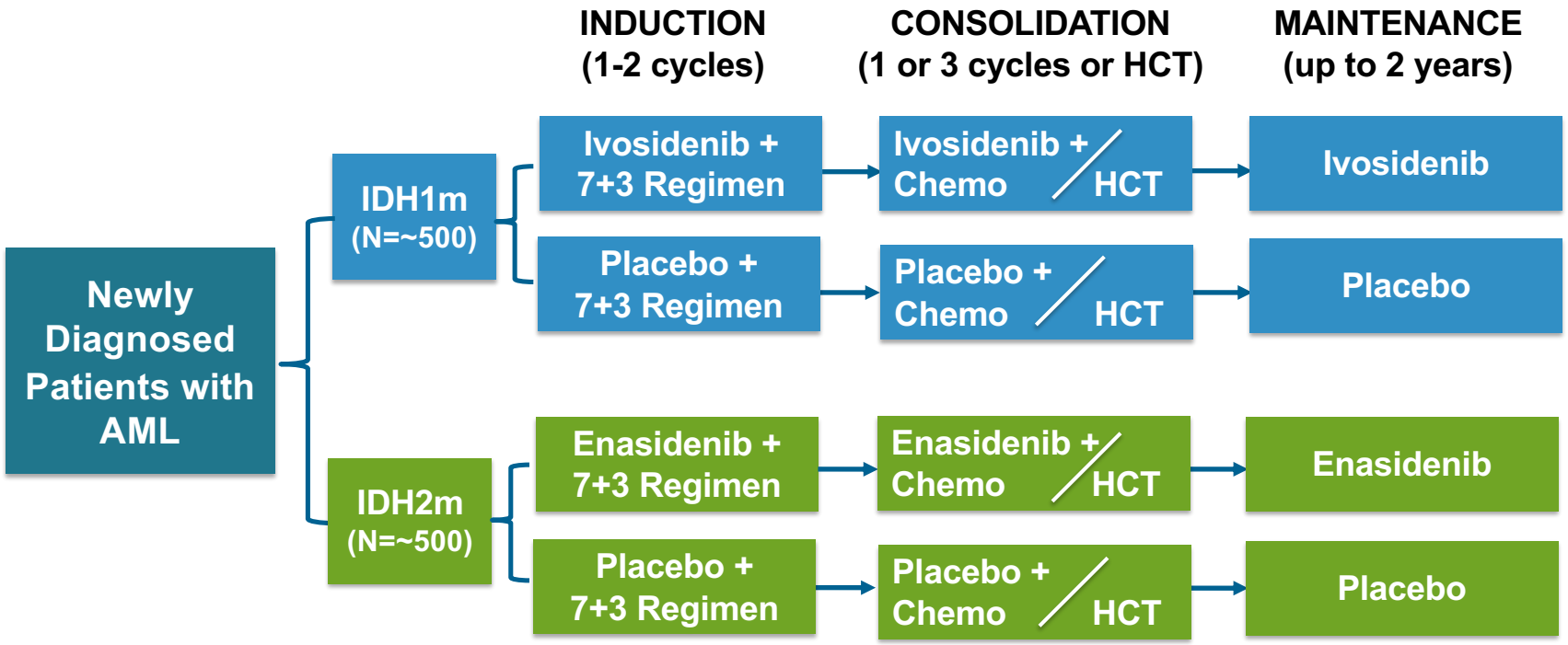
Global Phase 3 Frontline IC-Ineligible IDH1m AML



ClinicalTrials.gov Identifier:NCT03173248
IC = intensive chemotherapy
VIDAZA® is a registered trademark of Celgene Corporation

Primary endpoint changed to EFS; now expect to complete enrollment in 2020

HOVON 150 Phase 3 Intergroup Frontline AML Trial in Collaboration with Celgene Planned for Q4 2018



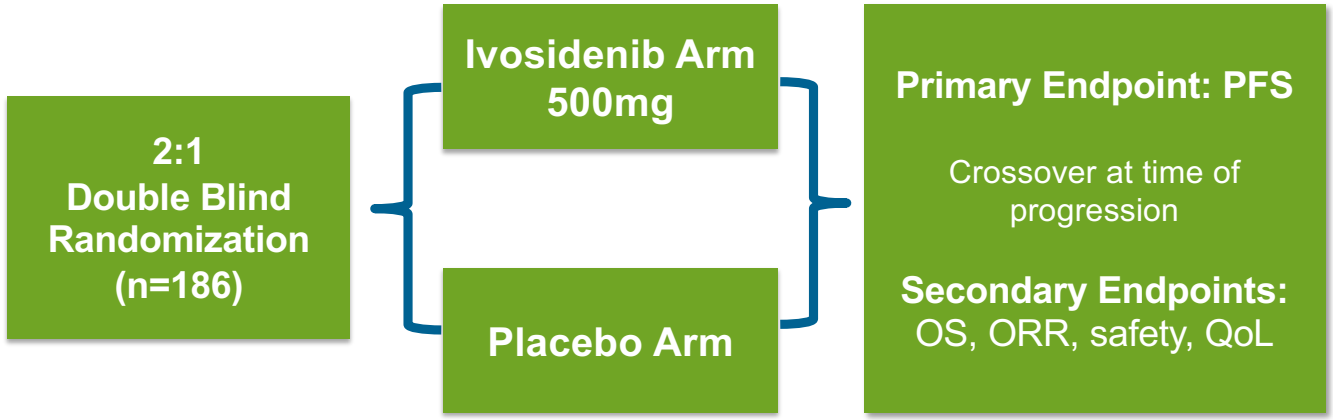
EFS = Event Free Survival
HCT = Hematopoietic Cell Transplantation

EFS primary endpoint; sponsored by HOVON and AML-SG

Registration-Enabling Phase 3 Cholangiocarcinoma Study Ongoing

ClarIDHy

Global Phase 3 Previously Treated Advanced IDH1m Cholangiocarcinoma (no more than 2 prior therapies)



The study has 96% power to detect a hazard ratio of 0.5 with a one-sided alpha of 0.025

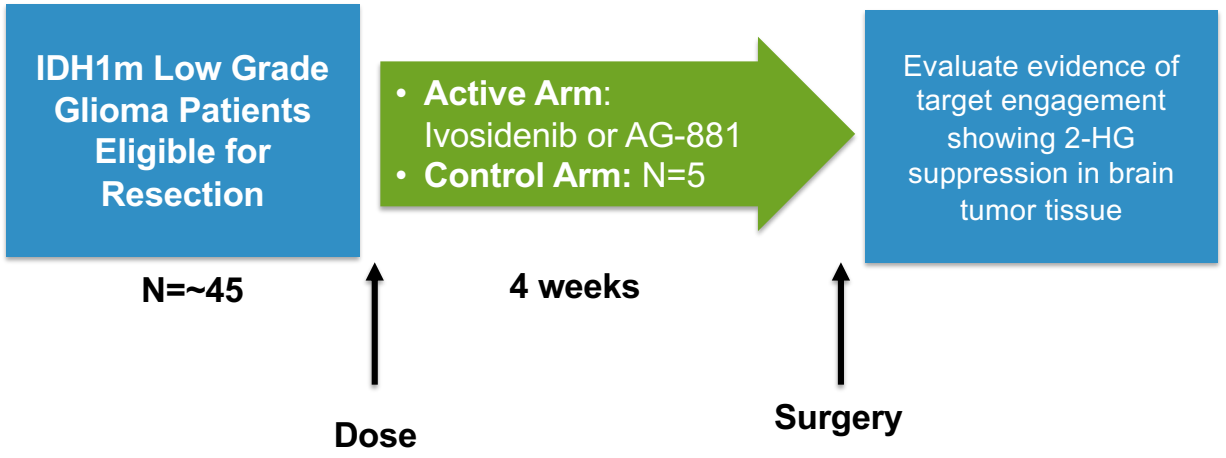
ClinicalTrials.gov Identifier: NCT02989857

Expect to complete enrollment in 1H 2019

Ongoing Phase 1 Perioperative Study with Ivosidenib and AG-881 Evaluating Evidence of Target Engagement

Study Objectives:

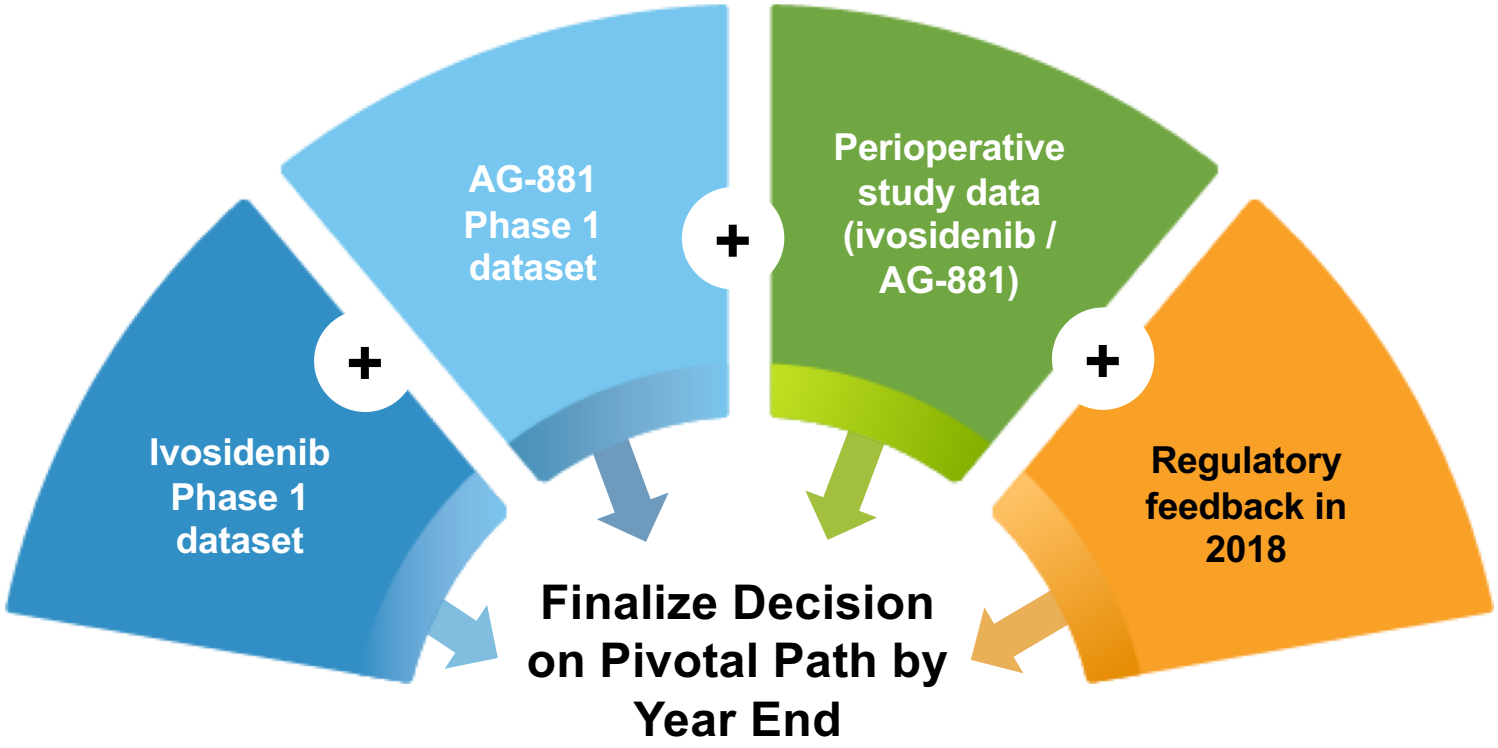
- Determine amount of drug penetration in the brain
- Confirm magnitude of IDHm target engagement as measured by 2HG levels in brain tumor tissue (pre-clincally 85% seen with ivosidenib & 98% with AG-881)
- Assess impact of IDHm inhibition on differentiation and epigenetic profiles in tumor tissue
- Assess the safety of both molecules



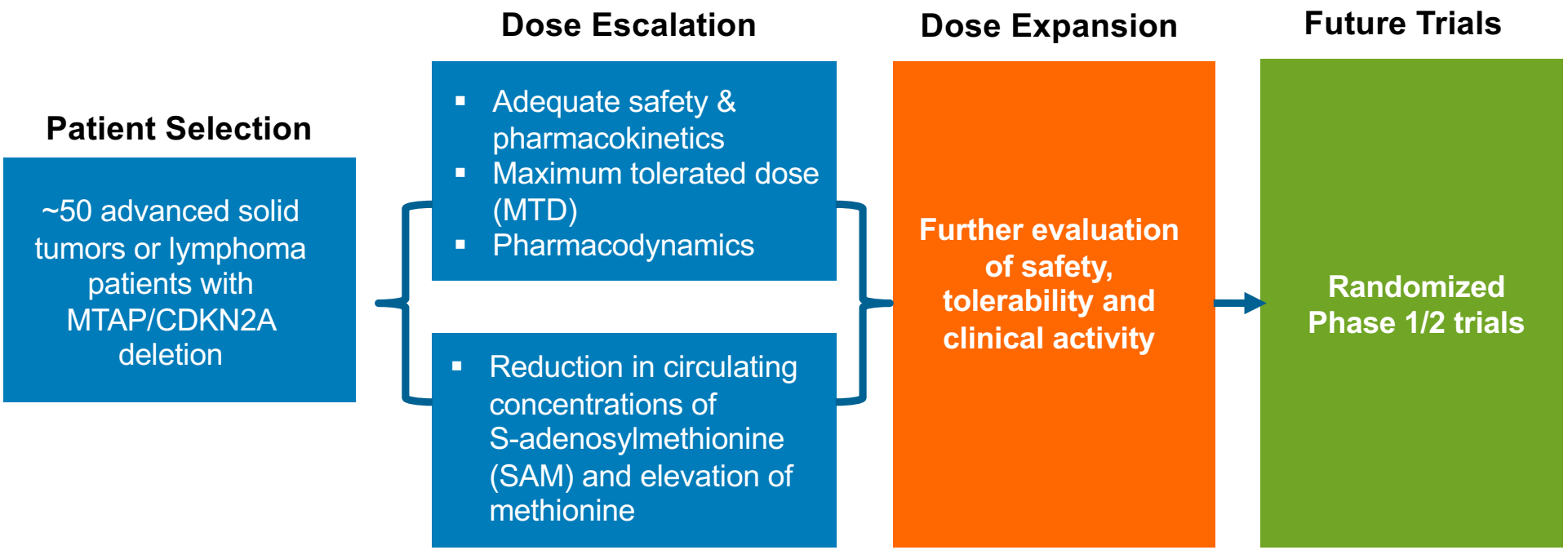
ClinicalTrials.gov Identifier: NCT03343197

Trial initiated in Q1; Patients Enrolling

Next Steps in Glioma



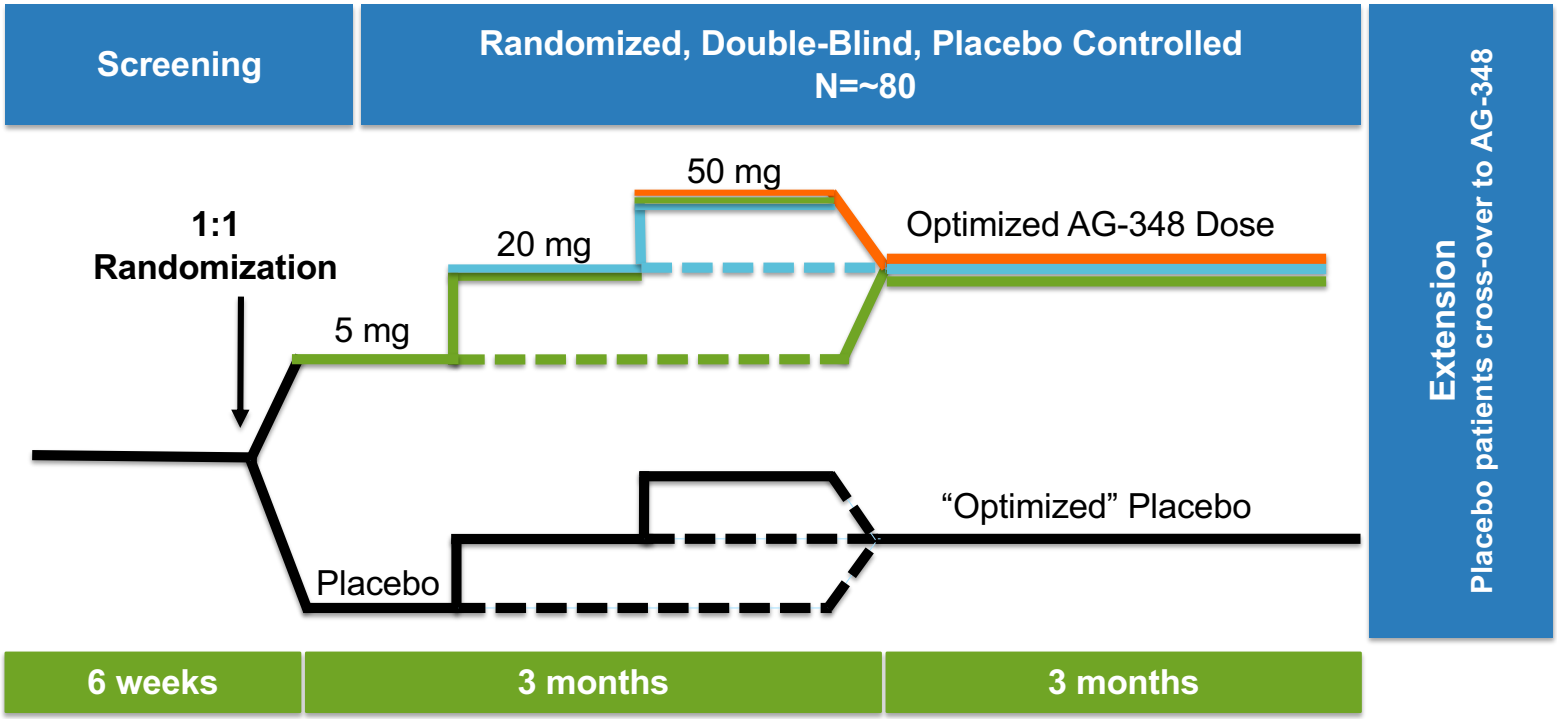
AG-270 First-in-Human Phase 1 Clinical Trial



ClinicalTrials.gov Identifier: NCT03435250

Trial initiated and enrolling patients

Mitapivat (AG-348) ACTIVATE Trial for Non-Regularly Transfused Patients

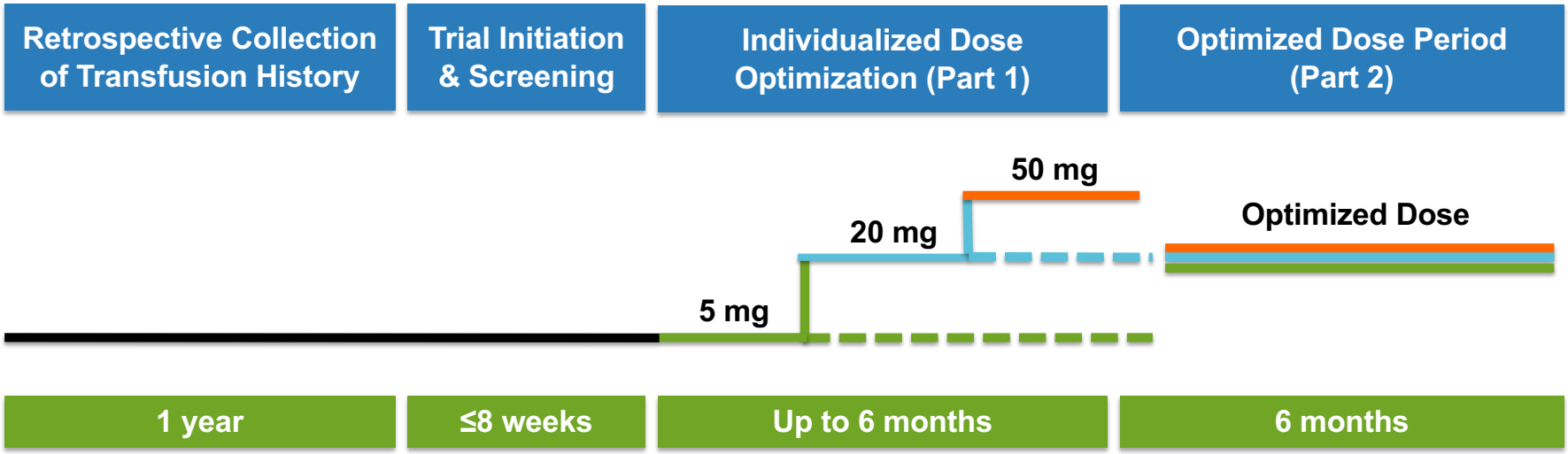


Primary Efficacy Endpoint:

Proportion of patients who achieve at least a 1.5 g/dL increase in hemoglobin sustained over multiple visits

Enrollment expected to complete in 2019

Mitapivat (AG-348) ACTIVATE-T Trial for Regularly Transfused Patients



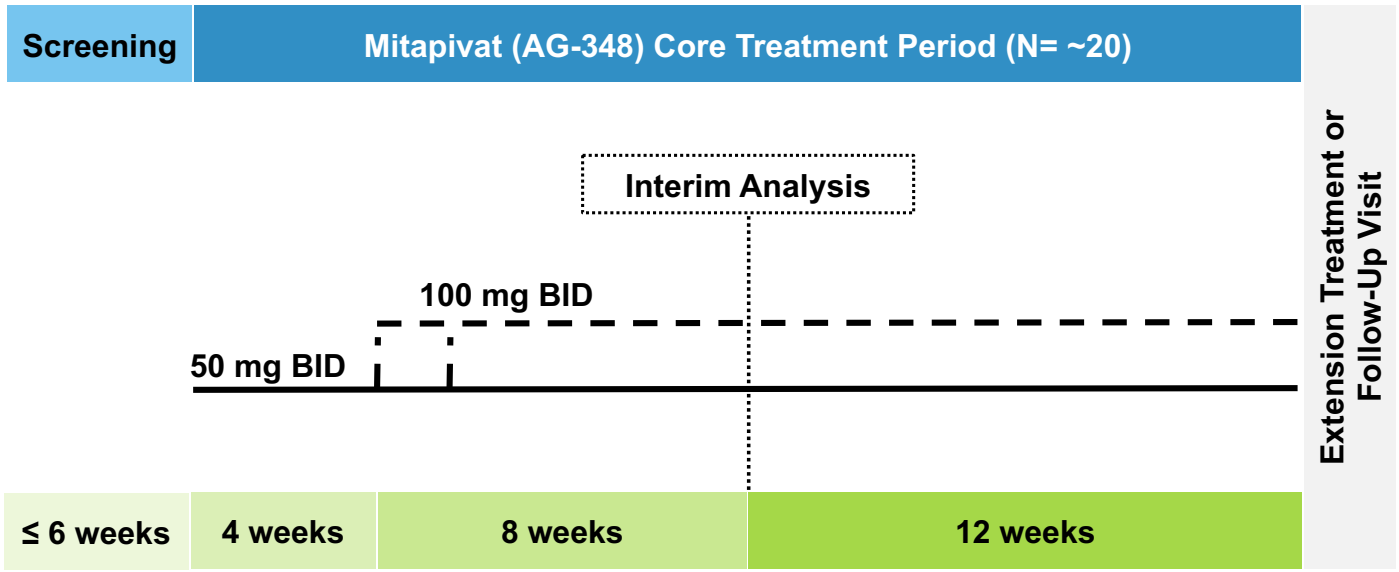
Approximately 20 regularly transfused patients who have required a minimum of 6 transfusions over the year preceding enrollment

Primary Endpoint:
Reduction in transfusion burden over a 6-month period compared to the patient's transfusion history

Enrollment expected to complete in 2019

Thalassemia Phase 2 Proof-of-Concept in Non-Transfusion Dependent Adults

- Open-label trial in ~20 patients with hemoglobin < 9.0.
- Primary endpoint is hemoglobin response, using a definition of 1.0 g/dl over baseline at 12 weeks



On track to initiate by year-end 2018

TIBSOVO Launch Update

Steve Hoerter, Chief Commercial Officer

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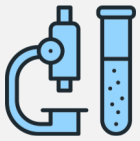
Strategic Imperatives for the TIBSOVO® Launch

Physicians test for IDH1m



TIBSOVO® is recognized as the best option for IDH1m+ R/R AML

TIBSOVO® (ivosidenib) tablets

Patients have access to TIBSOVO®

TIBSOVO® Launch Performance – Q3 2018

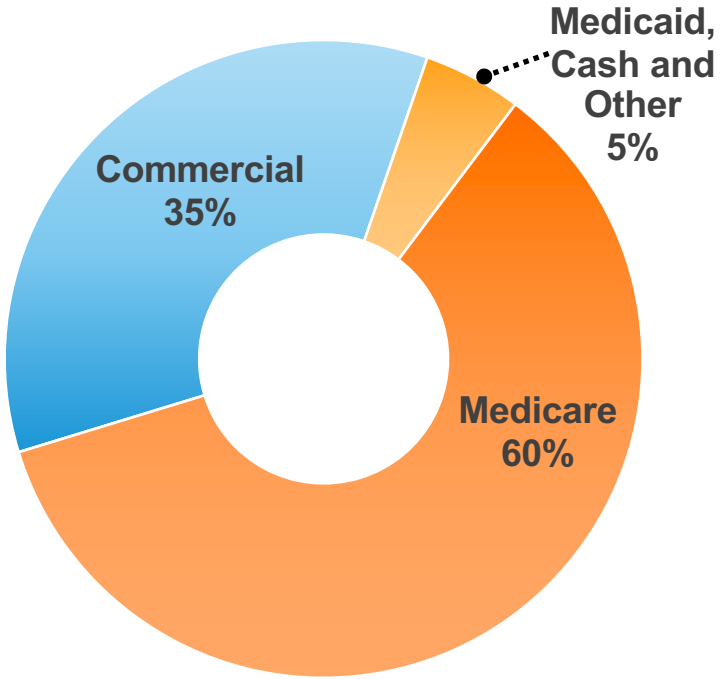
$4.5M Net Sales

~80% Physicians Testing for IDH1/IDH2 mutations

~2,000 Customer Interactions

100+ Unique Prescribers

Payer Mix: Specialty Pharmacy Channel



Market research as of August 2018; Agios estimates

Third Quarter 2018 Financial Results

Andrew Hirsch, Chief Financial Officer

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Third Quarter 2018 Financial Results

Statement of Operations	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017
Total Revenue	$15.2M	$11.4M
Collaboration Revenue	8.7M	10.6M
TIBSOVO® Net Sales	4.5M	--
Royalty Revenue	2.0M	0.7M
Cost of Sales	0.7M	--
Research & Development Expense	82.6M	72.9M
Selling, General & Administrative Expense	31.1M	17.5M

Balance Sheet	September 30, 2018	December 31, 2017
Cash, Cash Equivalents and Marketable Securities	$878.4M	$567.8M

September 30, 2018 cash balance provides runway through at least the end of 2020

Q&A

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