



AGIOS 2025 VISION

May 2020 Corporate Presentation



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 TIBSOVO® (ivosidenib), IDHIFA® (enasidenib), mitapivat, vorasidenib, AG-270, and AG-946; the potential benefits of Agios' product candidates; its key milestones and guidance for 2020; its strategic vision and goals for 2025; 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 benefits of its strategic plans and focus. The words "anticipate," "expect," "goal," "hope," "milestone," "plan," "potential," "possible," "strategy," "will," "vision," 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 collaborators 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, without limitation: risks and uncertainties related to the impact of the COVID-19 pandemic to Agios' business, operations, strategy, goals and anticipated milestones, including its ongoing and planned research activities, ability to conduct ongoing and planned clinical trials, clinical supply of current or future drug candidates, commercial supply of current or future approved products, and launching, marketing and selling current or future approved products; 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, the EMA or 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; 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.



We are
driven by our
sense of
urgency to
help patients.



“On a bad day, it’s like watching some electronic toy slowly lose the battery.”
—Tamara S., Minnesota



“The disease has affected my career. I spent 11 years to get a PhD in nutrition...My heart wants more but my body can’t handle it.”

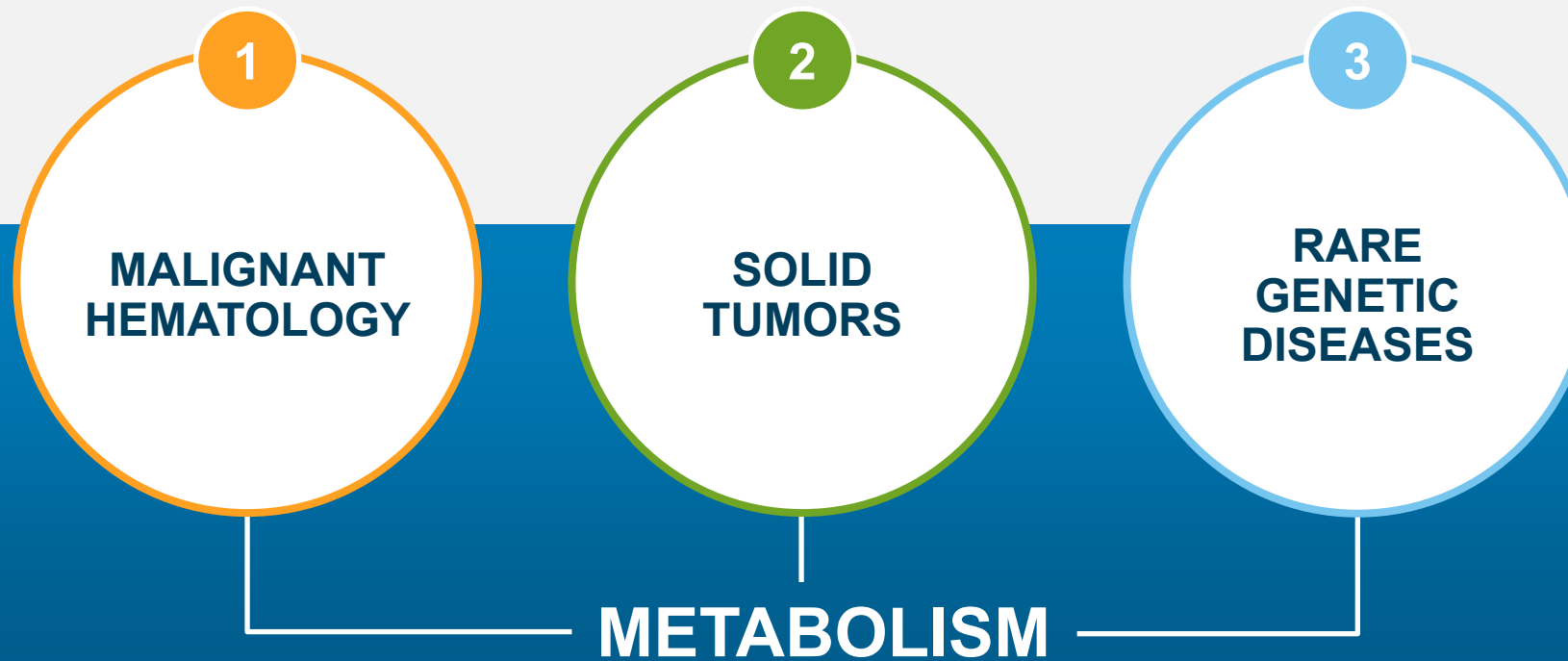
—Tamara S., Minnesota

Currently 50 years old. Diagnosed with PK deficiency at the age of 6.

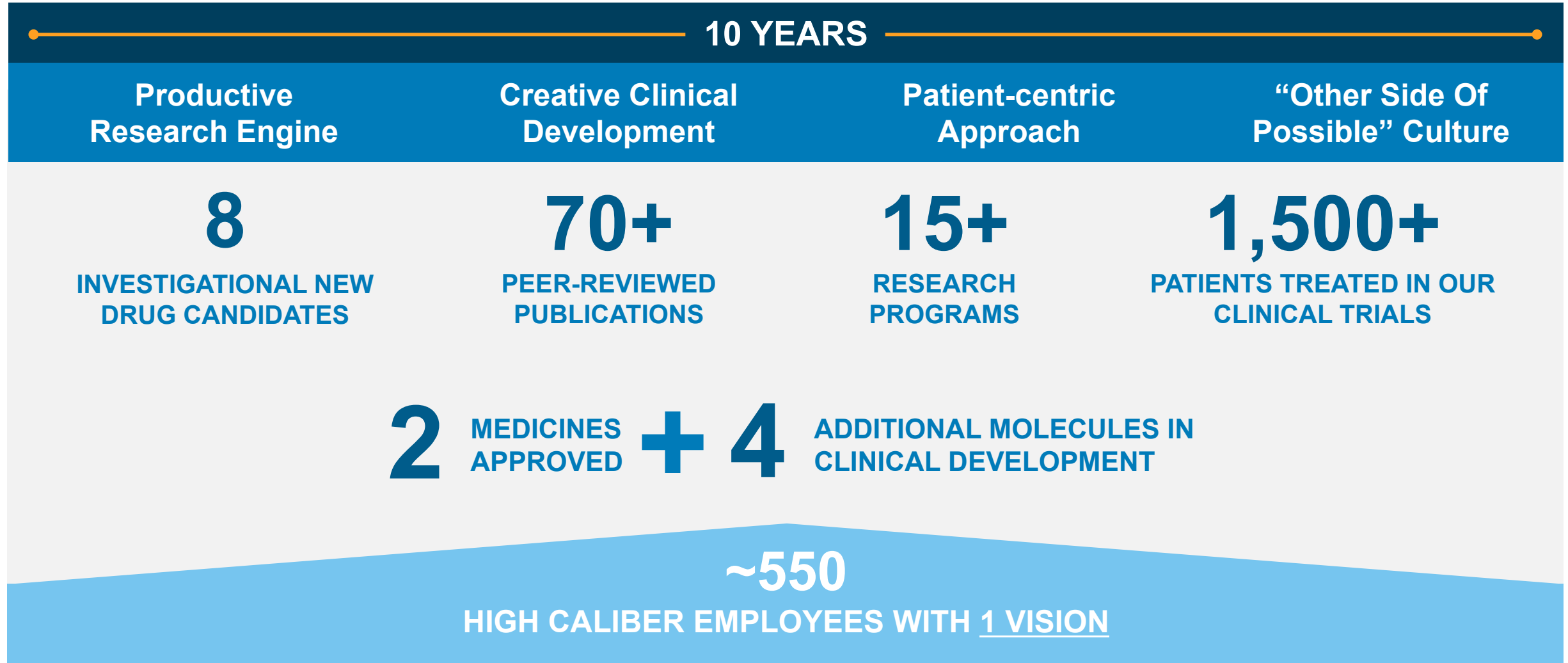
LEARN MORE AT [KNOWPKDEFICIENCY.COM](https://www.knowpkdeficiency.com)

Our Strategy is Clear

For more than a decade, our mission has been to create **differentiated, small molecule medicines for patients** in three focus areas – malignant hematology, solid tumors and rare genetic diseases – based on our unique expertise in **cellular metabolism** and adjacent areas of biology



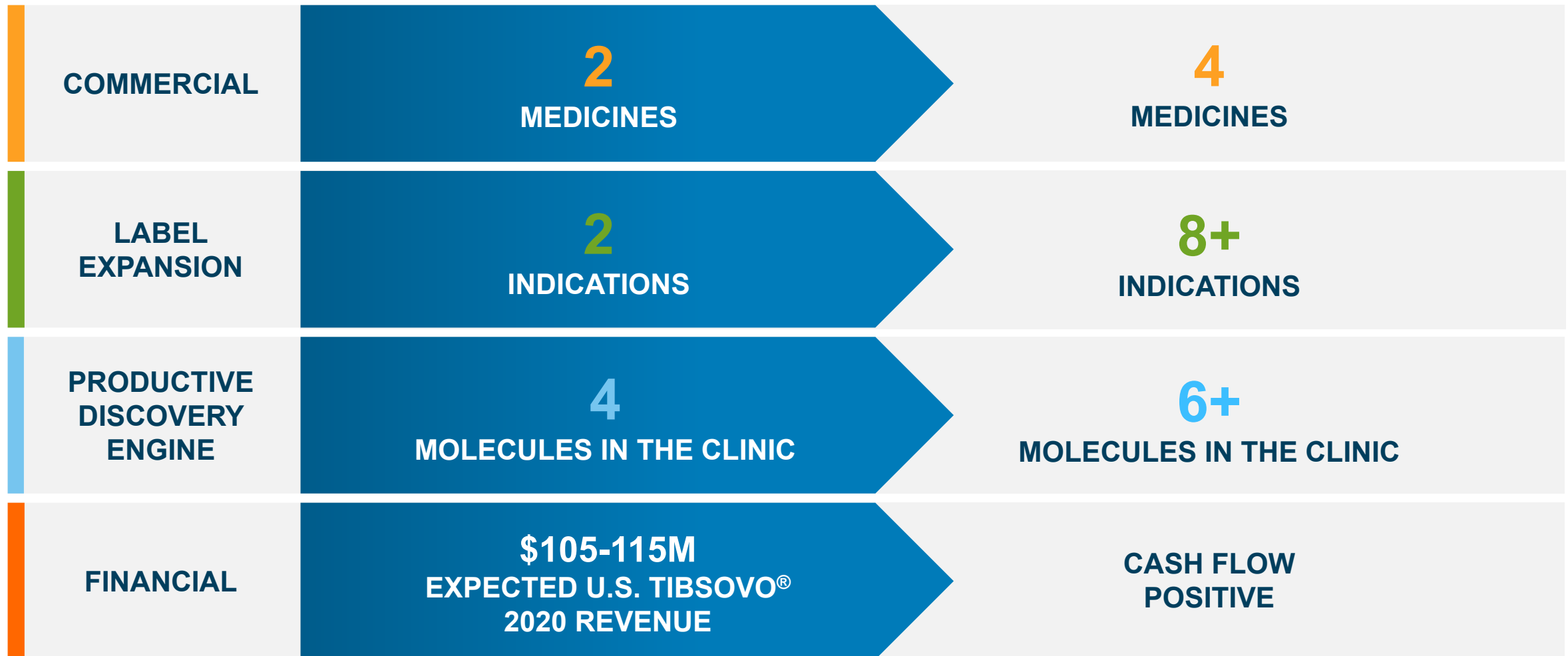
Our People and Culture Fuel Incredible Productivity, Strategic Focus and Continuity from Early Research to Market



Agios 2025 Vision: Focused Innovation. Ambitious Development. Transformative Treatments for Patients Across Three Focus Areas.

NOW

2025



2020 Anticipated Milestones and Recent Updates

RARE GENETIC DISEASES

- Mitapivat ACTIVATE and ACTIVATE-T topline data in PK deficiency now expected between YE 2020 and mid-2021
- Data on 13 patients from the Phase 2 study of mitapivat in thalassemia have been accepted for presentation at EHA
- The decision on proof-of-concept in the NIH-sponsored study of mitapivat in sickle cell disease on track for mid-2020
- Phase 1 study of AG-946, next-generation PKR activator, in healthy volunteers expected to initiate in mid-2020

MALIGNANT HEME

- Achieve full-year U.S. revenue for TIBSOVO® \$105-115M
- EU regulatory process for TIBSOVO® in R/R AML remains on track with a CHMP opinion expected by YE 2020
- Phase 3 AGILE enrollment completion now expected in 2021
- MDS expansion arm enrollment completion now expected in 2021

SOLID TUMORS

- Mature OS data from ClarIDHy study of TIBSOVO® expected in mid-2020 and cholangio sNDA filing expected between YE 2020 and mid-2021
- Updated data from the Phase 1 study of vorasidenib in non-enhancing low-grade glioma accepted for presentation at ASCO



COVID-19 Response Focused on Key Priorities

Our Patients

- Continued to provide uninterrupted commercial supply of TIBSOVO® and investigational medicines
- Ongoing access to myAgios™ patient support services
- Activated the clinical operations response team focused on clinical trial continuity

Our Employees

- Vast majority of employees are working from home
- Increased support and resources for employees during disruption
- Regular communication and implementing new ways of staying connected

Our Communities

- Organized a donation of Agios's PPE supply to local hospitals
- Raised more than \$22,000 for The Greater Boston Food Bank
- Encouraged blood donations





CREATING MEDICINES IN
THREE FOCUS AREAS

1

Malignant Hematology

2

Solid Tumors

3

Rare Genetic Diseases



CREATING MEDICINES IN
THREE FOCUS AREAS

1

Malignant Hematology

2

Solid Tumors

3

Rare Genetic Diseases

Significant Growth Potential in Malignant Hematology

~4K
PATIENTS IN
U.S. & EU

**IDH1 Mutant Acute Myeloid
Leukemia (AML)**

TIBSOVO®

R/R AML	U.S. Approval; MAA Under Review
1L Monotherapy	U.S. Approval
1L HMA Combo	Phase 3
1L 7+3 Combo	Phase 3

<1K
PATIENTS IN
U.S.

**IDH1 Mutant Myelodysplastic
Syndrome (MDS)**

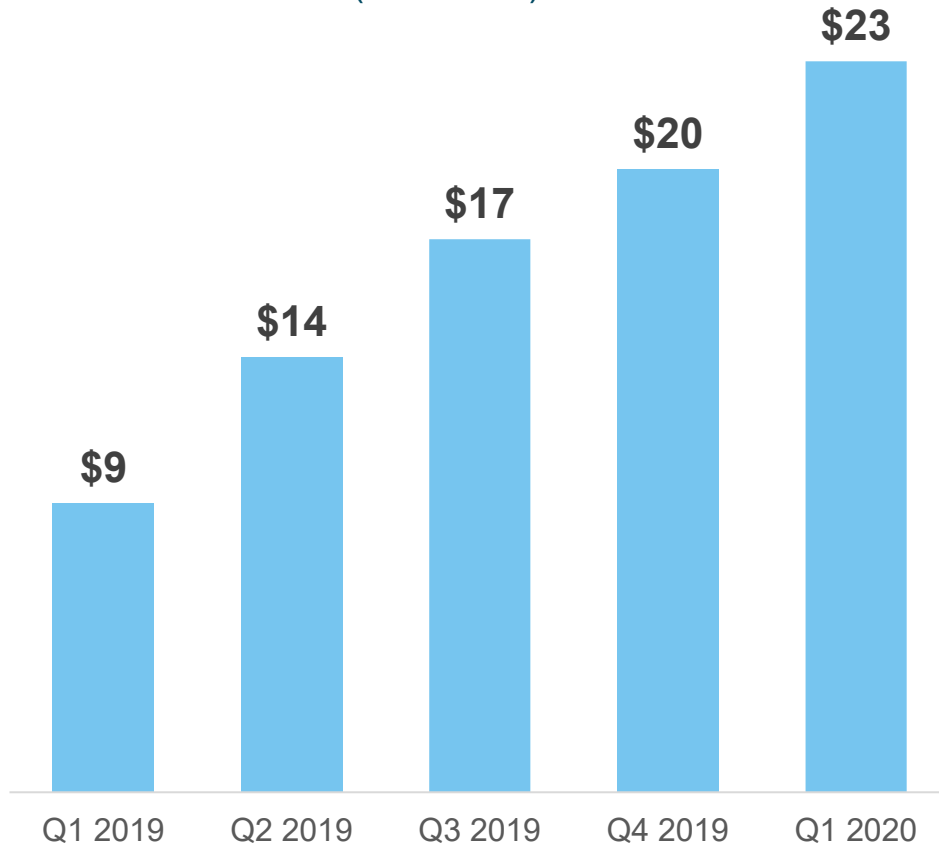
TIBSOVO®

R/R MDS	Phase 1 Expansion
----------------	-------------------



Significant Q1 Growth Driven by Increased Demand in Both R/R and Frontline AML Segments and Expanding Customer Base

TIBSOVO® Revenue
(in millions)



16% Growth

In Product Revenue Quarter-over-Quarter



\$105 – 115M

U.S. Net Sales Guidance for 2020



25% Increase

In Unique Prescribers Quarter-over-Quarter



~1,400

Patients Treated Since Launch

Source: Agios estimates



Despite Potential Disruptions Related to COVID-19, Patient Access to TIBSOVO® Remains Uninterrupted and Performance Outlook Unchanged

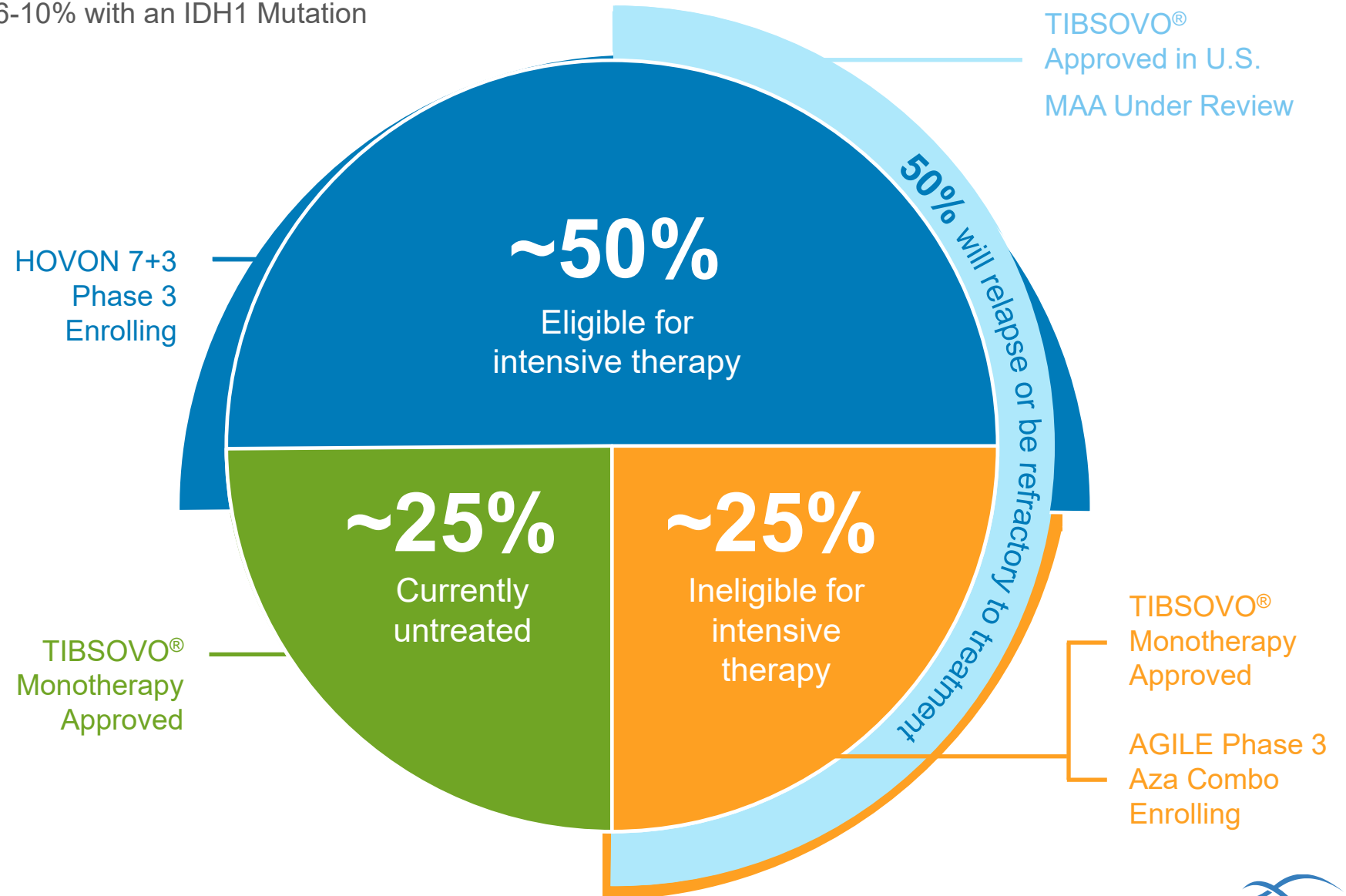
- Current inventory is more than sufficient to meet anticipated demand for TIBSOVO® even if COVID-19 disruptions were to persist
- The TIBSOVO® distribution strategy is flexible which permits treatment to be delivered directly to patients' residences if they are homebound for a prolonged period of time.
- myAgios™ Patient Support Services is fully functional and remains available to help patients with access, reimbursement, and financial assistance for TIBSOVO®
- Our field team has been working from home since mid-March and continues to engage customers remotely
- The urgency to treat patients with AML is high, and recently issued professional oncology patient care guidelines favor effective oral options with well tolerated safety profiles as healthcare professionals wrestle with the needs of COVID-19 infected patients



50K AML Patients Diagnosed Per Year in U.S. and EU

6-10% with an IDH1 Mutation

Advancing
Toward Largest
Opportunity for
mIDH1 AML:
Intensive and
Non-Intensive
Therapy
Combinations



Sources: SEER. Cancer Stat Facts: AML 2015 and Epiphany EPIC oncology numbers; American Cancer Society. AML 2017.





CREATING MEDICINES IN
THREE FOCUS AREAS

1

Malignant Hematology

2

Solid Tumors

3

Rare Genetic Diseases

Four Distinct Solid Tumor Opportunities Across Three Clinical Molecules

~2-3K

**PATIENTS IN
U.S. & EU**

**IDH1 Mutant
Cholangiocarcinoma**

TIBSOVO®

R/R Cholangio

sNDA YE 2020
to mid-2021

~9K

**PATIENTS IN
U.S. & EU**

**IDH Mutant
Low Grade Glioma**

Vorasidenib

Low-grade Glioma

Phase 3

~9K

**PATIENTS
IN U.S.**

**MTAP-Deleted Non-
Small Cell Lung Cancer**

AG-270

2nd Line NSCLC

Phase 1
Combo

~10K

**PATIENTS
IN U.S.**

**MTAP-Deleted
Pancreatic Cancer**

AG-270

**1st or 2nd Line
Pancreatic Cancer**

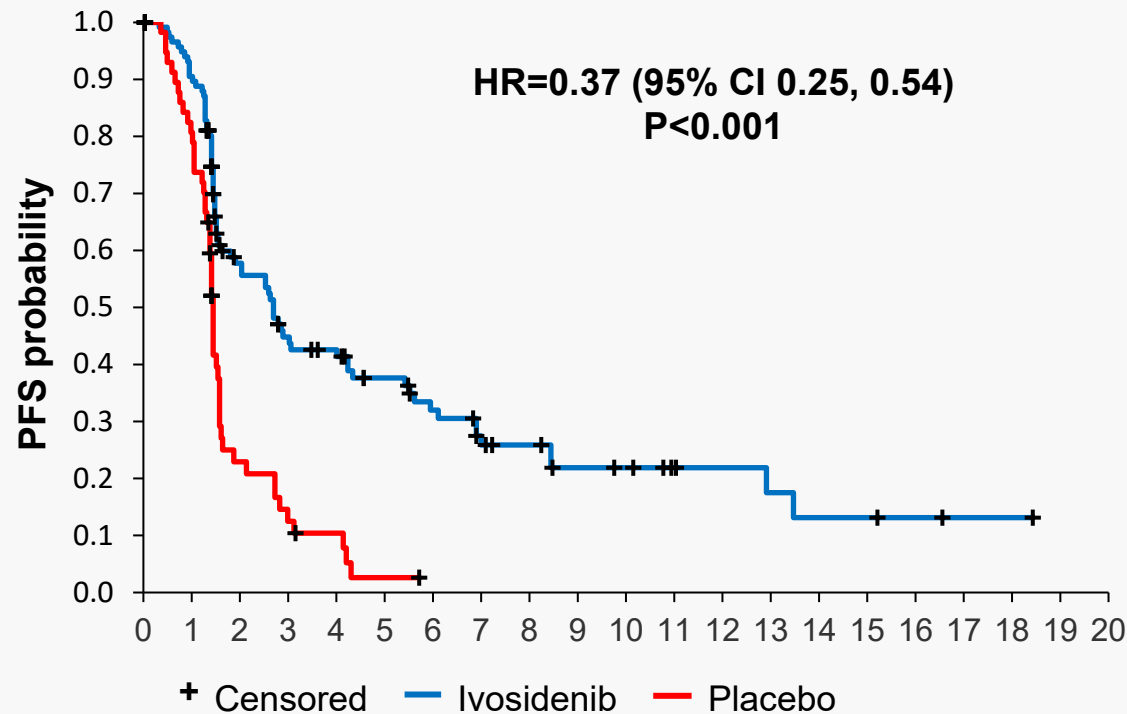
Phase 1
Combo



Established Utility of IDH Inhibition in Solid Tumors with Positive ClarIDHy Phase 3 Study of TIBSOVO® in Second-line or Later Cholangiocarcinoma

Mature OS from ClarIDHy Phase 3 expected mid-2020; sNDA planned between YE 2020 and mid-2021

Phase 3 ClarIDHy Study Achieved Primary Endpoint,
Demonstrating Statistically Significant Improvement in PFS



LOW
SURVIVAL
RATES

FEW
TREATMENT
OPTIONS

POSITIVE
CLARIDHY
RESULTS

~9%
FIVE-YEAR
OVERALL
SURVIVAL
RATE

0
APPROVED
THERAPIES
FOR mIDH1
PATIENTS

63%
REDUCTION IN
RISK OF DISEASE
PROGRESSION OR
DEATH FOR
PATIENTS
TREATED W/
TIBSOVO®



Global Phase 3 INDIGO Study of Vorasidenib in IDH Mutant Low-Grade Glioma

**SIGNIFICANT
2-HG
SUPPRESSION**

**IMPRESSIVE
PRELIMINARY
EFFICACY
DATA**

**ENCOURAGING
PHASE 1 DATA**

>90%

**2-HG
SUPPRESSION IN
RESECTED
mIDH1 GLIOMAS
ACROSS ALL
DOSES TESTED**

33% ORR

**IN THE
VORASIDENIB
ARM OF THE
PERIOPERATIVE
STUDY**

22 mo.

**MEDIAN
TREATMENT
DURATION IN
VORASIDENIB
PHASE 1**



**1:1 double-blind
randomization
(n=366)**

Stratified by 1p19q status
and baseline tumor size

**Vorasidenib
50 mg QD orally
Continuous 28-day cycles
(n=183)**

**Matched placebo*
(n=183)**

*centrally-confirmed progressive disease
will permit unblinding and crossover

Endpoints

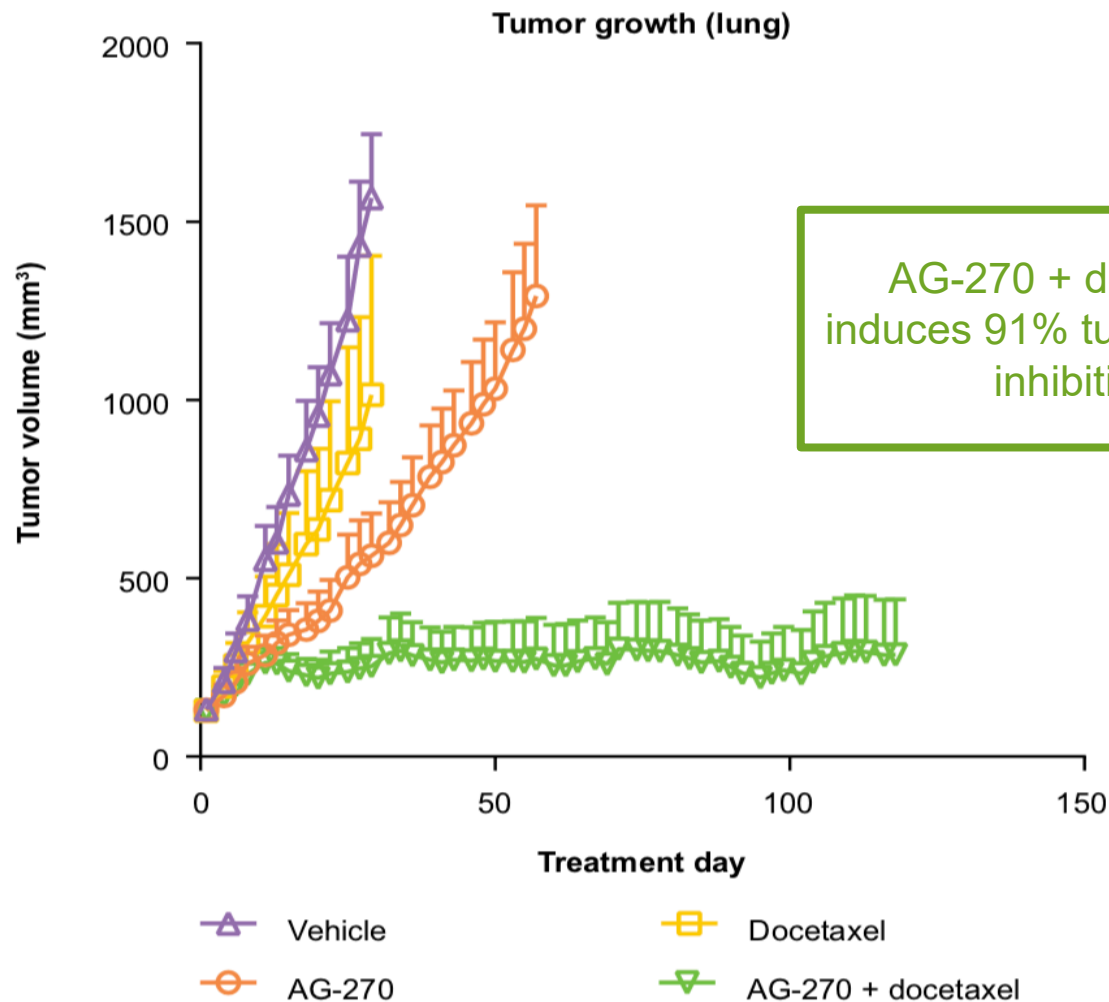
Primary: Progression free survival (by BIRC)

Secondary/Exploratory: Tumor volume, safety, ORR, OS, QOL, seizures, neuro-cognitive function, time to next intervention

BIRC = blinded independent review committee, ORR = overall response rate, OS = overall survival, QOL = quality of life, WHO = World Health Organization; Source: Data presented at SNO 2019



AG-270, MAT2A Inhibitor, Preclinical Data Supports Combination with Taxanes; Two Phase 1 Combination Arms Ongoing



Source: Data presented at AACR-NCI-EORTC 2019

PHASE 1 COMBINATION ARMS INITIATED

AG-270 + docetaxel in
MTAP-deleted NSCLC
(2nd line)
N = up to 40

AG-270 + nab-paclitaxel
and gemcitabine in
MTAP-deleted pancreatic
ductal adenocarcinoma
(1st or 2nd line)
N = up to 45





CREATING MEDICINES IN THREE
FOCUS AREAS

1

Malignant Hematology

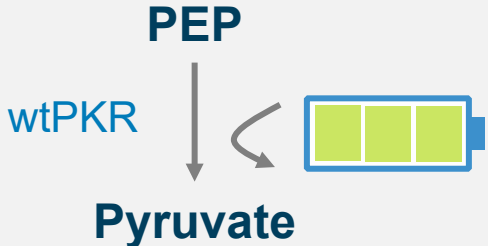
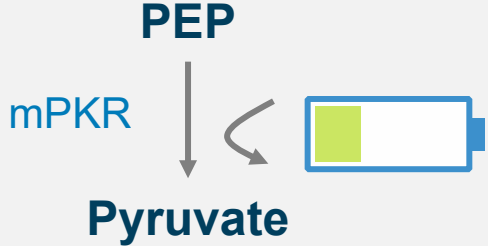
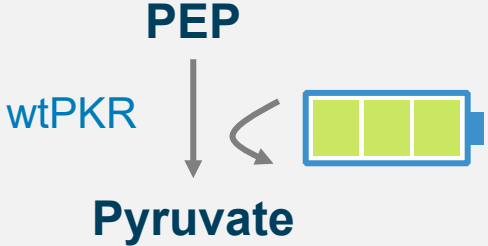
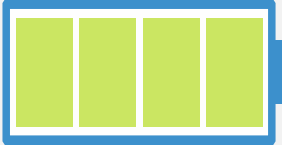
2

Solid Tumors

3

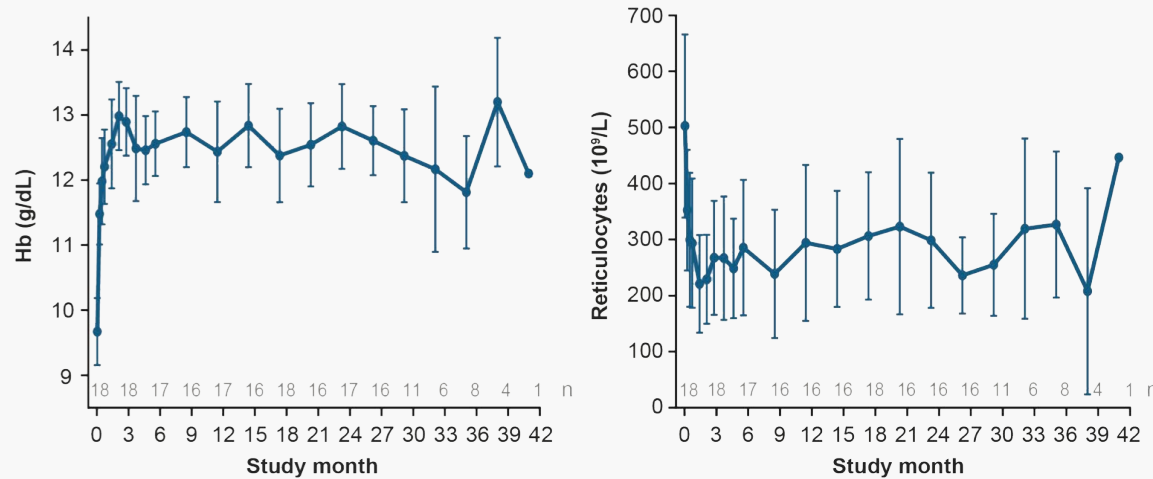
Rare Genetic Diseases

PKR Activation Represents Unique Mechanism of Action with Potential to Address Broad Range of Hemolytic Anemias

Normal Red Cell	Pyruvate Kinase Deficiency	Other Hemolytic Anemias
 PEP wtPKR Pyruvate Cellular demand: 	 PEP mPKR Pyruvate Cellular demand: 	 PEP wtPKR Pyruvate Cellular demand: 
ATP production meets demand	Inadequate production: ATP deficiency	Increased demand: ATP deficiency
	▪ Proof-of-concept achieved ▪ Adult PK deficiency approval expected in 2022 ▪ Pediatric PK deficiency pivotal strategy expected to be finalized in 2020	▪ Thalassemia proof-of-concept achieved ▪ NIH sponsored trial in sickle cell disease ongoing

Mitapivat has Potential to be First Disease-modifying Therapy for Patients with PK Deficiency

Improvements in Hemoglobin and Other Hemolysis Markers Maintained for More Than 3 Years in Responding Patients from DRIVE PK Extension



Chronic daily dosing with mitapivat for a median of 3 years and up to 42 months was well tolerated

COMPLICATIONS & COMORBIDITIES REGARDLESS OF TRANSFUSION STATUS

HIGHER LIFETIME RATES OF PULMONARY HYPERTENSION, OSTEOPOROSIS, AND LIVER CIRRHOSIS

SUPPORTIVE CARE ONLY

0 APPROVED THERAPIES

HIGH RISK OF IRON OVERLOAD

38% OF PATIENTS NOT RECEIVING REGULAR TRANSFUSIONS EXPERIENCE IRON OVERLOAD

Source: Data presented at ASH 2019; van Beers EJ, et al. Haematologica. 2019;104(2):e51-e53.



Clinical Proof-of-concept for Mitapivat Established in Non-transfusion-dependent Thalassemia

7 of 8 efficacy evaluable patients achieved a hemoglobin increase of ≥ 1.0 g/dL from baseline in at least one assessment (weeks 4 – 12)

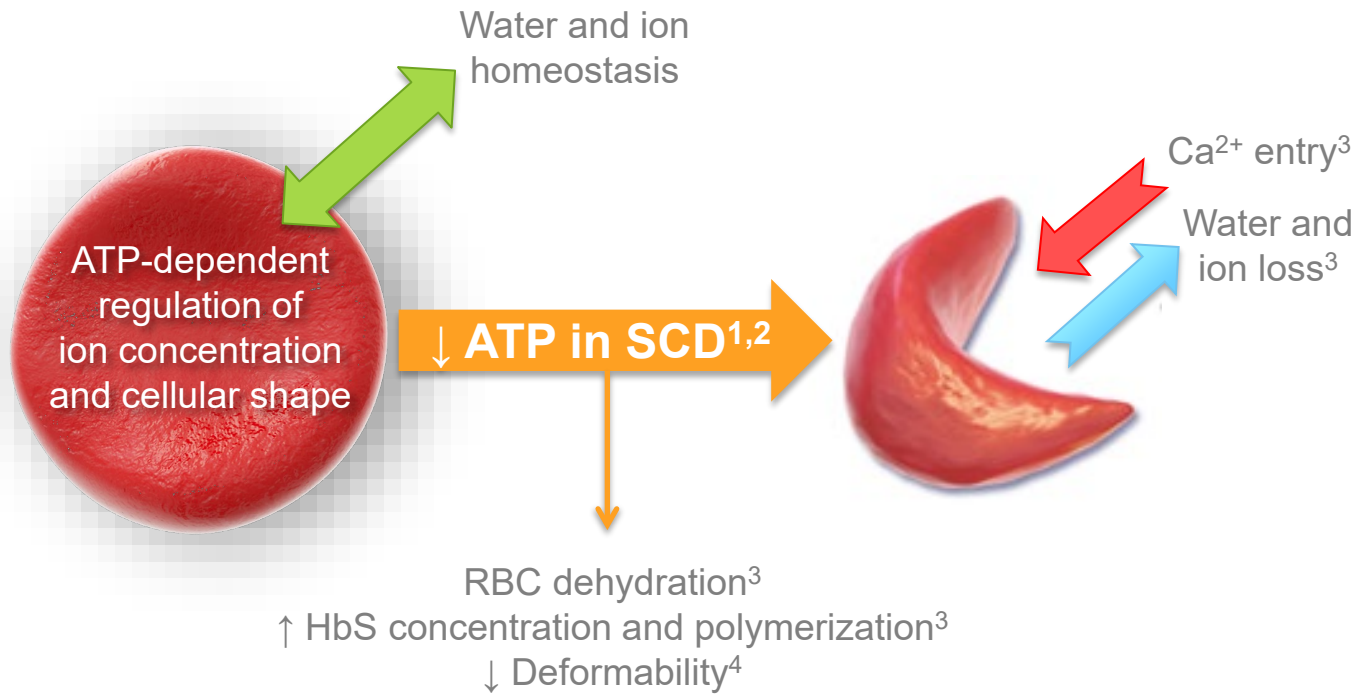
In responding patients, the mean hemoglobin increase from baseline was 1.76 g/dL (range, 0.9 – 3.3 g/dL)

Majority of adverse events were Grade 1 or 2 and consistent with previously published Phase 2 data for mitapivat in patients with PK deficiency

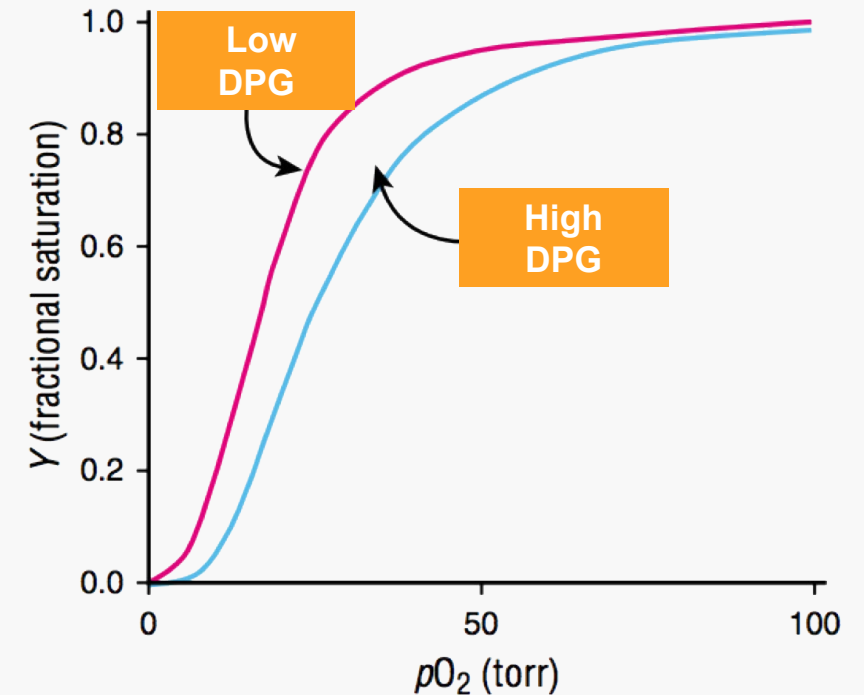
Updated Phase 2 thalassemia data to be presented at EHA and pivotal strategy expected to be finalized by YE 2020



Therapeutic Hypothesis for Wildtype PKR Activation in Sickle Cell Disease: 2,3-DPG and ATP Modulation Improves Anemia and Reduces Sickling



2,3-DPG Shifts the Oxygen Saturation Curve



ATP, adenosine triphosphate; HbS, sickle cell hemoglobin; RBC, red blood cell; SCD, sickle cell disease.

1. Palek J, Liu SC. J Supramol Struct. 1979;10(1):79-96. 2. Glader BE, et al. Br J Haematol. 1978;40(4):527-32.

3. Bogdanova A, et al. Int J Mol Sci. 2013;14(5):9848-72. 4. Park Y, et al. Proc Natl Acad Sci USA. 2010;107(4):1289-94.

PKR Activation Has Potential Broad Utility Across Hemolytic Anemias

~3-8K
PATIENTS IN
U.S. & EU

Pyruvate Kinase Deficiency

NTD Adult PKD	Phase 3 Enrollment Complete
TD Adult PKD	Phase 3 Enrollment Complete
Pediatric PKD	Pivotal Plan by YE

**~18-
23K**
PATIENTS IN
U.S. & EU

β - and α -Thalassemia

NTD β- and α-Thalassemia	Phase 2
Thalassemia	Pivotal Plan by YE

**~120-
135K**
PATIENTS IN
U.S. & EU

Sickle Cell Disease

Adult SCD	NIH CRADA
------------------	-----------





CREATING MEDICINES IN
THREE FOCUS AREAS

1

Malignant Hematology

2

Solid Tumors

3

Rare Genetic Diseases

First Quarter 2020 Financial Results

Statement of Operations	Three Months Ended 3/31/20	Three Months Ended 3/31/19	Year Ended 12/31/19
Total Revenue	\$87.1M	\$30.2M	\$117.9M
Collaboration Revenue	61.1M	18.9M	47.5M
TIBSOVO® Net Sales	22.7M	9.1M	59.9M
Royalty Revenue	3.3M	2.2M	10.5M
Cost of Sales	0.5M	0.3M	1.3M
Research & Development Expense	91.3M	95.6M	410.9M
Selling, General & Administrative Expense	38.5M	31.8M	132.0M

Balance Sheet	3/31/20	12/31/19
Cash, Cash Equivalents and Marketable Securities	\$613.1M	\$717.8M





AGIOS 2025 VISION:

Focused Innovation. Ambitious Development.
Transformative Treatments for Patients Across Three Focus Areas.

4

MEDICINES

8+

INDICATIONS

6+

**MOLECULES
IN THE CLINIC**

\$

**CASH FLOW
POSITIVE**