



Second Quarter 2020 Financial Results

July 30, 2020



Agios Conference Call Participants

TOPIC	PARTICIPANT
Introductions	Holly Manning, Director of Investor Relations
Business Update	Jackie Fouse, Ph.D., Chief Executive Officer
Clinical Development Update	Chris Bowden, M.D., Chief Medical Officer
TIBSOVO® Performance	Darrin Miles, Senior Vice President, U.S. Commercial & Global Marketing
Second Quarter 2020 Financial Results	Andrew Hirsch, Chief Financial Officer & Head of Corporate Development



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.





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**

Rare Genetic Diseases

- Established clinical proof-of-concept for mitapivat in sickle cell disease
- Presented data from our Phase 2 study of mitapivat in thalassemia at EHA 2020
- Received FDA Orphan Drug Designation for mitapivat in thalassemia

Hematologic Malignancies

- TIBSOVO® net sales of \$27.6 million, an increase of 22% from Q1 2020
- Expanded total number of unique TIBSOVO® prescribers by 15% from Q1 2020

Solid Tumors

- Published data from ClarIDHy study of TIBSOVO® in cholangio in The Lancet Oncology
- NCCN guidelines updated to recommend treatment with TIBSOVO® for advanced cholangio
- Presented data from our Phase 1 study of vorasidenib in glioma at ASCO 2020

Corporate

- Completed a \$255 million purchase agreement with Royalty Pharma for IDHIFA® (enasidenib) royalty





Clinical Development Updates

Chris Bowden, M.D., Chief Medical Officer

Anticipated Upcoming Milestones

RARE GENETIC DISEASES

- Mitapivat ACTIVATE and ACTIVATE-T topline data in PK deficiency between YE 2020 and mid-2021
- Finalize pivotal development plan for mitapivat in thalassemia by the end of 2020; initiate a pivotal program in 2021
- Finalize pivotal development plan for mitapivat in sickle cell disease and initiate pivotal program in 2021
- Initiate Phase 1 study of AG-946, next-generation PKR activator, in healthy volunteers in third quarter 2020

MALIGNANT HEME

- Achieve full-year U.S. revenue for TIBSOVO® \$105-115M
- EU regulatory process for TIBSOVO® in R/R AML ongoing with a CHMP opinion expected by YE 2020

SOLID TUMORS

- Mature OS data from ClarIDHy study of TIBSOVO® in the third quarter 2020; cholangio sNDA filing in the first quarter 2021

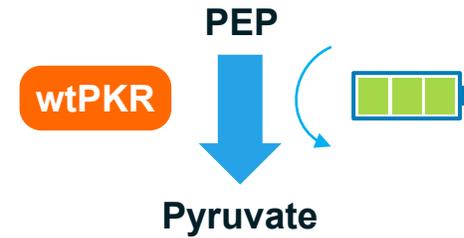


PKR Activation Represents Unique Mechanism of Action with Potential to Address Broad Range of Hemolytic Anemias

GLYCOLYSIS

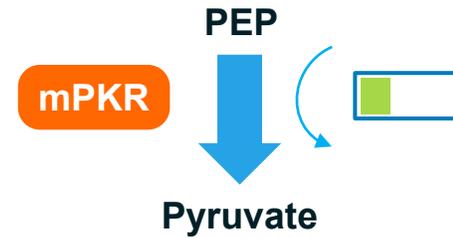


Normal Red Cell



ATP Production Meets Demand

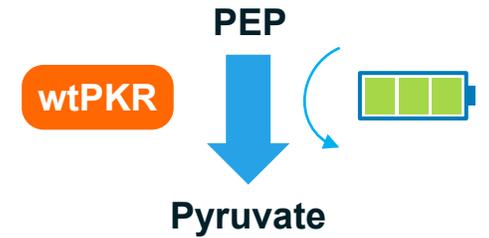
Mutant PKR Pyruvate Kinase Deficiency



Inadequate Production of ATP

- PKR mutations decrease PK stability, ATP generation and RBC membrane integrity and increase RBC destruction, leading to chronic hemolytic anemia

Wildtype PKR Other Hemolytic Anemias



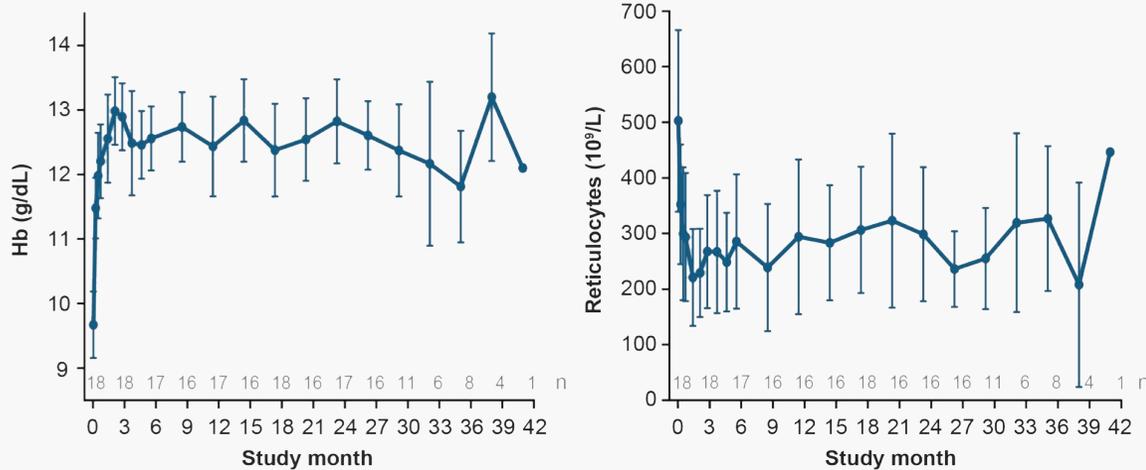
Increased Demand of ATP

- In other hemolytic anemias, there is an increase in ATP demand and impaired ATP production, leading to damage and premature death of RBCs, hemolysis and anemia



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

SUPPORTIVE CARE ONLY

HIGH RISK OF IRON OVERLOAD

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

0 APPROVED THERAPIES

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.



Interim Phase 2 Results in Thalassemia: Activation of wPKR by Mitapivat Improved Hb and Associated Markers of Hemolysis and Erythropoiesis

Treatment with mitapivat induced Hb increase of ≥ 1.0 g/dL in 12 of 13 evaluable patients, including 100% α -thalassemia patients; 7 of 8 evaluable patients achieved sustained Hb response

Median (range) time to Hb increase of ≥ 1 g/dL among responders was 3.1 (1.4–7.1) weeks

Mitapivat was generally well tolerated; the safety profile was consistent with previous studies

Improvements in markers of hemolysis and erythropoiesis correlated with the Hb increases

Mean ATP percent increase from baseline was similar to that previously observed with mitapivat in healthy volunteers

Pivotal plan for mitapivat in α - and β -thalassemia expected to be finalized by year-end 2020 and initiated in 2021



Clinical Proof-of-concept for Mitapivat Established in Sickle Cell Disease

7 of 8 (88%) efficacy evaluable patients experienced a Hb increase, and 5 of 8 (63%) patients achieved a Hb increase of ≥ 1.0 g/dL from baseline (range 1.0-2.7 g/dL) at doses of 50 mg BID or lower.

Treatment with mitapivat was associated with decreases in hemolytic markers such as bilirubin, LDH and reticulocytes.

2,3-DPG decreases and increases in ATP levels were observed. Sickling curves (t50) and oxygen dissociation curves (p50) consistent with decreases in both sickling and HbS polymerization.

AEs generally consistent with previously reported data with mitapivat treatment or are to be expected in the context of SCD. One SAE, a VOC, occurred during drug taper and was possibly attributed to mitapivat.



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; Topline data expected YE 2020 – mid 2021
TD Adult PKD	Phase 3 enrollment complete; Topline data expected YE 2020 – mid 2021
Pediatric PKD	Pivotal plan expected by YE

~18-
23K

PATIENTS IN
U.S. & EU

β - and α -Thalassemia

NTD β- and α-Thalassemia	Phase 2 enrollment complete
Thalassemia	Pivotal plan expected by YE and initiation in 2021

~120-
135K

PATIENTS IN
U.S. & EU

Sickle Cell Disease

Adult SCD	NIH CRADA; data to be submitted to ASH
Adult SCD	Pivotal study expected to initiate in 2021



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
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Four Distinct Solid Tumor Opportunities Across Three Clinical Molecules

~2-3K

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

**IDH1 Mutant
Cholangiocarcinoma**

TIBSOVO®

R/R Cholangio

sNDA expected
Q1 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



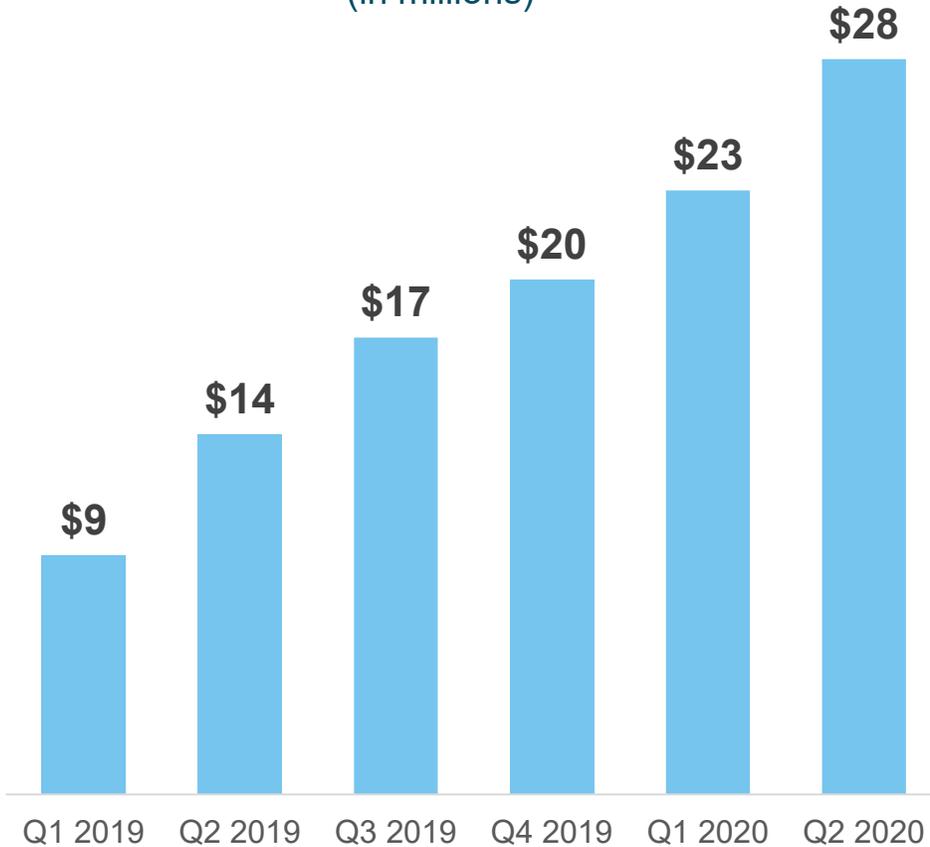


TIBSOVO[®] Performance Update

Darrin Miles, Senior Vice President, U.S. Commercial & Global Marketing

Q2 Growth Driven by Increased Demand in Both R/R and Frontline AML Segments and Expanding Customer Base

TIBSOVO® Revenue
(in millions)



22% Growth

In Product Revenue Quarter-over-Quarter



\$105 – 115M

U.S. Net Sales Guidance for 2020



15% Increase

In Unique Prescribers Quarter-over-Quarter



~1,600

Patients Treated Since Launch

Source: Agios estimates





Second Quarter 2020 Financial Results

Andrew Hirsch, Chief Financial Officer and Head of Corporate Development

Second Quarter 2020 Financial Results

Statement of Operations	Three Months Ended 6/30/20	Three Months Ended 6/30/19
Total Revenue	\$37.3M	\$26.2M
Collaboration Revenue	6.4M	9.8M
TIBSOVO® Net Sales	27.6M	13.7M
Royalty Revenue	3.3M	2.7M
Cost of Sales	0.7M	0.3M
Research & Development Expense	90.9M	107.4M
Selling, General & Administrative Expense	36.0M	32.4M

Balance Sheet	6/30/20	12/31/19
Cash, Cash Equivalents and Marketable Securities	\$794M	\$718M

June 30, 2020 cash balance provides runway through the end of 2022





Q&A