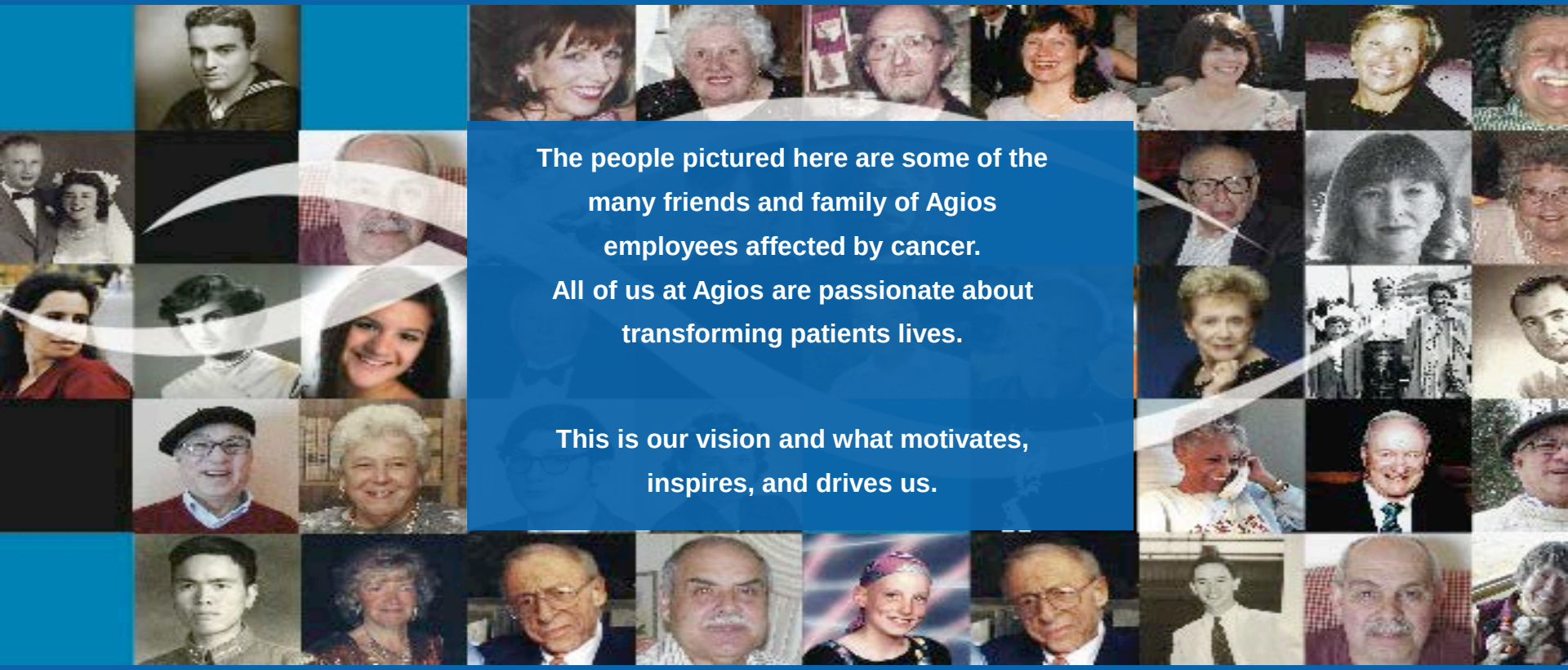
Agios Pharmaceuticals, Inc.



SECOND QUARTER 2015 FINANCIAL RESULTS

Thursday, August 6, 2015

Agios Conference Call Participants

Prepared Remarks

Introduction
- *RENEE LECK, Sr. Manager, Investor & Public Relations*

Corporate Strategy and Vision
- *DAVID SCHENKEIN, M.D., Chief Executive Officer*

Clinical Development Updates
- *CHRIS BOWDEN, M.D., Chief Medical Officer*

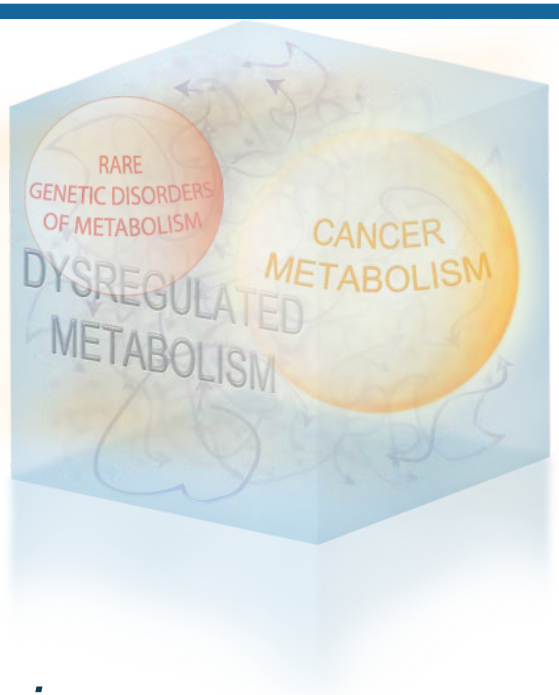
Second Quarter Year Financial Results
- *GLENN GODDARD, SVP. Finance*

Cautionary Note Regarding Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995, including those regarding Agios' expectations and beliefs about: the potential of IDH1/IDH2 and pyruvate kinase-R mutations as therapeutic targets; the potential benefits of Agios' product candidates targeting IDH1/IDH2 or pyruvate kinase-R mutations, including AG-221, AG-120, AG-881 and AG-348; its plans and timelines for the clinical development of AG-221, AG-120, AG-881 and AG-348; its plans regarding future data presentations; its financial guidance regarding the amount of cash, cash equivalents and marketable securities that the company will have as of December 31, 2015, and the potential benefit of its strategic plans and focus. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "would," "could," "potential," "possible" 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 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 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 agreement with Celgene, and general economic and market conditions. These and other risks are described in greater detail under the caption "Risk Factors" included in Agios' Annual Report on Form 10-K for the year ended December 31, 2014, and other filings that Agios may make with the Securities and Exchange Commission in the future. Any forward-looking statements contained in 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

DAVID SCHENKEIN, M.D.

Chief Executive Officer



Corporate Strategy and Vision

2015 Priorities

Execute on registration programs

Build out capabilities

Continue to invest in research

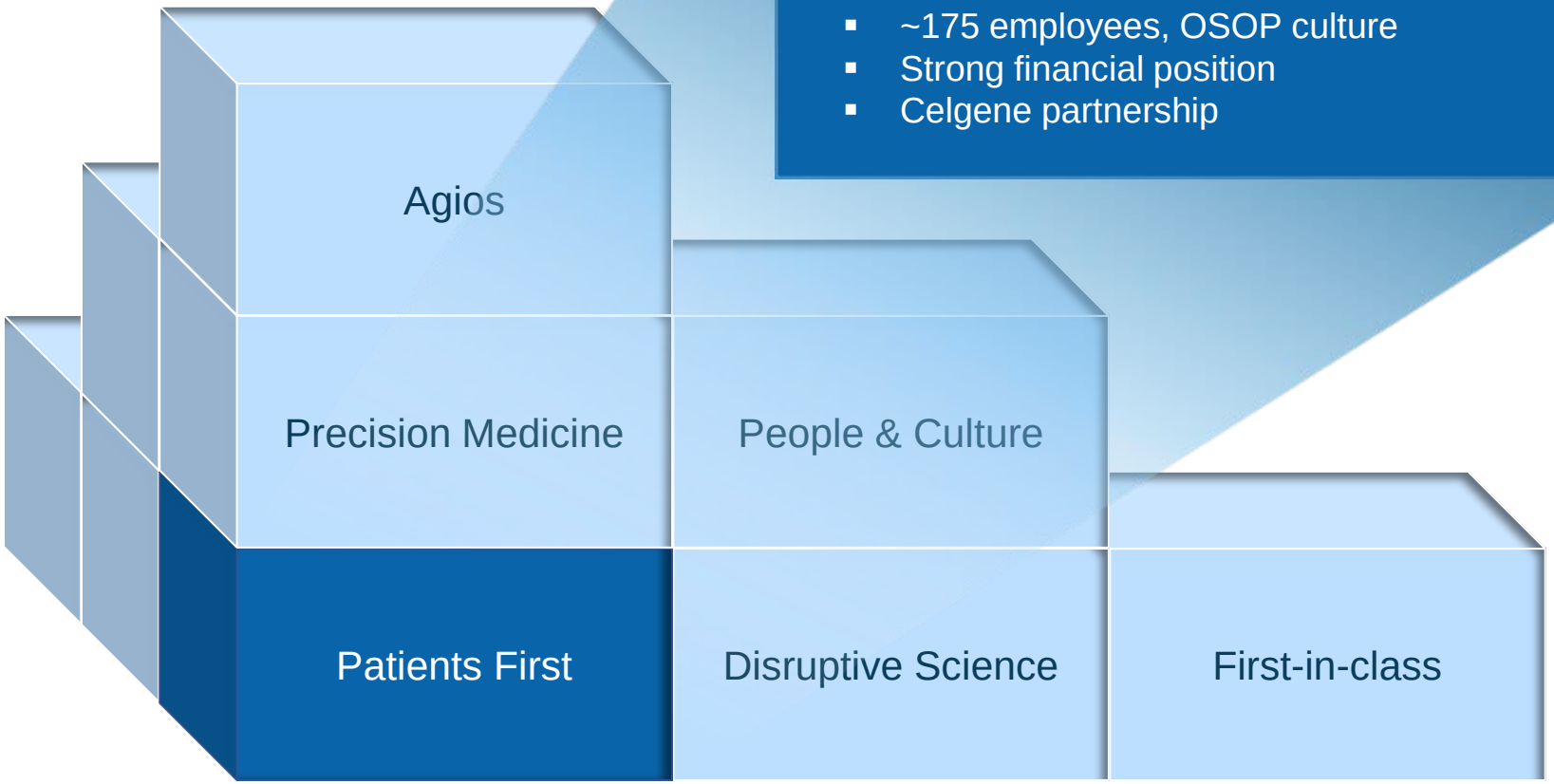
Novel First-in-Class Portfolio: Precision Medicine Approach

	Research	Planned: Early Stage → Late Stage Clinical Dev	Primary Commercial Rights
Development Programs			
AG-221 (IDH2m inhibitor)	Advanced Hematologic Malignancies	Registration Program	Celgene
	Advanced Solid Tumors		
AG-120 (IDH1m inhibitor)	Advanced Hematologic Malignancies	Registration Program	agios US; Celgene ex-US
	Advanced Solid Tumors		
AG-881 (pan-IDHm inhibitor)	Advanced Solid Tumors		agios / Celgene Joint WW collaboration
	Advanced Hematologic Malignancies		
AG-348 (Pyruvate kinase (R) Activator)	Phase 2 in Patients		agios
Research Programs			
Cancer Metabolism	(Multiple Novel Targets)		agios / Celgene
Rare Genetic Metabolic Disorders	(Multiple Monogenic Diseases)		agios

Building a Great, Multi-Product Biopharmaceutical Company

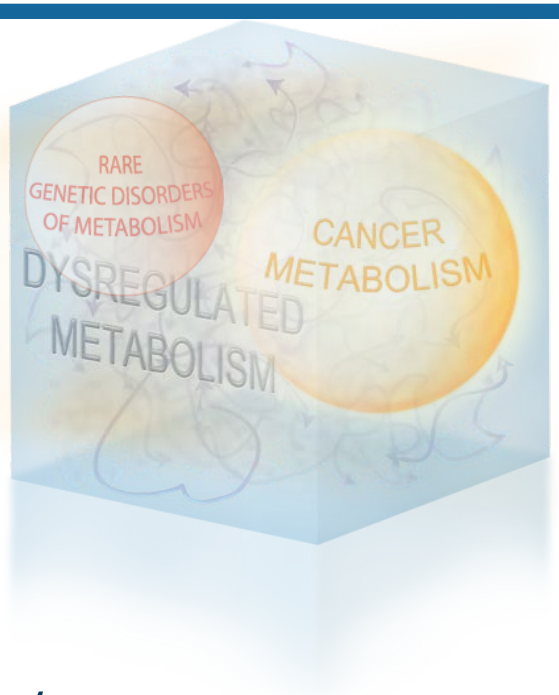
In just six years:

- Created four novel investigational medicines
- Proof-of-concept for AG-221 and AG-120
- Proof-of-mechanism for AG-348
- ~175 employees, OSOP culture
- Strong financial position
- Celgene partnership



CHRIS BOWDEN, M.D.

Chief Medical Officer



Clinical Development Updates

AG-221: First-In-Class Oral IDH2 Mutant Inhibitor

Current Development Status

Phase 1 All IDH2m+	Phase 1 Expansion 100 mg QD	Late-Stage Development
Advanced hematologic malignancies	Cohort 1 R/R AML ≥60 yrs (transplant ineligible) (n=25) Cohort 2 R/R AML <60 yrs (n=25) Cohort 3 AML – too sick for SOC chemotherapy (n=25) Cohort 4 Basket Heme (n=25) Cohort 5 R/R AML (n=125)	Maintenance (Post BM Transplant) Additional heme malignancies (e.g. MDS)
Advanced solid tumors		

EHA Highlights:

- Durable responses with duration on treatment over 15 months
- ORR is 40% and CR rate is 16%
- Well tolerated with majority of AEs mild to moderate
- Proof-of-concept demonstrated in myelodysplastic syndrome (MDS) and untreated AML

Collaboration with Celgene; Agios receives royalties on potential worldwide sales

AG-221: Best Overall Response by Disease[a]
Dose Escalation and Expansion

Data Presented at EHA, 6/13/15

	R/R AML[b] n=111	Untreated AML n=22	MDS n=14	Other[c] n=10	Total[d] n=157
CR, n (%)	20 (18.0)	3 (13.6)	2 (14.3)	1 (10.0)	**26 (16.6)**
CRp	1	—	1	1	3
PR	16	2	—	—	18
mCR,[e]	8	1	4	1	14
CRi	1	1	—	—	2
SD	49	7	4	7	67
PD	7	5	2	—	14
NE	9	3	1	—	13
ORR, n (%) (95% CI)	46/111 (41.4) (32.2, 51.2)	7/22 (31.8) (13.9, 54.9)	7/14 (50.0) (23.0, 77.0)	3/10 (30.0) (6.7, 65.2)	**63/157 (40.1) (32.4, 48.2)**

[a]Includes patients with a Day 28 or later response assessment or discontinued earlier than Day 28 for any reason as of 1 May 2015
[b]Includes 36 patients from Arms 1 and 2 of expansion, with 3 CRs and 12 objective responses
[c]Includes CMML, three; CMML-2, four; blastic plasmacytoid dendritic cell neoplasm, one; MDS transformed to AML, one; refractory AML, one
[d]Disease type missing for one patient
[e]Includes morphologic leukemia-free state

Note: Based on unaudited data from live clinical database.

AG-221: Late-Stage Development Plans for Hematologic Malignancies

Prospective Development Paths in Collaboration with Celgene

Next Steps by End of 2015:

- Initiate global Phase 3 registration-enabling study in relapsed/ refractory AML
- Initiate combination trials for frontline AML

Late-Stage Development

Speed

Phase 3 Relapsed/ Refractory AML

Options informed by:
- Clinical data
- Regulatory input

Breadth

Frontline | Unfit AML Patients

Frontline | Fit AML Patients

Maintenance (Post BM Transplant) AML

Additional Heme Malignancies (e.g. MDS)

AG-120: First-in-Class Oral IDH1 Mutant Inhibitor

Current Development Status (Hematologic Malignancies)

Phase 1 All IDH1m+	Phase 1 Expansion 500 mg QD	Late-Stage Development
Advanced hematologic malignancies	**Cohort 1** R/R AML (n=125) **Cohort 2** Untreated AML (n=25) **Cohort 3** Advanced heme not eligible for cohorts 1 & 2 (n=25)	
Advanced solid tumors		

EHA Highlights:

- Durable responses with duration on treatment over 11 months
- ORR is 31% and CR rate is 15%
- Well tolerated with majority of AEs mild to moderate

Collaboration with Celgene; Agios retains U.S. development & commercialization rights

AG-120: Future Development Plans in Hematologic Malignancies

Prospective Development Paths in Collaboration with Celgene

Next steps:

- Initiate global Phase 3 registration-enabling study in AML in 1H 2016
- Initiate combination trials for frontline AML by end of 2015

Late-Stage Development

Speed

Phase 3 in AML

Options informed by:
- Clinical data
- Regulatory input

Breadth

Frontline | Unfit Patients

Frontline | Fit Patients

Maintenance (Post BM Transplant)

Additional Heme Malignancies (e.g. MDS)

AG-120: Current Development Status in Advanced Solid Tumors

Phase 1
All IDH1m+

Phase 1 Expansion

Advanced hematologic malignancies

Advanced solid tumors

- Intrahepatic cholangiocarcinoma
- Chondrosarcoma
- Glioma
- Other advanced solid tumors

Phase 1 dose escalation study in advanced solid tumors

- Study initiated in March 2014
- First data expected in 4Q 2015
- IDH1m+
- Assess clinical activity, safety and tolerability of AG-120 as single agent
- Administered orally in 28-day cycles
- Assess 2HG levels, differentiation & efficacy
- Agios retains U.S. development & commercialization rights

AG-881: Brain Penetrant, Pan-IDH Inhibitor Now in Clinical Development

Two Phase 1 Studies Initiated

Phase 1
IDH1 or IDH2m+

Advanced solid tumors

- Study initiated in June 2015
- Assess safety, tolerability and clinical activity of AG-881 as a single agent
- Administered orally in 28-day cycles
- Assess 2HG levels, differentiation & efficacy

Advanced hematologic malignancies

- Study initiated in August 2015
- IDH1m+ or IDH2m+ patients whose cancer progressed on prior IDH inhibitor therapy eligible
- Purpose and dosing schedule same as above

Joint worldwide development & 50/50 profit share with Celgene

AG-348: Wholly Owned Pyruvate Kinase (PK) Deficiency Program

Current Development Status

Phase 1 – Healthy Volunteers

- Completed Single Ascending Dose (SAD) Phase 1 Study
- Completed Multiple Ascending Dose (MAD) Phase 1 Study

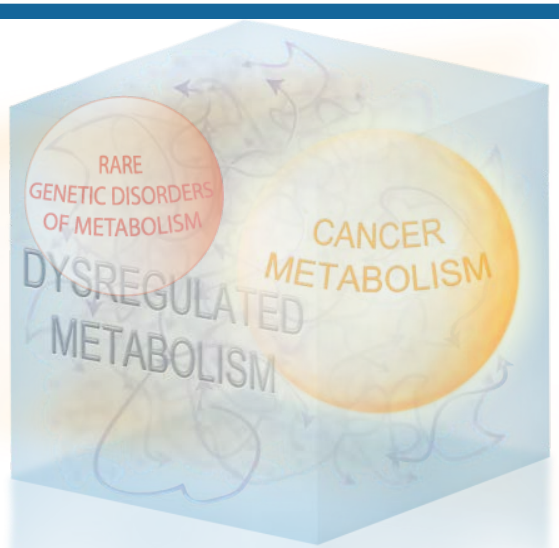
Phase 2 – First-in-Patient

DRIVE PK:

- Initiated in June
- Global, open-label safety & efficacy trial
- Adult, transfusion-independent patients
- Two arms with 25 patients each exploring 50 mg BID and 300 mg BID doses
- Six-month dosing period with opportunity for continued treatment

GLENN GODDARD

SVP, Finance



Selected Second Quarter Financial Results & 2015 Guidance

Strong Financial Position to Advance Multiple Programs into Late-Stage Development

- Ended 2Q 2015 with $434 million in cash, cash equivalents and marketable securities
- Celgene collaboration provides significant ongoing financial commitment, including R&D funding, potential milestones and royalties

Second Quarter 2015 Selected Financial Summary

Balance Sheet	June 30, 2015	December 31, 2014
Cash, cash equivalents and marketable securities	$434.0M	$467.4M
Total Assets	$474.4M	$491.9M

Statement of Operations	June 30, 2015	June 30, 2014
Collaboration Revenue(1)	$13.2M	$8.4M
Research & Development Expense(2)	$36.4M	$22.6M
General and Administrative Expense	$8.9M	$4.2M

(1) Collaboration revenue increased due to the application of new accounting guidance to the Company's collaboration arrangements with Celgene (2010 agreement and AG-881 agreements)
(2) During 1Q15, the Company began offsetting R&D expense for amounts received from Celgene for reimbursement of costs related to our IDH programs. R&D expense reported for the three months ended June 30, 2015 is presented net of $4.5 million, compared to no offset for cost reimbursement for the comparable period in 2014.

Now expect to end 2015 with cash position of more than $350M

Does not include any additional program-specific milestone payments

2015/2016 Potential Product Milestones

Entering Late-Stage Development: Initiating Multiple Studies

AG - 221

- ✓ *Added fifth heme expansion cohort*
- ✓ *First data from heme expansion cohorts (EHA)*
- Initiate global Ph 3 in R/R AML (by end of 2015)
- Initiate combination trials for frontline AML (by end of 2015)
- Ongoing solid tumor Phase 1/2 study (2015)

AG - 120

- ✓ *Added heme expansion cohorts*
- ✓ *New data from Ph 1 dose escalation (EHA)*
- First Ph 1 solid tumor data (4Q 2015)
- Initiate combination trials for frontline AML (by end of 2015)
- Initiate global Ph 3 in AML (1H 2016)

AG - 881

- ✓ *Initiate Phase 1 clinical development (2Q 2015)*

Cancer Metabolism

AG - 348

- ✓ *Final MAD data (EHA)*
- ✓ *First data from Natural History study (EHA)*
- ✓ *Ph 2 trial in PK deficiency patients (1H 2015)*

Rare Genetic Metabolic Disorders