Akebia Therapeutics, Inc.

Morgan Stanley Global Healthcare Conference

September 8, 2014

Akebia THERAPEUTICS

Forward-Looking Statements

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Akebia THERAPEUTICS

Akebia Therapeutics – Developing a New Paradigm in the Treatment of Anemia

Developing novel proprietary therapeutics based on hypoxia inducible factor (HIF) biology and commercializing these products for patients with kidney disease

- Lead Program: AKB-6548 is a once-daily, oral therapy with best-in-class potential to treat anemia related to CKD
  - Expect Phase 2b non-dialysis study results Q4 2014
  - Initiate Phase 2 dialysis study Q3 2014
  - Plan to commercialize AKB-6548 in U.S.
  - Retain commercial rights to AKB-6548
  - Maintain patent protection on composition of matter into 2028
  - Pursue lifecycle opportunities in other indications
- Additional HIF compounds with potential to treat broad range of serious diseases
  - AKB-6899: Preclinical development for oncology and ophthalmology
- Experienced management team; track record of successful drug development and commercialization, including in renal market
- Strong cash position $124.2 million 6/30/2014

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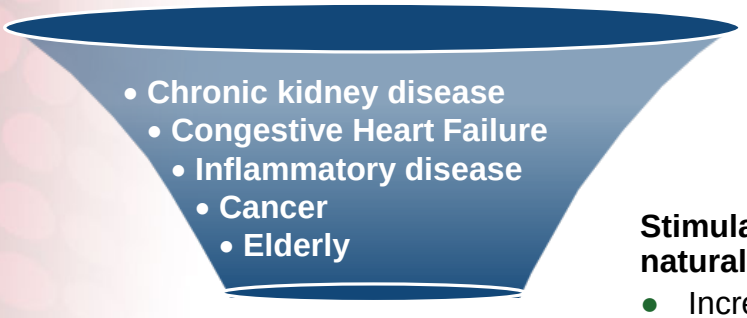
Anemia Overview



Anemia

- Chronic fatigue
- Increased risk of progression of multiple diseases
- Higher mortality rates
- More frequent hospitalization
- Increases in CV morbidity

Stimulation of body's natural response to anemia

- Increases hemoglobin
- Stabilizes iron supply

HIF

Developing AKB-6548 to:

- ✓ Safely and predictably raise hemoglobin levels
- ✓ Offer robust pharmacodynamics and substantially lower peak EPO levels
- ✓ Restore normal diurnal EPO pattern
- ✓ Reduce the need for IV or oral iron supplementation

* In anemia secondary to CKD

rESAs

EPO receptor binding and saturation

- Increases hemoglobin

WARNING: ESAs INCREASE THE RISK OF DEATH, MYOCARDIAL INFARCTION, STROKE, VENOUS THROMBOEMBOLISM, THROMBOSIS OF VASCULAR ACCESS AND TUMOR PROGRESSION OR RECURRENCE

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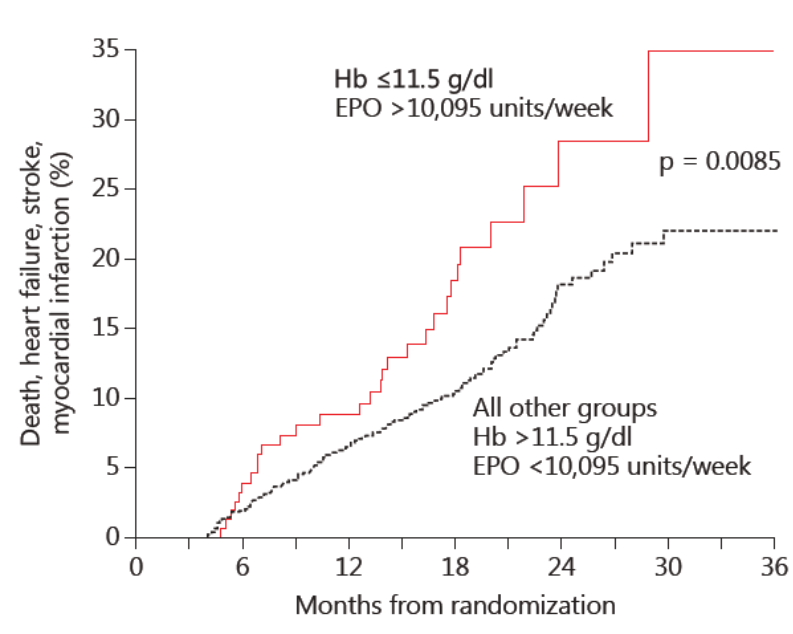
rESAs Safety Risks

Patients administered high doses of rESA experienced increased mortality and adverse cardiovascular events

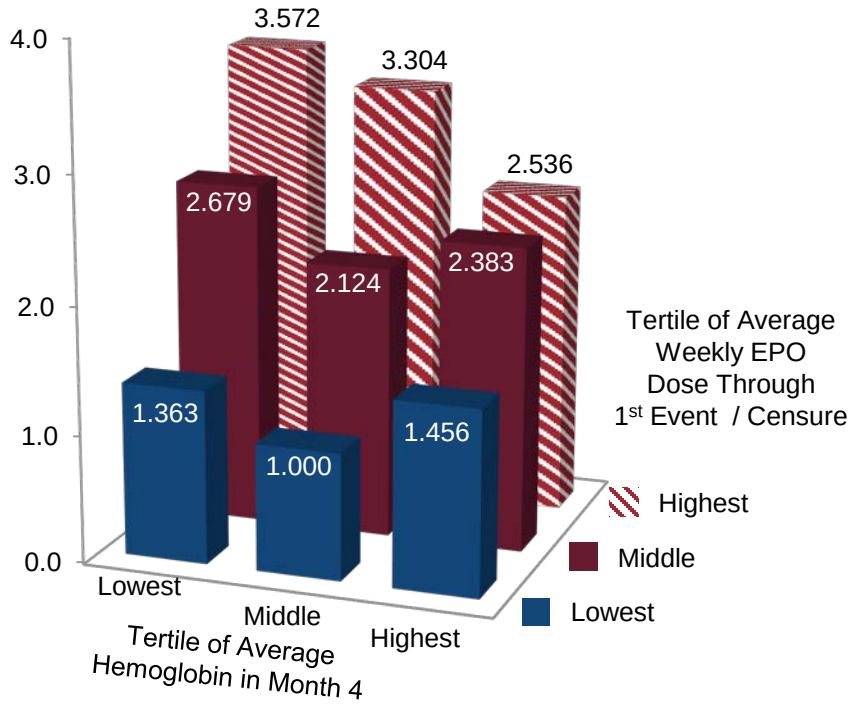
Kaplan-Meier Survival Curves

Death, Heart Failure, Stroke, Myocardial Infarction (%)



Cox Proportional Hazards

Hazard Ratio



Goal: Treat Anemia Without Excessive EPO Elevation

Source:
McCullough P.A. · Barnhart H.X. · Inrig J.K. · Reddan D. · Sapp S. · Patel U.D. · Singh A.K. · Szczech L.A. · Califf R.M. Am J Nephrol 2013;37:549-558 (DOI:10.1159/000351175); Permission granted by S. Karger AG, Basel.

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AKB-6548 – The Potential Solution

- Predictable, meaningful and sustained improvements in hemoglobin levels
- Robust pharmacodynamics and substantially lower peak EPO levels than with injectable rESAs
- A dosing regimen that potentially restores the normal diurnal EPO pattern, through differentiated PK profile
- Reduce the need for IV or oral iron supplementation to patients treated for anemia secondary to CKD
- Once-a-day therapy delivered orally

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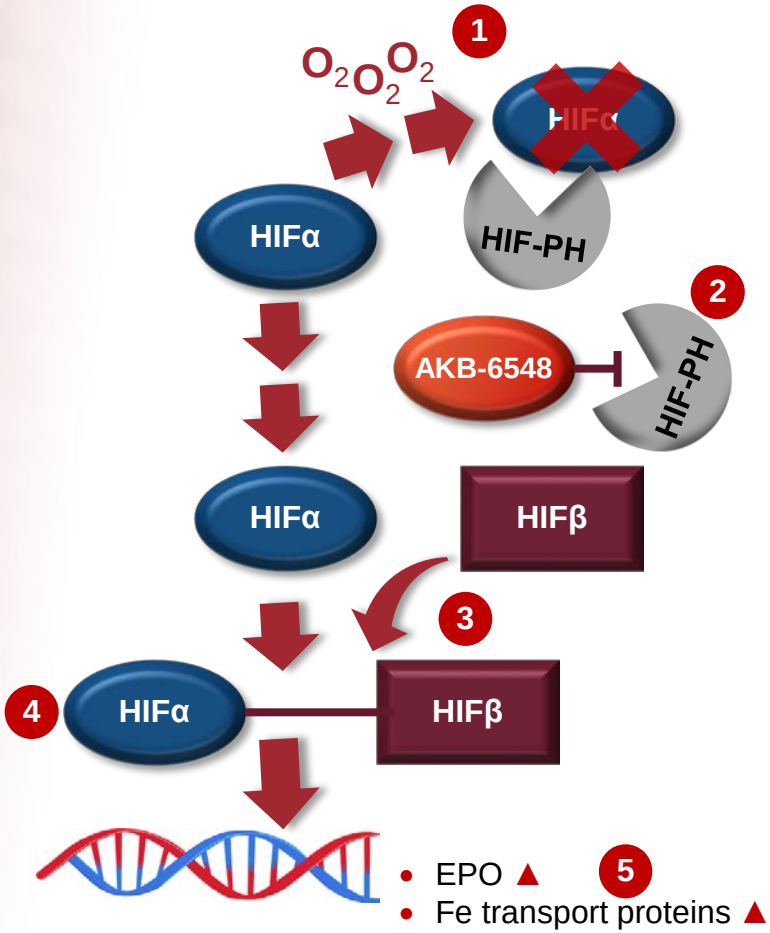
AKB-6548 Developed to Increase RBC Production by Stabilizing HIF2α

AKB-6548's Novel Mechanism of Action



1. HIF-PH normally targets HIFα for destruction
2. AKB-6548 inhibits HIF-PH activity resulting in higher levels of HIFα in the cytoplasm
3. HIFα binds with HIFβ in the nucleus
4. The HIFα and HIFβ complex leads to increased transcription of EPO and increased transcription of iron transfer proteins
5. The increase in EPO and iron in the bone marrow lead to increased hemoglobin and red blood cell production

▲ Hemoglobin and RBC formation

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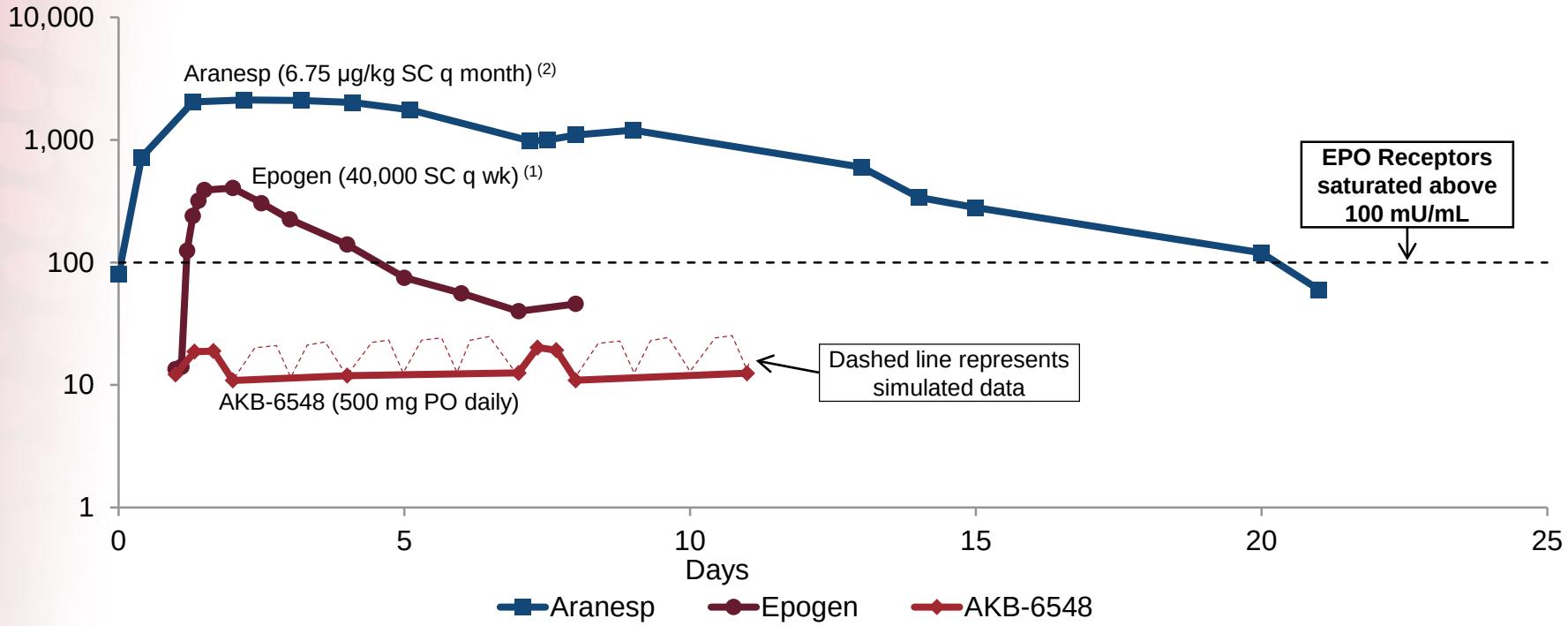
AKB-6548 Has Potential to Restore Diurnal EPO Response

EPO vs. Time by Study

Log Scale for EPO Concentration (mU/mL)



(1) Source: Arroliga, et al., Crit Care Med 2009, Vol. 37, No. 4.
(2) Source: Glaspy, et. al., European Journal of Cancer 41 (2005) 1140-1149. Data based on original Aranesp measurements as adjusted for the higher inherent potency of Aranesp.

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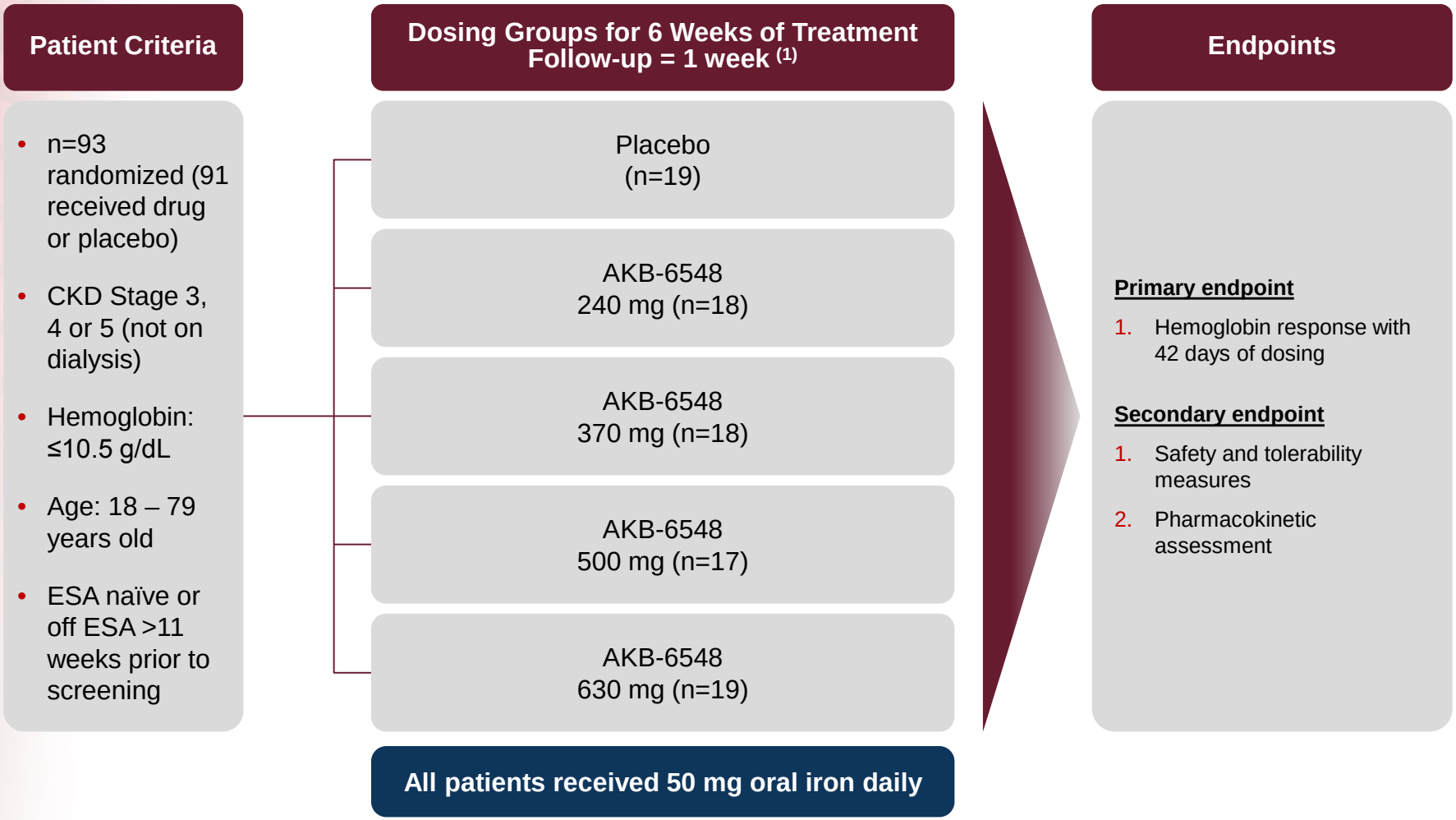
Phase 2a Randomized, Double-blind, Placebo Controlled Study of AKB-6548 in Patients with CKD (Stages III-V)



(1) Depending upon hemoglobin response, patients may have had their initial dose titrated to avoid too rapid of a rise in hemoglobin levels.

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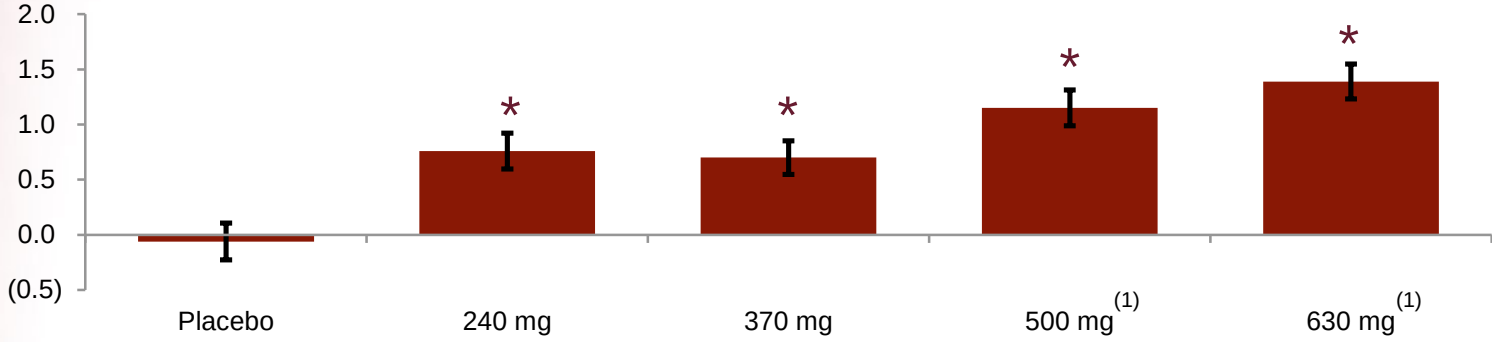
AKB-6548 Demonstrated Statistically Significant Increase in Hemoglobin Levels and Iron Mobilization

Patients' measured hemoglobin levels increased in a dose-dependent manner without exceeding 13 g/dL throughout the study period

AKB-6548's Effect on Hemoglobin Levels

Change in Hemoglobin from Baseline to Week 6 (g/dL)

Primary ANOVA p <0.0001



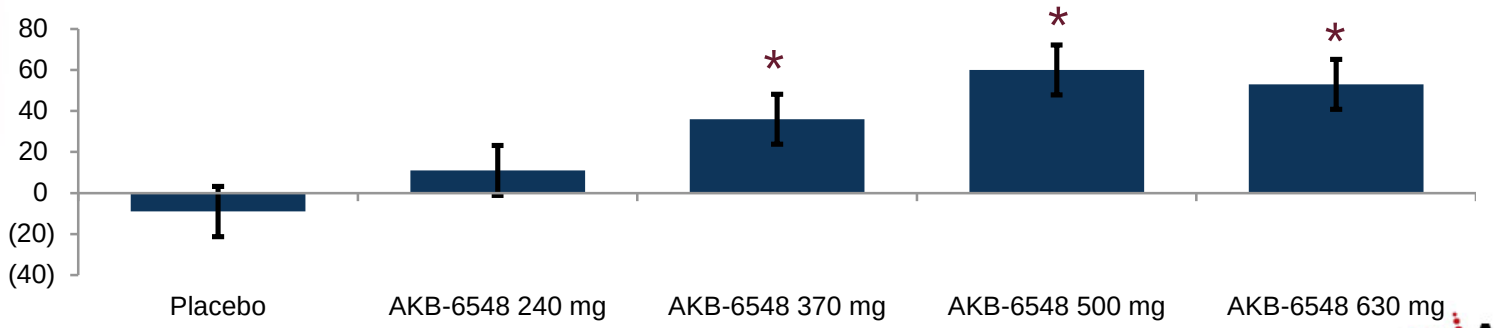
(1) 25% of patients in 630mg and 10% of patients in 500mg had their doses reduced by Week 4.
*Two tailed paired t-test of hemoglobin: Baseline vs. Week 6 p <0.01.

AKB-6548 may reduce the need for iron supplementation in CKD patients

Total Iron Binding Capacity Levels (TIBC) in Week 6

(ug/dL)

*** p < 0.01**



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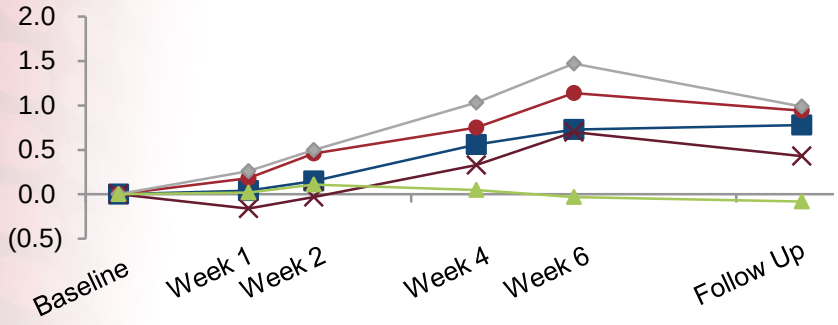
Significant Increase in Hemoglobin Levels Without Altering Baseline EPO Shown

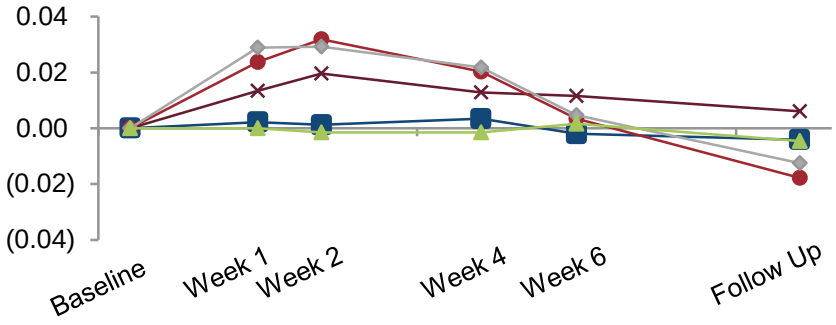
Sustained Increase in Hemoglobin

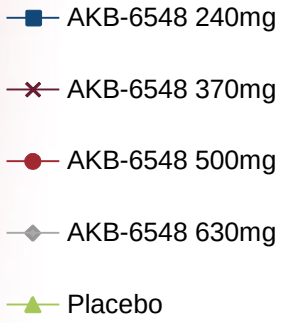
AKB-6548's Effect on Hemoglobin



Simulated Normal Physiologic Response to Anemia

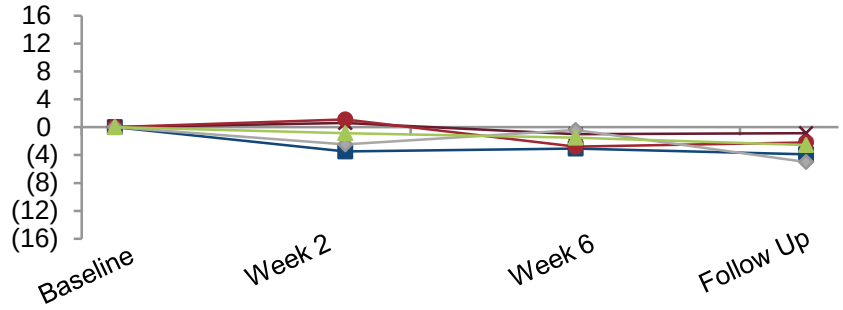
AKB-6548's Effect on Reticulocytes





Increase in Hemoglobin Levels Occurred Without Increasing Pre-dose EPO Levels

AKB-6548's Effect on EPO



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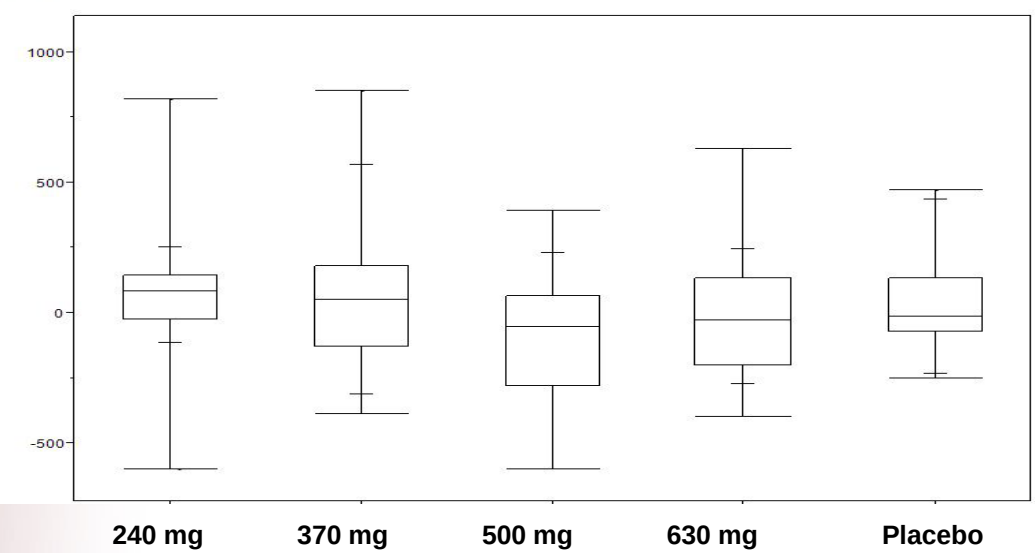
Phase 2a Safety Profile

Category	AKB-6548 240 mg N=18 (%)	AKB-6548 370 mg N=18 (%)	AKB-6548 500 mg N=17 (%)	AKB-6548 630 mg N=19 (%)	Placebo N=19 (%)
Any TEAE	9 (50.0)	6 (33.3)	8 (47.1)	11 (57.9)	11 (57.9)
Drug-Related TEAE	3 (16.7)	2 (11.1)	2 (11.8)	3 (15.8)	1 (5.3)
Serious TEAE	2 (11.1)	3 (16.7)	1 (5.9)	1 (5.3)	1 (5.3)
Deaths	0	1 (5.6)	0	0	0
Drug-Related serious TEAE	0	0	0	0	0

- AKB-6548 was generally well tolerated
- Adverse events were evenly distributed across the dosing groups with no apparent dose related effect
- None of the SAEs were considered to be drug related

VEGF Change from Baseline (pg/mL)



- **VEGF:** Necessary for the maintenance of healthy kidney function, however, increases in VEGF levels have been linked to growth of tumors in patients who already have cancer. VEGF was unchanged from baseline.
- **C-Reactive Protein:** Biomarker for inflammation and cardiovascular disease was unchanged from baseline
- **Cystatin-C:** Biomarker for kidney health, with increases linked to a decline in kidney function and to kidney disease, was unchanged from baseline

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Phase 2b Randomized, Double-blind, Placebo Controlled Study of AKB-6548 in Patients with CKD (Stages III-V)

Patient Criteria

- n=200 (randomized 2:1)
- CKD Stage 3, 4 or 5 (not on dialysis)
- Age: > 18 years old
- **Group 1:** rESA naïve with HGB ≤10.5 g/dL (1)
- **Group 2:** Previously treated with HGB ≤10.5 g/dL and off rESA >11 weeks (1)
- **Group 3:** Actively treated (2) with HGB ≥ 9.5 and ≤ 12.0 g/dL (1)(3)

20 Weeks of Treatment Follow-up = 4 weeks

Initiate treatment at 450 mg; adjust dose according to hemoglobin response

Placebo

AKB-6548 450 mg

All patients receive oral iron therapy to maintain Ferritin between 50 – 300 ng/mL

Endpoints

Percent of subjects:

1. Achieving or maintaining a mean HGB of ≥11.0 g/dL (average of Weeks 19 and 20)

OR

2. Increasing their HGB by ≥ 1.2 g/dL (average of Weeks 19 and 20) over their pre-dose average (2)

rESA Rescue

Allow rescue with rESA after Week 6 if worsening anemia

(1) At the time of screening
(2) Subjects being actively and consistently treated with a stable dose of an rESA for a minimum of 4 months prior to screening, and where the dose of rESA has not changed during the last two dose administrations
(3) Subjects will have their rESA discontinued prior to randomization. Randomization and first dose of study medication in Group 3 should occur at approximately the same time that the subject would have otherwise received the next dose of their prior rESA therapy.

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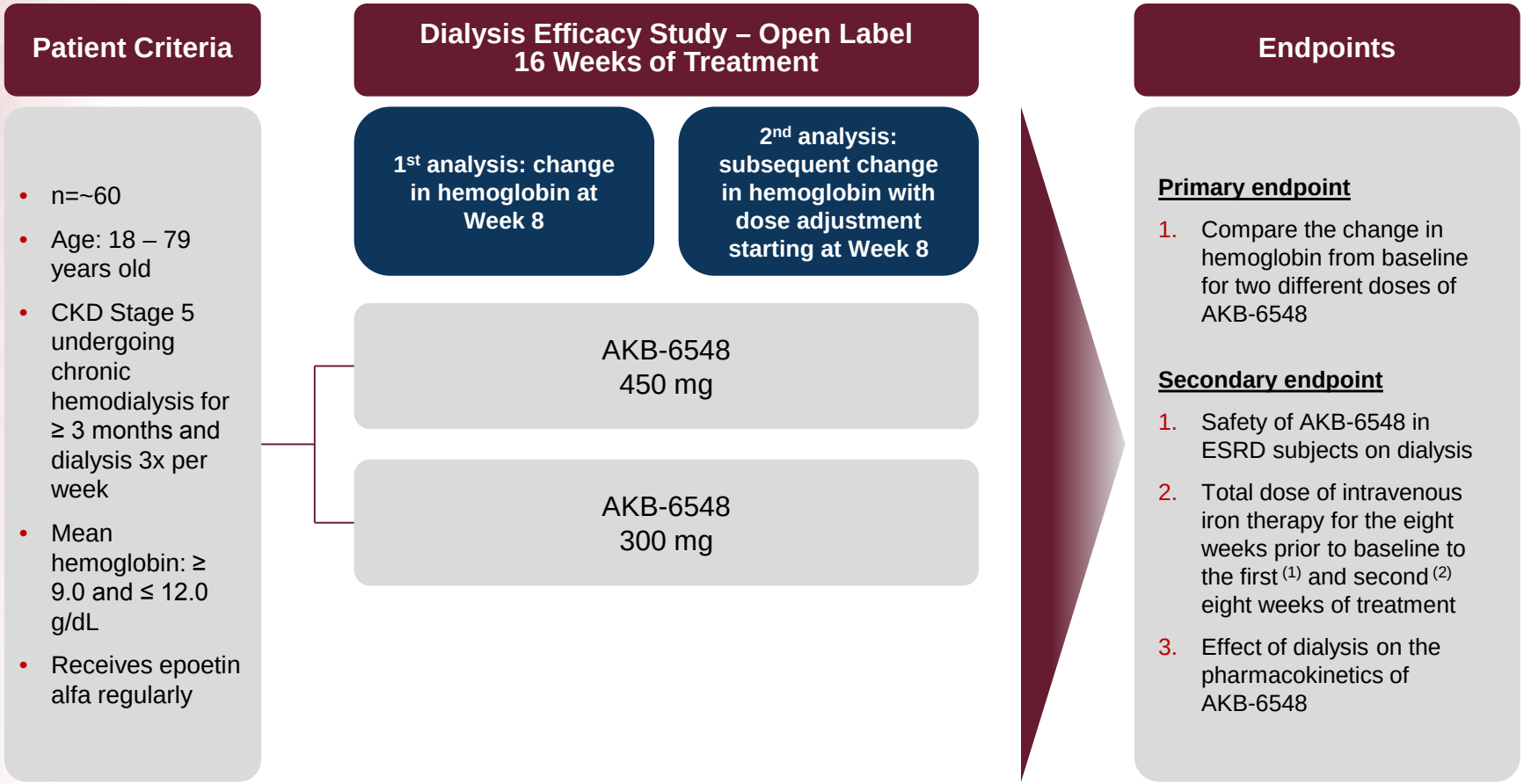
AKB-6548 Dialysis Efficacy Study Data Available Q3 2015



(1) First eight weeks include Weeks 1 – 8.
(2) Second eight weeks include Weeks 9 – 16.

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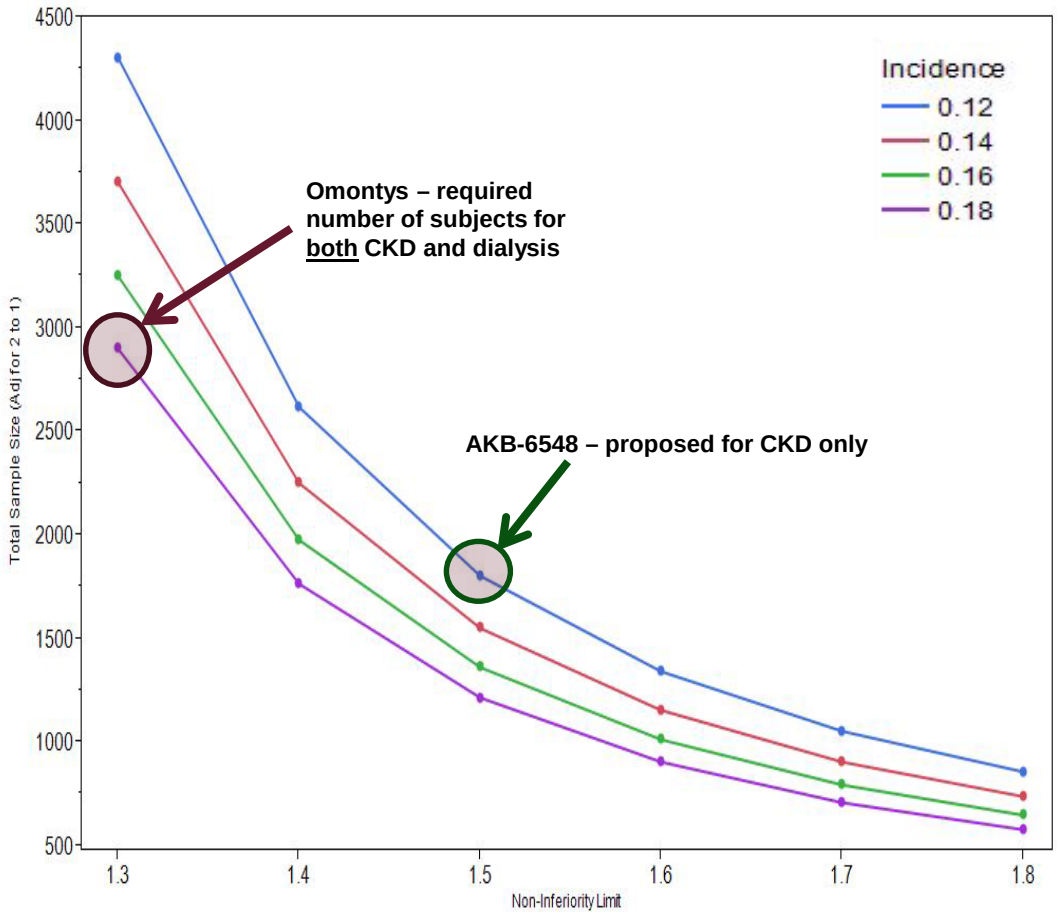
AKB-6548 Projected Phase 3 Development Plan

Study Criteria

- Primary two studies will be double-blind, randomized and placebo controlled
- Anticipated goal will be to raise hemoglobin levels to >10.5 g/dL
- Trials will be based on the Omontys® (peginesatide) approval studies
- Allow rESA rescue for subjects with declining hemoglobin
- Total number of subjects to be studied will be determined by a margin required for non-inferiority meta-analysis of cardiovascular events
- Designed to be applicable for global development

Anticipated Safety Study Sizing



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Potential Safety Benefit to Drive a Competitive Shift to HIF Class

$7 billion market despite major safety risks

Marketed rESAs

- Epogen® and Aranesp® (Amgen)
- Procrit® and Eprex® (J&J)
- Mircera® and Neorecormin® (Roche)

Success of biosimilars limited by same safety concerns

rESA biosimilars competition

- Potential US launch of epoetin alpha biosimilars
- Likely increasing share in EU and ROW

Improved safety and oral dosing address unmet need

Paradigm shift to HIF class will drive market growth

- Akebia AKB-6548
- Fibrogen FG-4592
- GSK GSK-1278863
- Bayer BAY-853934

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Commercial Strategy and Intellectual Property

Commercial Strategy

- US
  - ~7,000 nephrologists treat CKD patients
  - ~125 person specialty commercial organization will address this market
  - Opportunistically expand commercial portfolio to leverage this commercial infrastructure
- International Markets
  - We intend to seek commercial collaborators for Europe and Asia

Intellectual Property

- AKB-6548 patent protection
  - Composition of matter (2028)
  - Pharmaceutical compositions (2028)
  - Methods of treating anemia (2027)
- Pending applications cover manufacturing, formulations, dosing, polymorph, and mechanisms of action
- Worldwide patent estate for AKB-6548 and AKB-6899 include:
  - 24 issued patents and allowed applications
  - 38 pending utility and provisional applications

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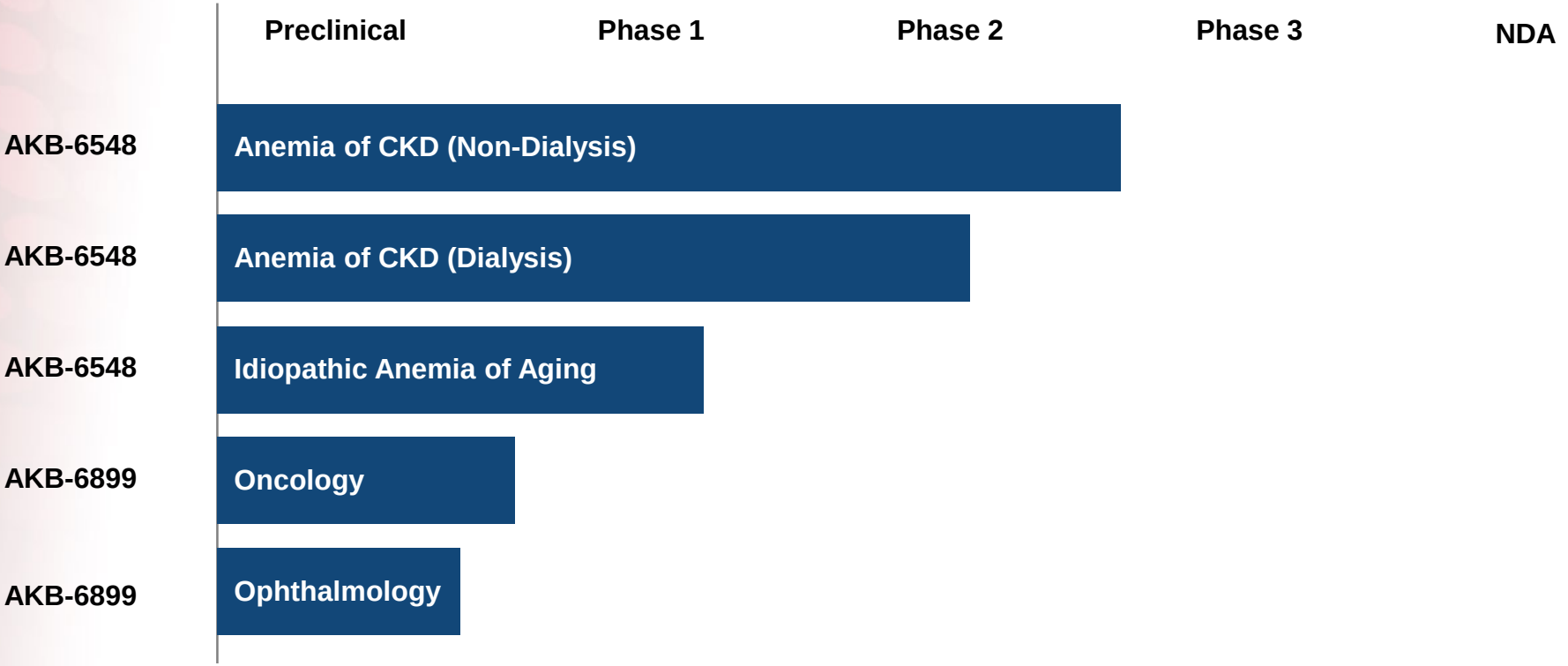
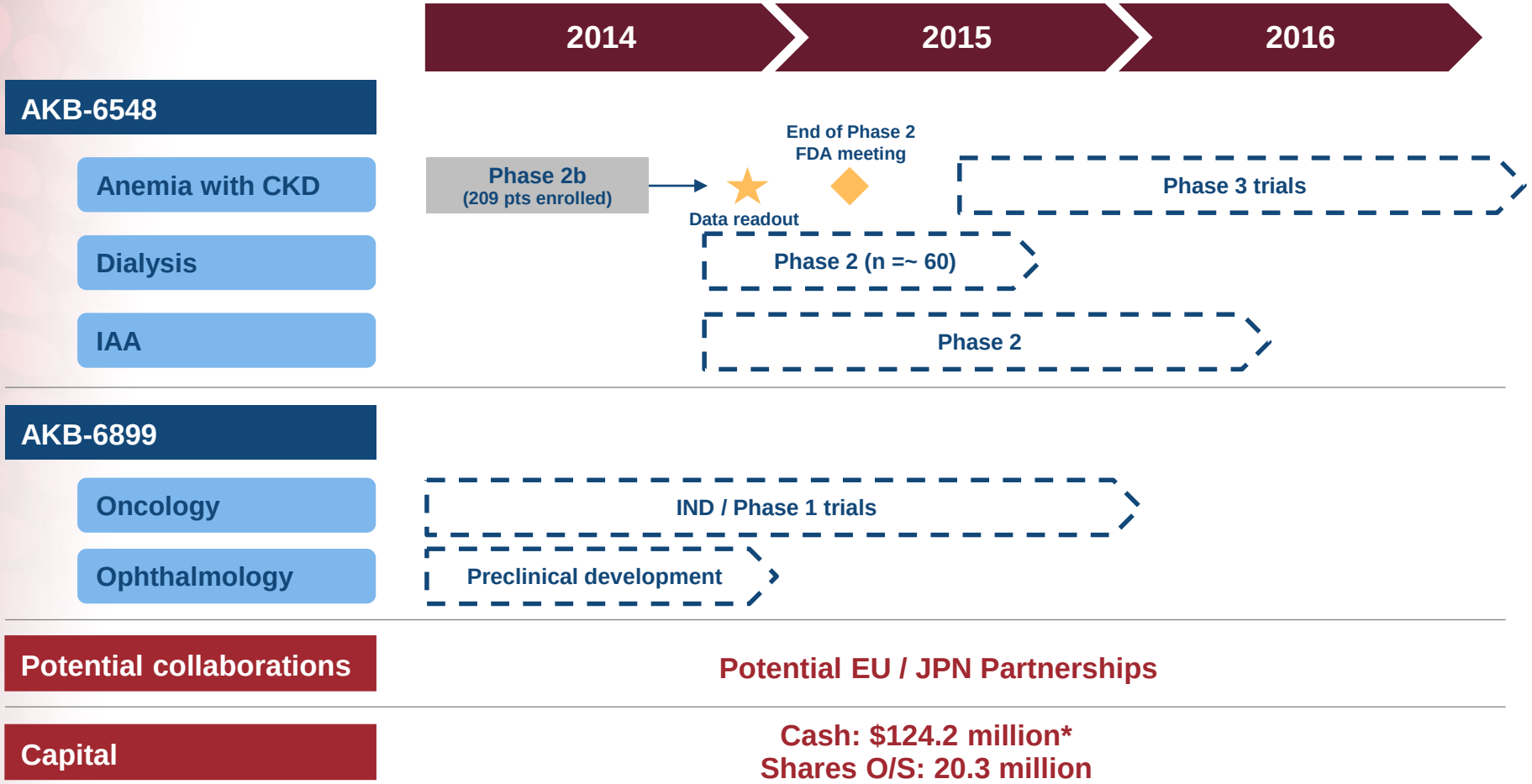
Akebia Therapeutics – R&D Pipeline

- *Our Mission is to Deliver Therapeutic Advances to Patients with Serious Diseases through the Biology of HIF*



Value Drivers and Capital Position



*Represents cash, cash equivalents and short-term investments as of 6/30/14.

Ongoing In planning

Experienced Executive Team

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