The background of the slide features a photograph of two individuals in a professional setting. On the left, a man with glasses is shown in profile, smiling and looking towards the right. On the right, a woman with glasses is also smiling and looking towards the left. The image is overlaid with a semi-transparent teal color that has a geometric, triangular shape on the right side. The company name 'Akebia' is written in a large, bold, white sans-serif font, with a registered trademark symbol (®) to its upper right. Below it, the word 'THERAPEUTICS' is written in a smaller, all-caps, white sans-serif font.

# Akebia<sup>®</sup>

THERAPEUTICS

A FULLY INTEGRATED BIOTECH  
COMPANY FOCUSED ON KIDNEY  
DISEASE

John P. Butler  
President and CEO

(Nasdaq: AKBA)

## CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

Statements in this presentation regarding Akebia's strategy, plans, prospects, expectations, beliefs, intentions or goals are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including but not limited to statements regarding the expected period of time our resources can fund operations, and the components of such resources; the optimization of cash resources; the timing, availability and presentation of clinical trial data and results; development, launch, commercial availability and the commercial potential, growth potential and market opportunity for our product and, if approved, our product candidates, and the drivers, timing, impact and results thereof; our strategy, mission and objectives; potential for our product candidates to set a new standard of care; the potential benefits of our product candidates; our relationships with the nephrology community; and the anticipated timing of preclinical, clinical and regulatory developments and the design, timing and results of our studies; the assessments and evaluations we expect from our clinical programs. The terms "estimate," "expect," "growth," "momentum," "mission" "opportunity," "positioned," "potential," "vision" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement, including the actual product revenues for Auryxia (ferric citrate); the timing of generic entrants for Auryxia, vadadustat or any other product candidates; the rate of enrollment in clinical studies of vadadustat; the risk that clinical trials may not be successful; the risk that existing preclinical and clinical data may not be predictive of the results of ongoing or later clinical trials;

manufacturing risks; the quality and manner of the data that will result from clinical studies of vadadustat; the actual funding required to develop and commercialize our product candidates and operate the company, and the actual expenses associated therewith; efficacy, safety and tolerability of our products and product candidates; the risk that clinical studies need to be discontinued for any reason, including for safety, tolerability, enrollment, manufacturing or economic reasons; early termination of any of Akebia's collaborations or license agreements, and the parties' ability to satisfy their obligations under such agreements; the timing and content of decisions made by regulatory, judicial or similar authorities; the timing of any additional studies initiated for vadadustat; the actual time it takes to initiate and complete research and clinical studies; the success of competitors in developing product candidates for diseases for which we are currently developing our product candidates; the scope, timing, and outcome of any ongoing legal proceedings; changes in the economic and financial conditions of our or our partners' businesses; and our ability to obtain, maintain and enforce patent and other intellectual property protection for Auryxia, vadadustat and our other product candidates. Other risks and uncertainties include those identified under the heading "Risk Factors" in Akebia's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, filed with the SEC, and other filings that Akebia may make with the SEC in the future. These forward-looking statements (except as otherwise noted) speak only as of the date of this presentation, and Akebia does not undertake, and specifically disclaims, any obligation to update any forward-looking statements contained in this presentation. Vadadustat is an investigational drug and has not yet been approved by the U.S. Food and Drug Administration (FDA) or any regulatory authority.

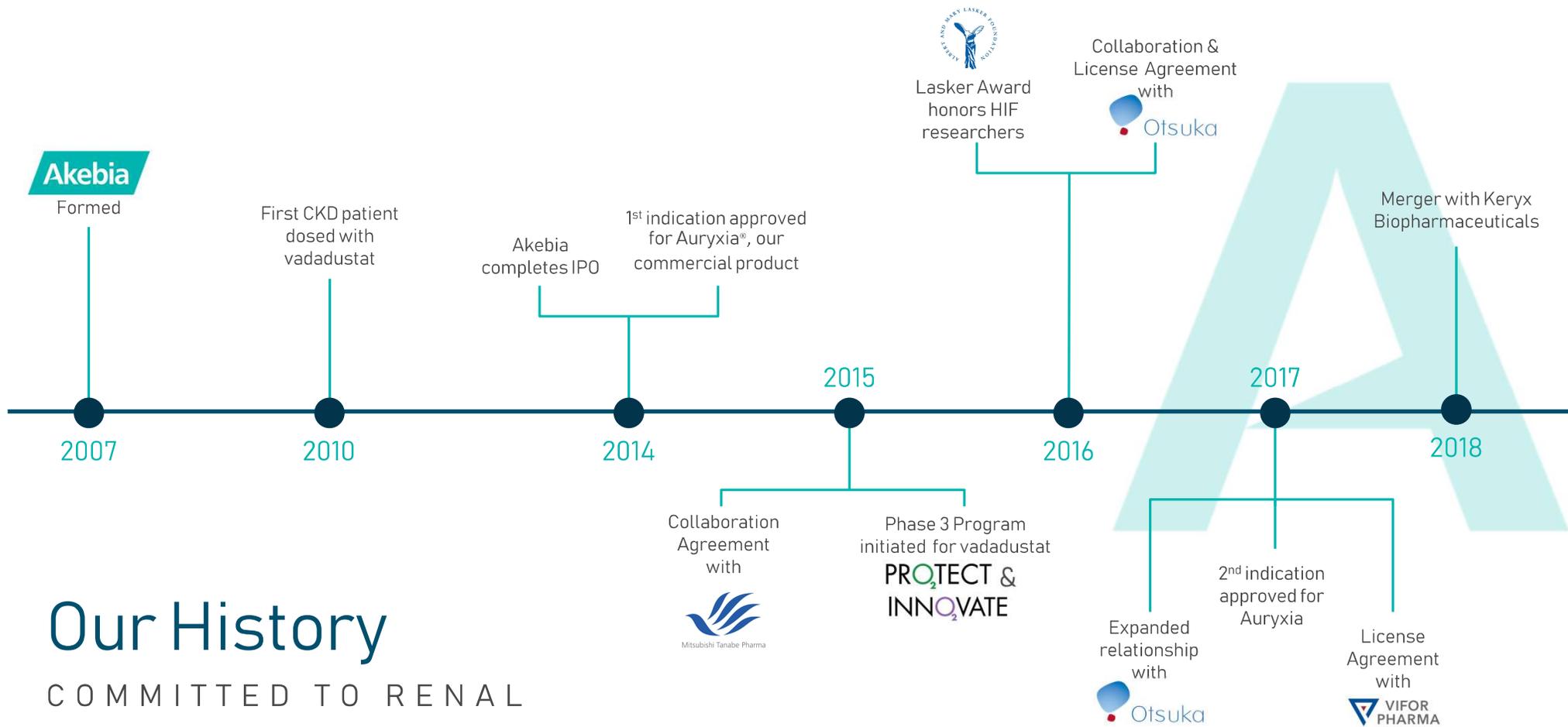


OUR PURPOSE

To Better the Life of  
Each Person  
Impacted by Kidney  
Disease



# Akebia



## Our History

COMMITTED TO RENAL

Vadadustat is an investigational HIF PH inhibitor that is not approved by the FDA or any other regulatory authority.

# KEKOLA<sup>®</sup> THERAPEUTICS

### 2019 MILESTONES

- Positive Phase 3 Study Results for Vadadustat in Japan**
- Expanded Science Agreement with VIVOR PHARMA**
- ANDA Filing for Vadadustat (Japan)**
- Secured \$100M Non-Dilutive Term Loan Funding into Q1 2021**
- CLINICAL LEADERSHIP**  
Full enrollment of global Phase 3 studies for vadadustat, INNOVATE and PROTECT
- AURYXIA PATENT SETTLEMENT**  
Settlement with Auryxia Inc. regarding intellectual property
- Nobel Prize in Medicine**  
Awarded to Dr. Peter Doherty
- KERYX**  
Integration of Keryx

2019

### 2020 A DEFINING YEAR FOR AKEBIA

The countdown to our global Phase 3 data for vadadustat has begun!

- INNOVATE**  
TOPLINE DATA EXPECTED Q2 2020<sup>1</sup>  
INNOVATE enrolled 3,923 DD-CKD patients
- PROTECT**  
TOPLINE DATA EXPECTED MID 2020<sup>2</sup>  
PROTECT enrolled 3,513 NDD-CKD patients
- ANTICIPATE APPROVAL OF VADADUSTAT IN JAPAN**  
ANDA for marketing approval of vadadustat submitted in July 2019
- PRE-COMMERCIALIZATION ACTIVITIES UNDERWAY**  
Leveraging existing respiratory-focused commercial organization to increase disease awareness and aligning manufacturing strategies

2020



# 2019 MILESTONES



Positive Phase 3  
Study Results for  
Vadadustat in Japan



Expanded License  
Agreement with



Mitsubishi Tanabe Pharma  
JNDA Filing for  
Vadadustat  
(Japan)



Secured  
**\$100M**  
Non-Dilutive  
Term Loan  
Funding into Q1 2021\*



CLINICAL  
LEADERSHIP

Full enrollment of global Phase 3  
studies for vadadustat: INNO<sub>2</sub>VATE  
and PRO<sub>2</sub>TECT

AURYXIA PATENT  
SETTLEMENT

Reinforces strength of  
intellectual property



Nobel Prize  
in Medicine

Awarded to HIF Researchers



**KERYX**  
BIOPHARMACEUTICALS, INC.

Integration of  
Keryx

\* Includes \$145.6 million of cash, cash equivalents and available for sale securities as of 9/30/19, \$100 million tranching term loan, committed research and development funding from collaborators and receipt of a regulatory milestone from MTPC, assuming approval of vadadustat in Japan.

# 2020 A DEFINING YEAR FOR AKEBIA

The countdown to our global Phase 3 data for vadadustat has begun!

## INNO<sub>2</sub>VATE

TOPLINE DATA  
EXPECTED Q2 2020\*

INNO<sub>2</sub>VATE enrolled 3,923 DD-CKD patients

## PRO<sub>2</sub>TECT

TOPLINE DATA  
EXPECTED MID 2020\*

PRO<sub>2</sub>TECT enrolled 3,513 NDD-CKD patients



ANTICIPATE APPROVAL OF  
VADADUSTAT IN JAPAN

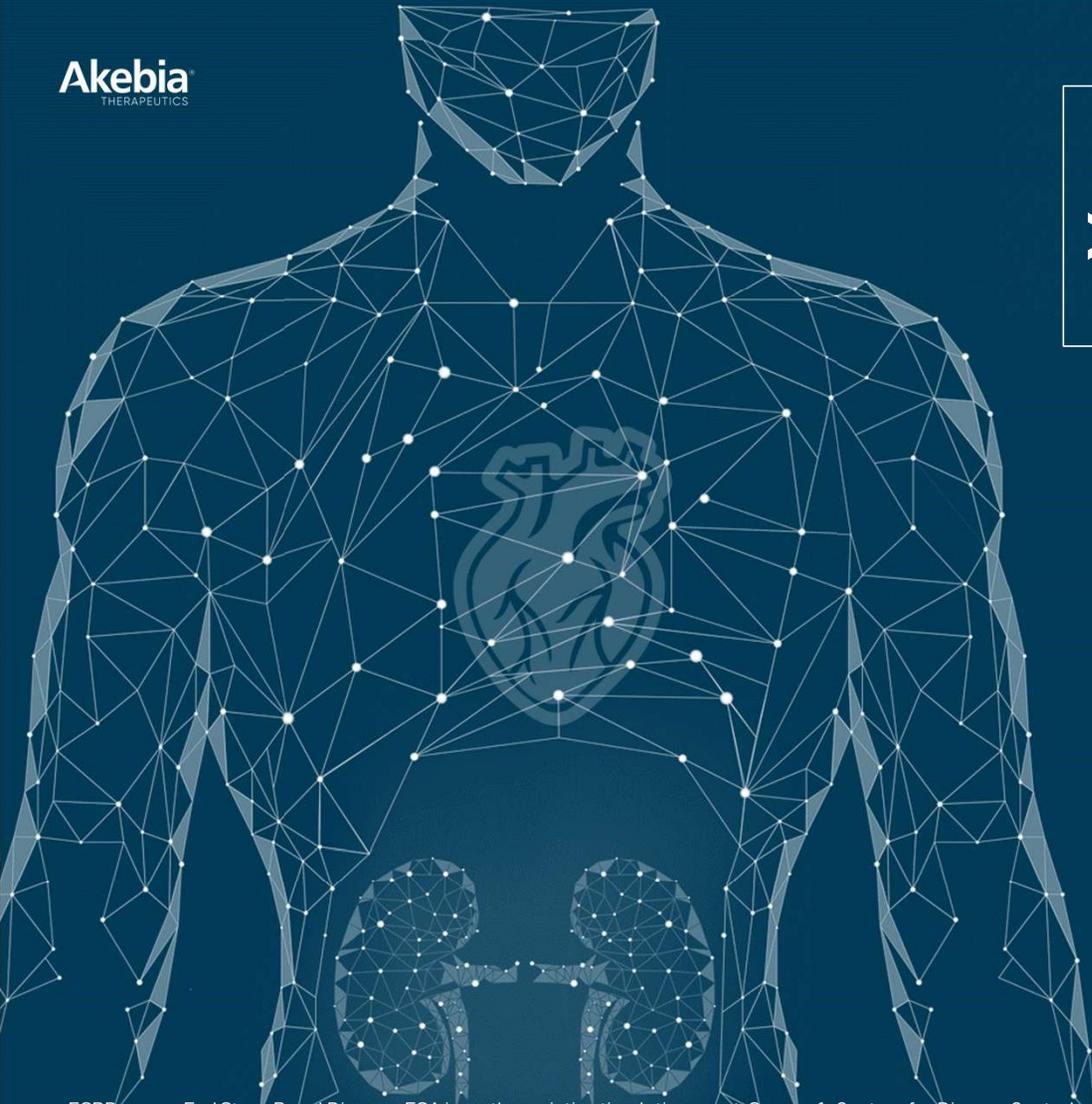
JNDA for marketing approval of  
vadadustat submitted in July 2019



## PRE-COMMERCIALIZATION ACTIVITIES UNDERWAY

Leveraging existing nephrology-focused  
commercial organization to increase disease  
awareness and aligning manufacturing  
resources

\*Subject to accrual of MACE.



KIDNEY DISEASE COSTS  
US MEDICARE

> \$120B

annually<sup>1</sup>

PATIENT POPULATION

5.7M

People in the US with  
anemia due to CKD<sup>2</sup>

ANEMIA DUE TO CKD:

## Unmet Needs

### BURDEN OF DISEASE

Quality of life: fatigue,  
weakness, dizziness,  
shortness of breath.

### CLINICAL IMPACT

Anemia due to CKD can contribute  
to risk of ESRD, Cardiovascular  
(CV) disease, stroke, cognitive  
impairment, CV-related  
complications and death

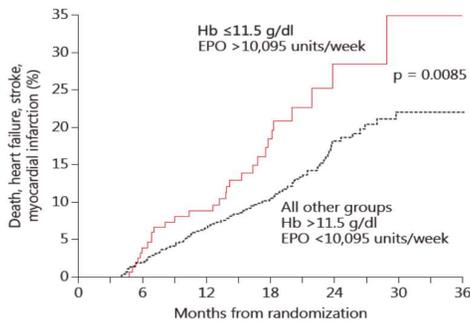
### CURRENT STANDARD OF CARE

Consists of injectable ESAs, which have been  
associated with significant CV risk

# LIMITATIONS of ESAs in Treating and Managing Anemia Due to CKD

HIGH EPO LEVEL IS ASSOCIATED WITH INCREASED CV RISK

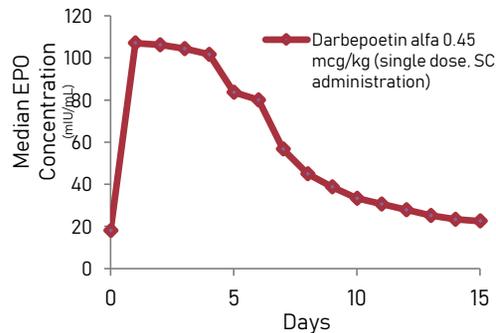
Kaplan-Meier Survival Curves<sup>1</sup>  
Death, Heart Failure, Stroke, Myocardial Infarction



Study Methods: post hoc analysis from the CHOIR trial. Inclusion criteria were Hb <math>< 11.0</math> g/dl and eGFR of 15–50 mL/min/1.73 m<sup>2</sup>. To be included in the present analysis, subjects needed to be free of the composite event at 4 months, receive epoetin-alfa, and have  $\geq 1$  postbaseline Hb measurement.

ESAs RESULT IN SUPRA-PHYSIOLOGICAL EPO LEVELS

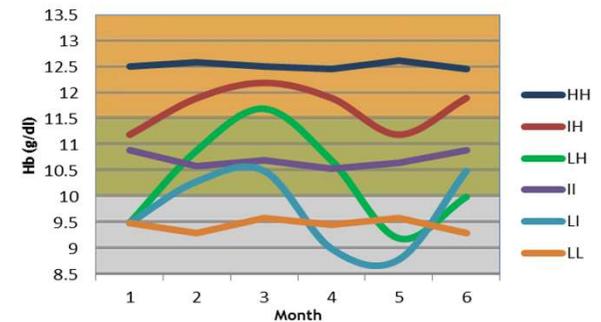
EPO vs Time with  
Darbepoetin Alfa (SC)  
PK-PD Model in CKD Subjects<sup>2</sup>



HGB VARIABILITY REMAINS<sup>3</sup>

Variability in Hemoglobin Levels in Hemodialysis Patients in the Current Era<sup>3</sup>

Figure 1. Idealized example of Hb variability groups



Distribution of demographics and comorbidity by Hb variability groups in 2012

	Overall	LL	II	HH	LI	IH	LH
Total patients, N	200,728	2,200	18,999	10,552	48,029	60,525	60,423

Study Methods: The study population consisted of maintenance HD patients as of October 1, 2012, with Medicare as primary payer during the baseline period (April 1 – September 30, 2012). Monthly Hb values were categorized as low (L), intermediate (I), or high (H), where L and H were based on monthly Hb values below or above the 25th and 75th percentiles, respectively. Hb variability was then classified into six groups based on the lowest and highest category during the six month observation period (LL, consistently low; II, consistently intermediate; HH, consistently high; LI, low-intermediate; IH, intermediate-high; LH, low-high).

HGB is hemoglobin. eGFR is estimated glomerular filtration rate. EPO is erythropoietin. Sources: 1. McCullough PA et al. Am J Nephrol 2013;37:549-558 (DOI:10.1159/000351175). Permission granted by S. Karger AG, Basel.; 2. Doshi S et al. J Clin Pharmacol. 2010;50(9 Suppl):755-90S (DOI:10.1177/0091270010377201). Original figure redrawn to depict darbepoetin alfa serum concentration (ng/mL/(mcg/kg)) converted to mIU/mL. Data from 6 clinical studies conducted with extensive PK sampling in CKD patients following subcutaneous (SC) administration of a single dose or first dose of a monthly dosing regimen ranging from 0.4-0.6mcg/kg, dose normalized to 0.45 mcg/kg.; 3. Chronic Disease Research Group, Gilbertson D et al. Variability in Hemoglobin Levels in Hemodialysis Patients in the Current Era. Presented at: American Society of Nephrology Kidney Week; Nov 2015; San Diego, CA. Funded by Akebia Therapeutics, Inc.

**Akebia**  
THERAPEUTICS

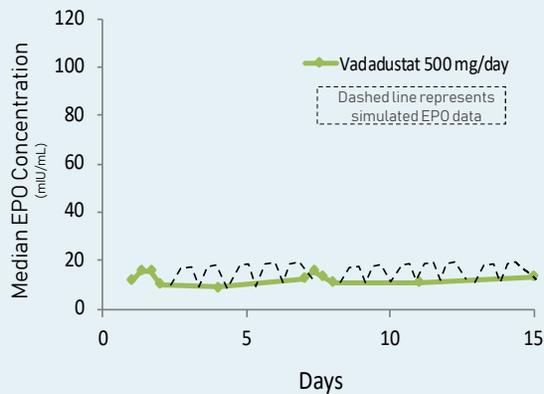
# VADADUSTAT

An investigational oral HIF PH inhibitor designed to stimulate endogenous EPO production

Sources: 1. Akebia Therapeutics, Inc. Data on File (2010). Data from Phase 1 study in healthy volunteers with vadadustat once daily dosing for 10 days. Pre-dose EPO concentrations were evaluated on Days 1, 4, 7, 11, 15 and 22. Post-dose data to assess acute rise in EPO following vadadustat dosing was only completed on Day 1 and Day 7 (8 and 16 hours post-dose). Dashed line represents estimated EPO levels based on post-dose data from Day 1 and Day 7.; 2. Nangaku M et al. Randomized, Open-Label, Active-Controlled (Darbepoetin Alfa), Phase 3 Study of Vadadustat for Treating Anemia in Nondialysis-Dependent Chronic Kidney Disease Patients in Japan. Presented at: American Society of Nephrology Kidney Week; Nov 9 2019; Washington, DC. (Mitsubishi Tanabe Pharma Corporation's (MTPC) Phase 3 randomized, open-label, active-controlled correction and conversion study assessed the efficacy and safety of vadadustat compared to darbepoetin alfa in 304 Japanese non-dialysis dependent subjects with anemia due to CKD, with a treatment duration of 52 weeks.)

## VADADUSTAT AVOIDED SUPRA-PHYSIOLOGICAL EPO LEVELS

EPO vs Time with Vadadustat (Oral)  
Phase 1 Study in Healthy Volunteers<sup>1</sup>

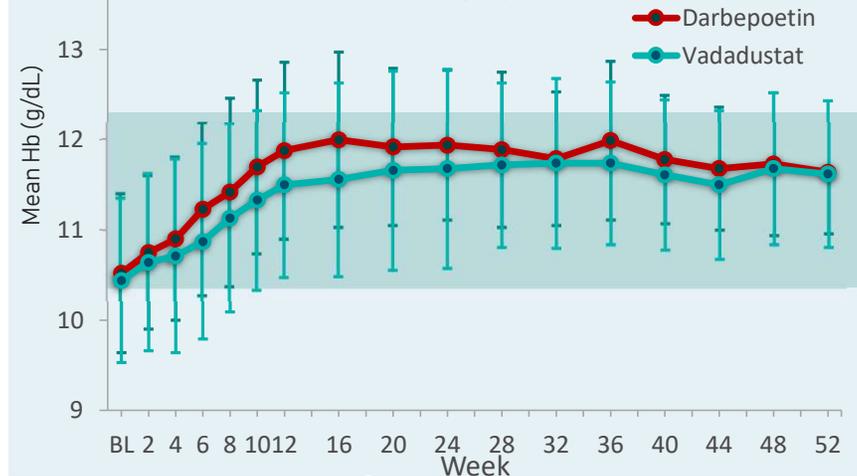


## VADADUSTAT'S EFFECT ON HEMOGLOBIN (HGB) WAS SUSTAINED THROUGH TO 52 WEEKS

Mean HGB Over Time

Non-Dialysis Dependent Patients

MTPC Phase 3 Randomized, Open-Label Active Controlled Correction and Conversion Study (Japan) -52 Weeks<sup>2</sup>



WITH THE GOAL OF

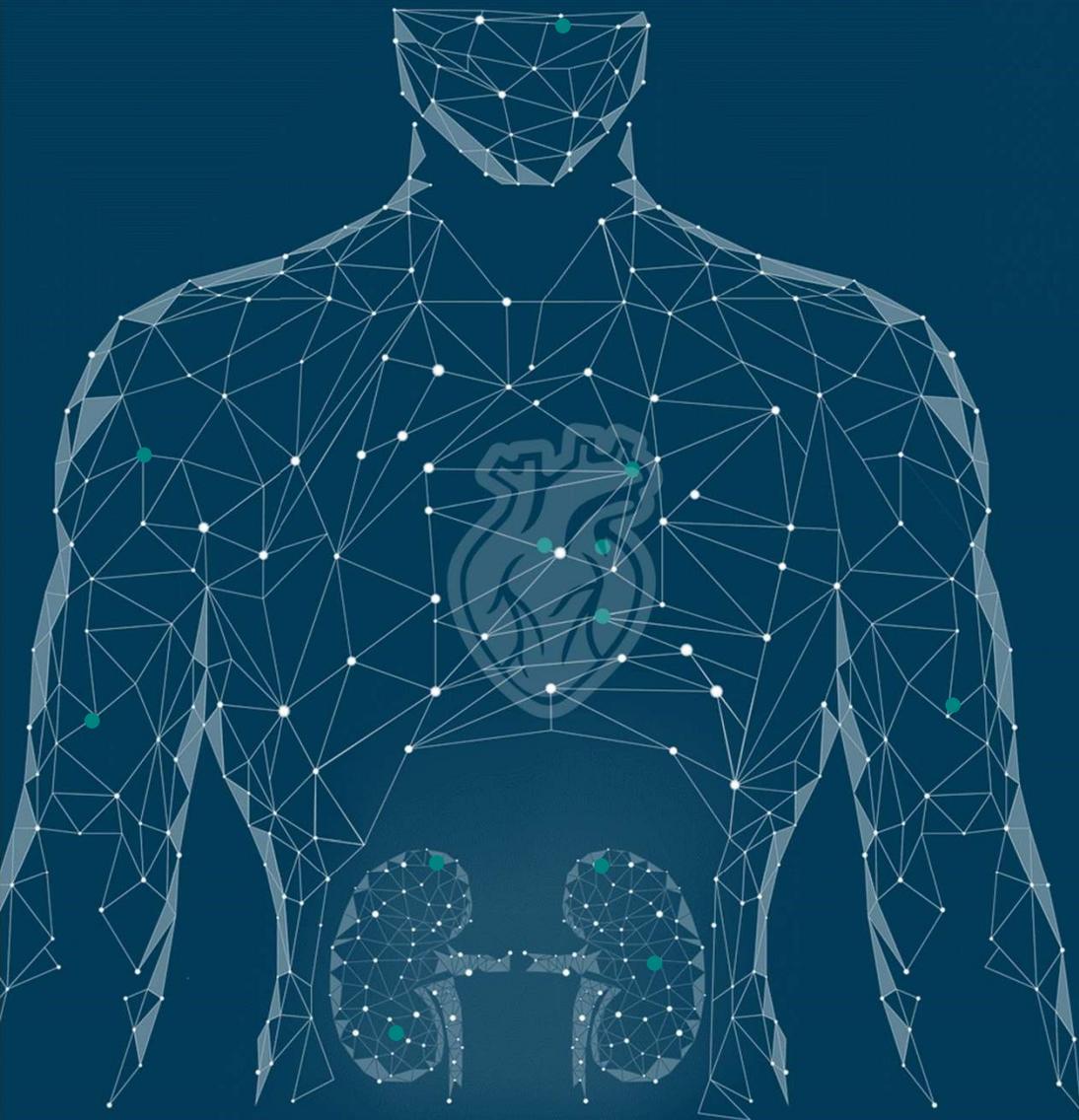
Maintaining  
EPO within  
physiologic  
range

Increasing  
HGB in  
predictable  
and controlled  
manner

Minimizing  
HGB  
excursions  
and cycling

Providing  
convenient  
dosing

Vadadustat's ongoing Phase 3 cardiovascular outcomes trials for anemia due to CKD in non-dialysis and dialysis patients are now fully enrolled and will be analyzing these parameters. Vadadustat is an investigational HIF PH inhibitor that is not approved by the FDA or any other regulatory authority.



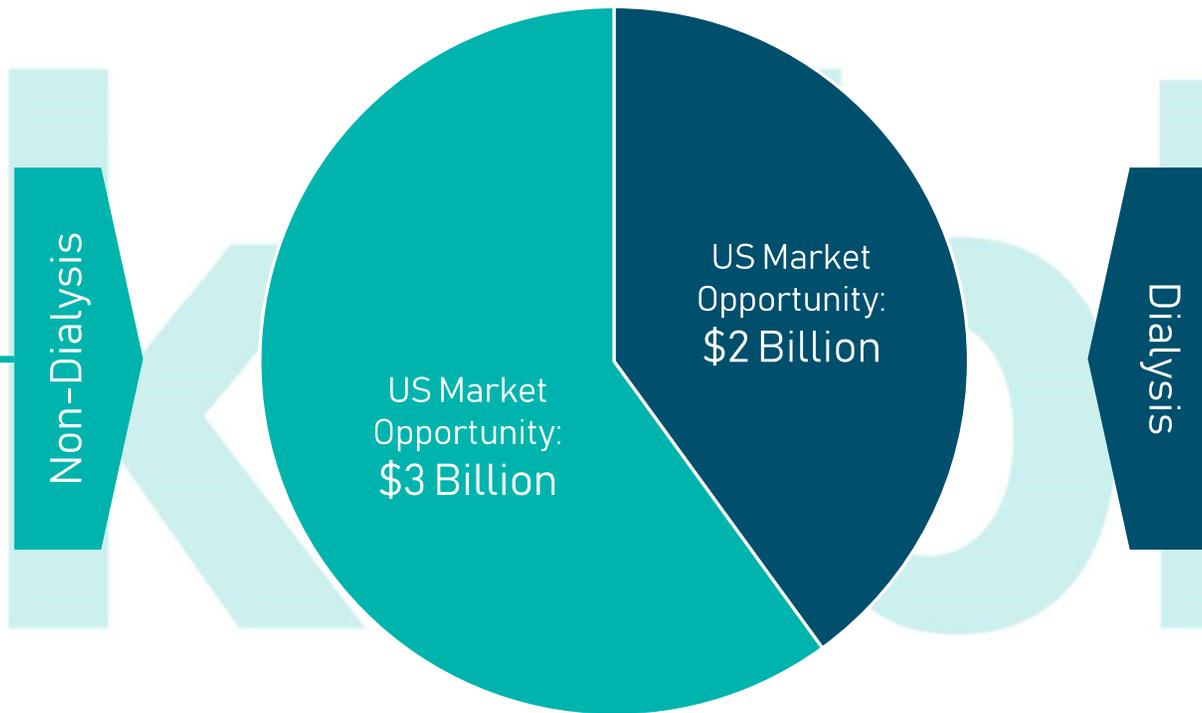
# VADADUSTAT

POTENTIAL NEW ORAL  
STANDARD OF CARE FOR  
ANEMIA DUE TO CKD

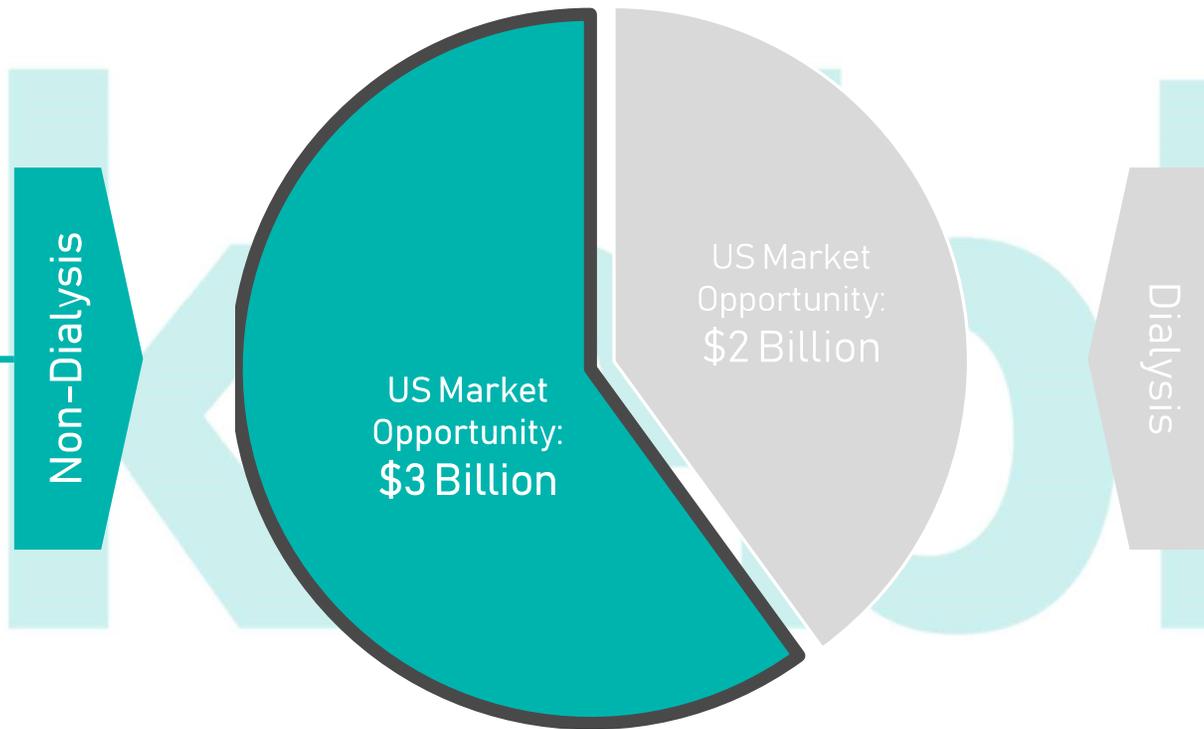
Unique focus and potential  
opportunity to address  
unmet needs with a  
differentiated safety  
profile compared with the  
standard of care

Vadadustat's ongoing Phase 3 cardiovascular outcomes trials for anemia due to CKD in non-dialysis and dialysis patients are now fully enrolled. Vadadustat is an investigational HIF-PH inhibitor that is not approved by the FDA or any other regulatory authority.

# Focused on \$5B+ MARKET OPPORTUNITY



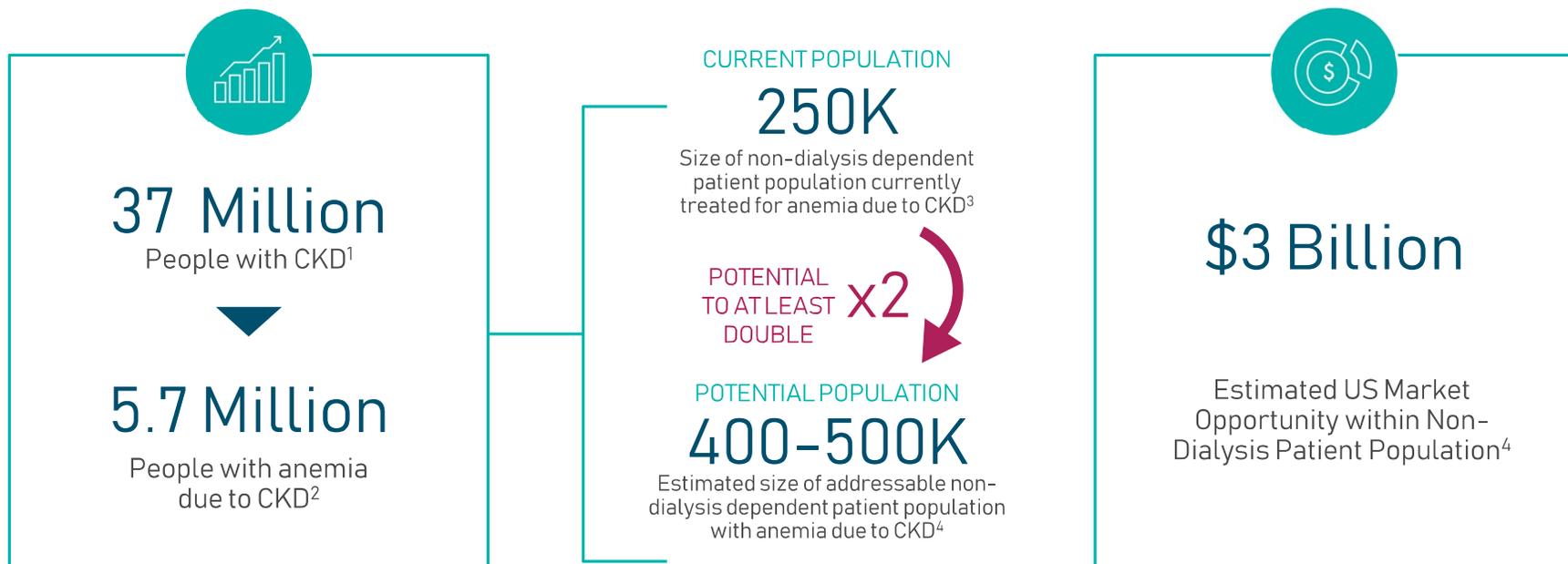
# Focused on \$5B+ MARKET OPPORTUNITY



## Non-Dialysis

# VADADUSTAT

Significant Opportunity to Address Unmet Needs of Non-Dialysis Dependent Patient Population with Anemia Due to CKD (US Market), Upon Approval



Vadadustat is an investigational HIF PH inhibitor that is not approved by the FDA or any other regulatory authority.

Slide shows estimated US market. Sources: 1. 2018 USRDS Annual Data Report: [https://www.usrds.org/2018/download/v2\\_c01\\_incPrev\\_18\\_web.xlsx](https://www.usrds.org/2018/download/v2_c01_incPrev_18_web.xlsx). 2. Stauffer et al. PLOS ONE. 2014. 3. Spherix RealWorld Dynamix Renal Anemia market research survey and chart review, Feb 2018. 4. Based on internal estimates for pts with Hb<11 and not treated with ESA and industry reports estimating ESA pricing.

Non-Dialysis



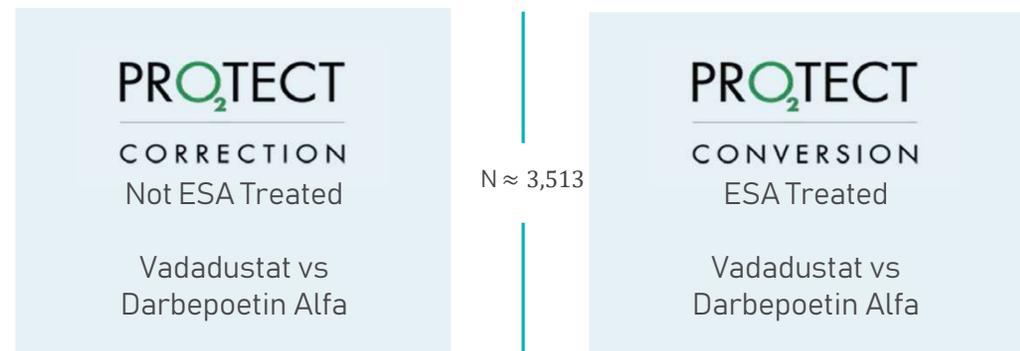
To Have the Potential to  
Change the Standard of  
Care, You Must Compare to  
the Standard of Care.



# NDA/MAA CORE PACKAGE

Phase 3 Studies of Vadadustat for Treatment of  
Anemia due to CKD in Non-Dialysis Dependent Patients

FULLY ENROLLED



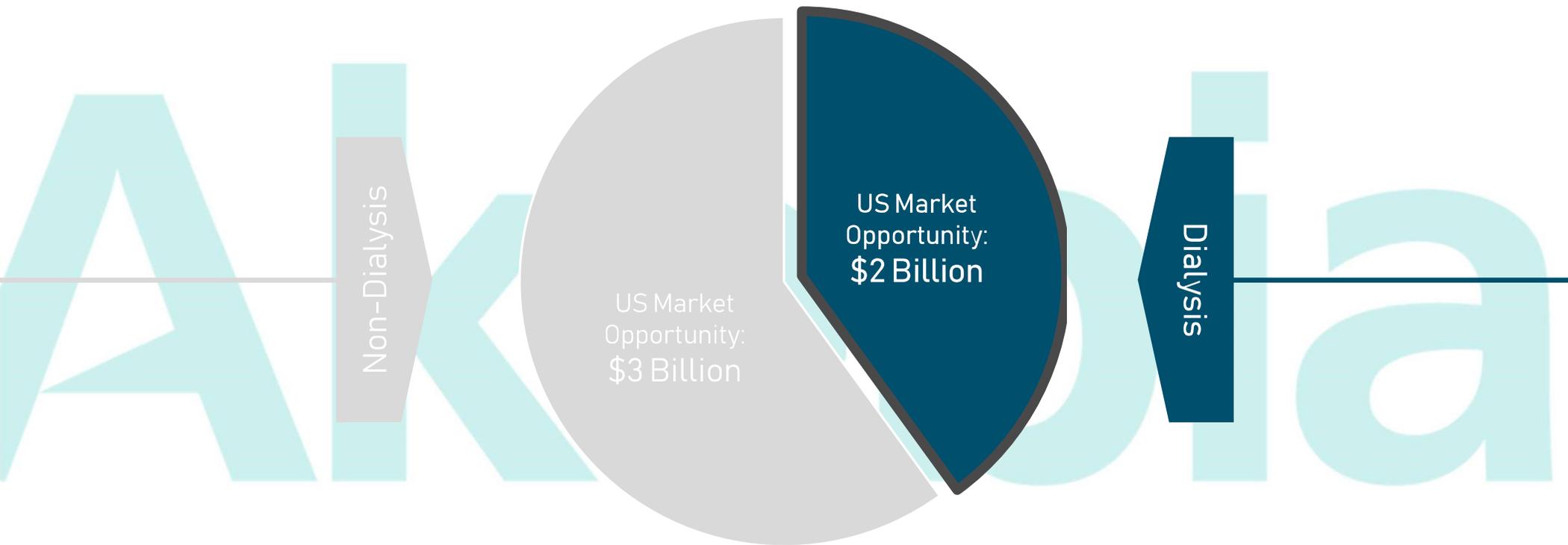
PRIMARY EFFICACY ENDPOINT:  
Change in hemoglobin from baseline

PRIMARY SAFETY ENDPOINT:  
Major Adverse Cardiovascular Events (MACE)

TOP-LINE RESULTS  
Expected mid 2020\*

\*Subject to accrual of MACE.

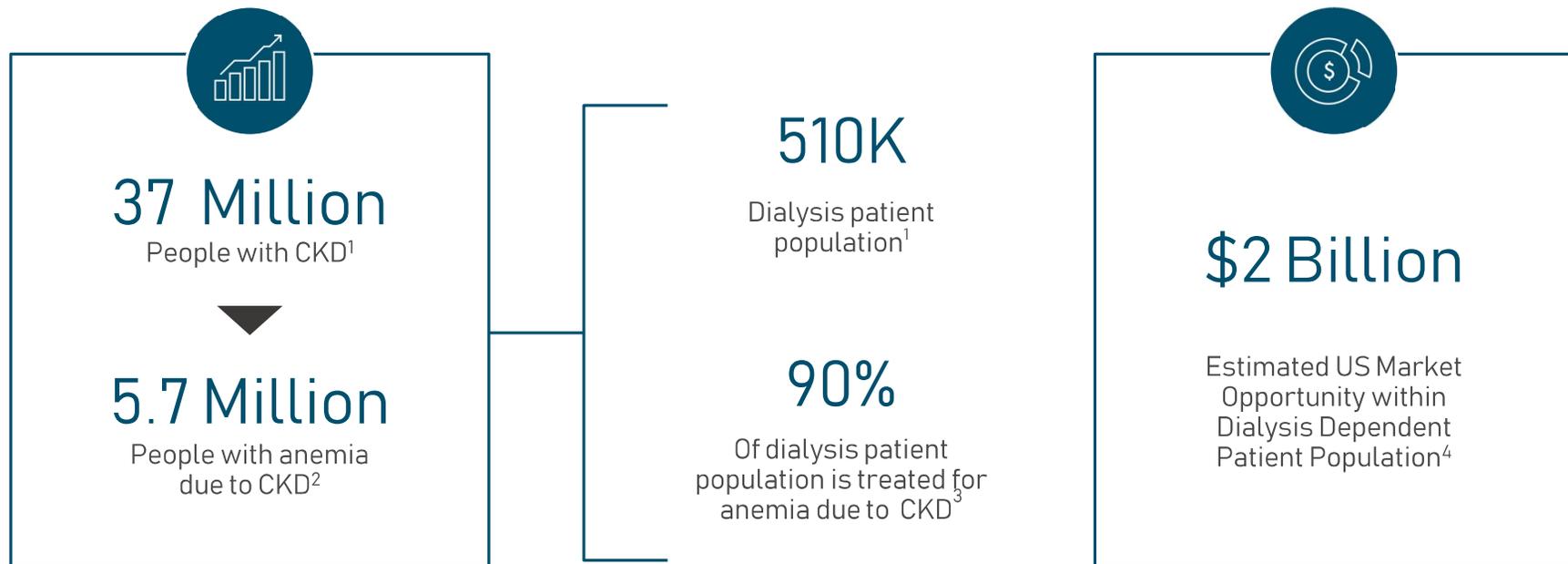
# Focused on \$5B+ MARKET OPPORTUNITY



## Dialysis

# VADADUSTAT

Significant Opportunity to Address Unmet Needs of Dialysis Dependent Patient Population with Anemia Due to CKD (US Market), Upon Approval



Vadadustat is an investigational HIF PH inhibitor that is not approved by the FDA or any other regulatory authority.

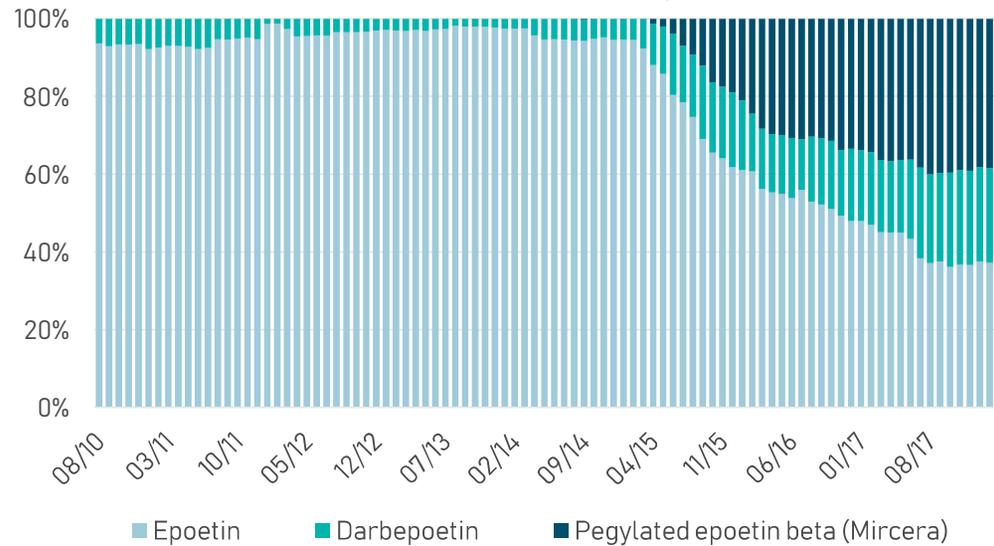
Slide shows estimated US market. Sources: 1. 2018 USRDS Annual Data Report: [https://www.usrds.org/2018/download/v2\\_c01\\_IncPrev\\_18\\_web.xlsx](https://www.usrds.org/2018/download/v2_c01_IncPrev_18_web.xlsx). 2. Stauffer et al. PLOS ONE, 2014. 3. Based on internal estimates and industry reports. 4. Based on internal estimates and industry reports estimating ESA pricing.

# Dialysis

## STRONG DISTRIBUTION CHANNEL to US Dialysis Network with



Chart Shows Uptake of Mircera into Fresenius Dialysis Centers<sup>1</sup> which represent approx. 40% of US Dialysis Market



Unique market dynamics with dialysis center clinical protocols



Agreement with Vifor positions vadaadustat for rapid uptake in Fresenius LDO subject to FDA approval\*



2019 amendment expands agreement, facilitating access to up to 60% of US dialysis patients



TDAPA<sup>2</sup> creates additional opportunity for value creation

\*Subject to the earlier of reimbursement under TDAPA (defined below) or inclusion in the ESRD bundle. Sources: 1 ESA Use, by type. DOPPS Practice Monitor. <https://www.dopps.org/dpm/DPMSlideBrowser.aspx>. Accessed 12/19/2018.; 2 TDAPA: Transitional drug add-on payment adjustment, CMS Ruling CMS-1691-F. Medicare Program; End-Stage Renal Disease Prospective Payment System. Payment for Renal Dialysis Services Furnished to Individuals with Acute Kidney Injury, End-Stage Renal Disease Quality Incentive Program, Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS) Competitive Bidding Program (CBP) and Fee Schedule Amounts, and Technical Amendments to Correct Existing Regulations Related to the CBP for Certain DMEPOS.

Dialysis



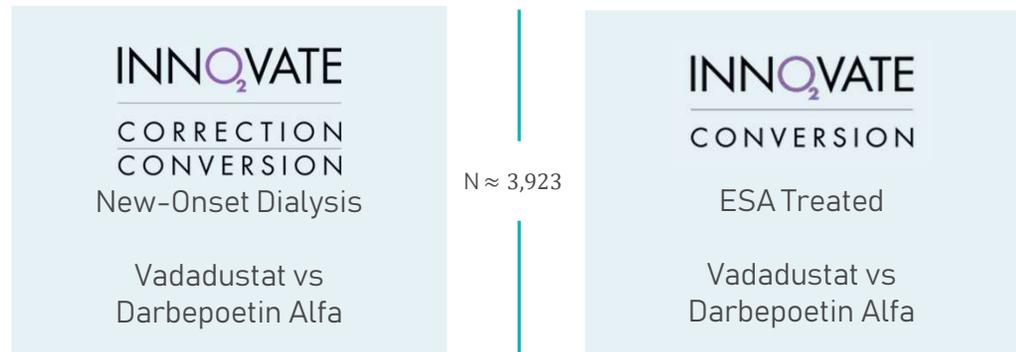
To Have the Potential to Change the Standard of Care, You Must Compare to the Standard of Care.



# NDA/MAA CORE PACKAGE

Phase 3 Studies of Vadadustat for Treatment of Anemia due to CKD in Dialysis Dependent Patients

FULLY ENROLLED



PRIMARY EFFICACY ENDPOINT:  
Change in hemoglobin from baseline

PRIMARY SAFETY ENDPOINT:  
Major Adverse Cardiovascular Events (MACE)

TOP-LINE RESULTS  
Expected Q2 2020\*

\*Subject to accrual of MACE.

# Design of Global Phase 3 Program

## POSITIONS VADADUSTAT FOR SUCCESS



### CLINICAL

Active control enables clear data readouts for efficacy and safety as compared with current standard of care



### REGULATORY

Prospectively defined and agreed upon non-inferiority margin and key components of statistical analysis plan

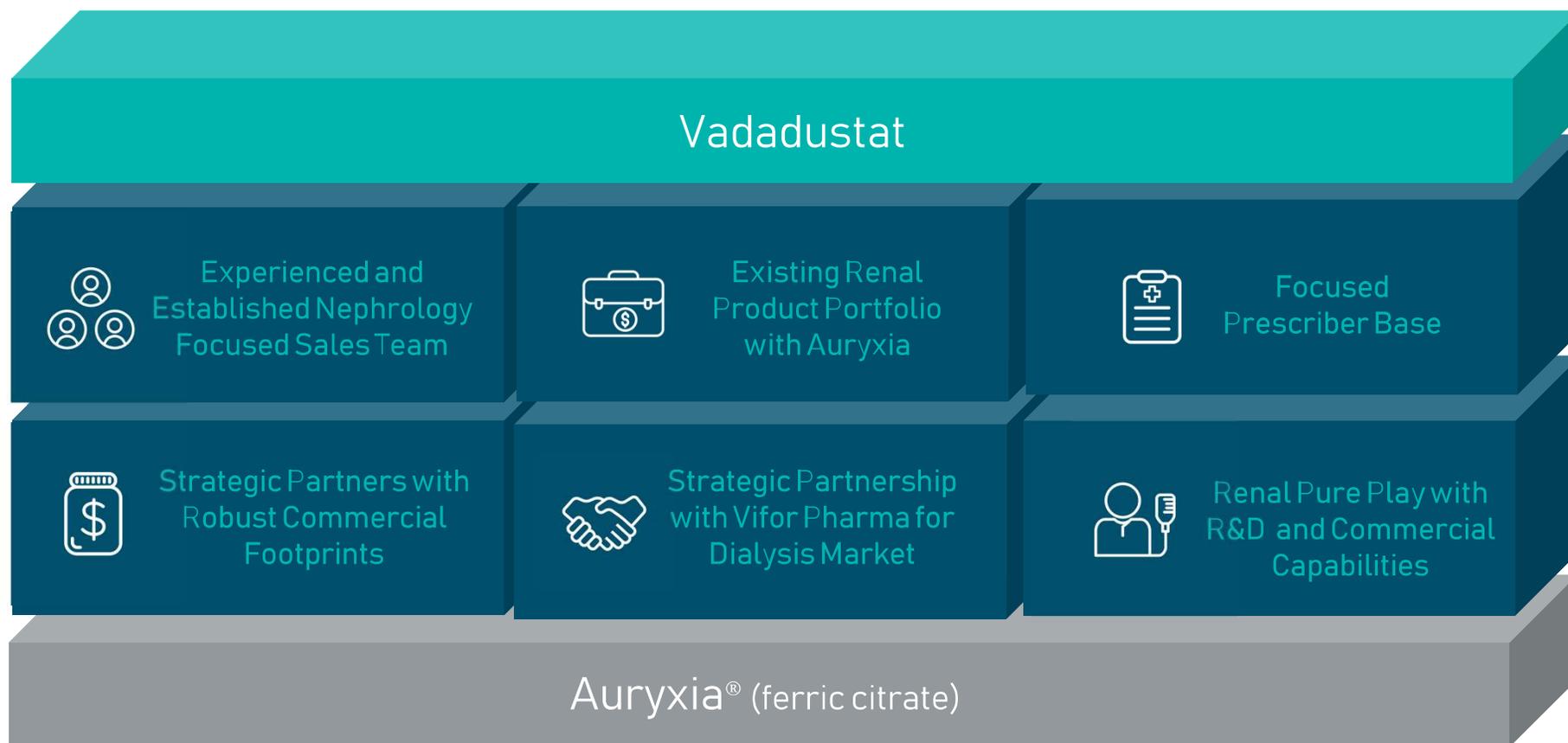


### COMMERCIAL

Key secondary efficacy and safety endpoints to assess important areas of differentiation from current standard of care

Vadadustat's ongoing global Phase 3 cardiovascular outcomes trials for anemia due to CKD in non-dialysis and dialysis patients are now fully enrolled. Vadadustat is an investigational HIF PH inhibitor that is not approved by the FDA or any other regulatory authority.

# WELL POSITIONED UPON VADADUSTAT APPROVAL AND LAUNCH



# 2020 A Defining Year for Akebia

## STRATEGIC OBJECTIVES

1

EXECUTE ON GLOBAL  
PHASE 3 DATA READOUT  
FOR VADADUSTAT

- Topline data for INNO<sub>2</sub>VATE expected Q2 2020\*
- Topline data for PRO<sub>2</sub>TECT expected mid 2020\*
- NDA/MAA readiness

2

SECURE APPROVAL  
OF VADADUSTAT IN  
JAPAN

3

DEEPEN  
RELATIONSHIPS  
WITH NEPHROLOGY  
COMMUNITY

4

OPTIMIZE CASH  
RESOURCES

\*Subject to accrual of MACE.

## Important Safety Information

### CONTRAINDICATION

AURYXIA® (ferric citrate) is contraindicated in patients with iron overload syndromes, e.g., hemochromatosis

### WARNINGS AND PRECAUTIONS

**Iron Overload:** Increases in serum ferritin and transferrin saturation (TSAT) were observed in clinical trials with AURYXIA in patients with chronic kidney disease (CKD) on dialysis treated for hyperphosphatemia, which may lead to excessive elevations in iron stores. Assess iron parameters prior to initiating AURYXIA and monitor while on therapy. Patients receiving concomitant intravenous (IV) iron may require a reduction in dose or discontinuation of IV iron therapy

**Risk of Overdosage in Children Due to Accidental Ingestion:** Accidental ingestion and resulting overdose of iron-containing products is a leading cause of fatal poisoning in children under 6 years of age. Advise patients of the risks to children and to keep AURYXIA out of the reach of children

### ADVERSE REACTIONS

The most common adverse reactions reported with AURYXIA in clinical trials were:

Hyperphosphatemia in CKD on Dialysis: Diarrhea (21%), discolored feces (19%), nausea (11%), constipation (8%), vomiting (7%) and cough (6%)

Iron Deficiency Anemia in CKD Not on Dialysis: Discolored feces (22%), diarrhea (21%), constipation (18%), nausea (10%), abdominal pain (5%) and hyperkalemia (5%)

### SPECIFIC POPULATIONS

**Pregnancy and Lactation:** There are no available data on AURYXIA use in pregnant women to inform a drug-associated risk of major birth defects and miscarriage. However, an overdose of iron in pregnant women may carry a risk for spontaneous abortion, gestational diabetes and fetal malformation. Data from rat studies have shown the transfer of iron into milk, hence, there is a possibility of infant exposure when AURYXIA is administered to a nursing woman

To report suspected adverse reactions, contact Akebia at [1-844-445-3799](tel:1-844-445-3799).

Please see full [Prescribing Information](#)

Learn more at [AURYXIA.com](http://AURYXIA.com).



**Akebia**<sup>®</sup>  
THERAPEUTICS

THANK YOU | QUESTIONS?