Zydus announces Phase IV DREAM-CKD trial to generate Real World Evidence of Desidustat in patients with Chronic Kidney Disease induced anemia

- **Oxemia™** (Desidustat) is a Prescription Drug approved in India for patients with Chronic Kidney Disease (CKD) induced anemia, and can be taken only under the advice and guidance of a Nephrologist or an internal medicine specialist

Ahmedabad, India, 30 August 2022,

Zydus Lifesciences Ltd. (formerly known as Cadila Healthcare Ltd.), a discovery-driven, global life sciences company announced the commencement of Phase IV clinical trial for Desidustat in patients with Chronic Kidney Disease (CKD) induced anemia.

CKD is predicted to become one of the most common causes of premature death by 2040 globally. It is estimated that 115.1 million people in India, 132 million in China, 38 million in the United States, 21 million in Japan and 41 million people in Western Europe are living with Chronic Kidney Disease (Lancet 2020; 395: 709–33).

The **Phase IV DREAM-CKD trial** will enrol 1004 CKD patients in India, including 502 dialysis dependent, 502 dialysis independent CKD patients with anemia. This multicentre post marketing surveillance study will evaluate the safety of Desidustat for the treatment of anemia in subjects with chronic kidney disease over a period of 52 weeks, in addition to secondary endpoints including; change in hemoglobin level, change in Lipid profile including Small dense LDL, change in weight, change in VEGF, change in serum hepcidin and evaluation of safety laboratory parameters [clinicaltrials.gov identifier : NCT05515367].

Dr. Ajay K. Singh, a senior nephrologist at the Brigham and Women's Hospital and Harvard Medical School mentioned that "This Phase 4 DREAM-CKD study will help generate Real World Data (RWD) in CKD patients and will add to our existing knowledge of Desidustat. Real World Data is crucial to understanding how Desidustat works in diverse settings and will be critical to generate real world evidence which will help formulate clinical guidelines, to further support its use in clinical practice."

Pankaj R. Patel, Chairman, Zydus Lifesciences Ltd. said, "Desidustat testifies our commitment to innovation.It exemplifies our endeavour to develop novel best-in-class innovative medicines, which is backed by robust clinical trial results and publications in peer-reviewed scientific

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journals. This novel medicine will meet the needs of millions of patients living with Chronic Kidney Disease induced anemia."

Desidustat's development was based on the **Nobel Prize in Medicine** winning science on discoveries of the oxygen sensing mechanism of cells through hypoxia-inducible factor (HIF). Desidustat has been previously studied in randomised controlled clinical trials in over 1200 CKD patients, and is currently approved in India as **Oxemia**™ for the treatment of anemia in Chronic Kidney Disease (CKD) patients. Earlier the two Phase 3 trial results of Desidustat in CKD patients not-on-dialysis [DREAM-ND], and in CKD patients on-dialysis [DREAM-D] have been published in the prestigious American Journal of Nephrology.

Publications on Desidustat / ZYAN1:

1. Desidustat in Anemia due to Non- Dialysis-Dependent Chronic Kidney Disease: A Phase 3 Study (DREAM-ND). ***Am J Nephrol.*** 2022. DOI: 10.1159/000523961
2. Desidustat in Anemia due to Dialysis-Dependent Chronic Kidney Disease: A Phase 3 Study (DREAM-D). ***Am J Nephrol.*** 2022. DOI: 10.1159/000523949
3. Prolyl hydroxylase inhibitor desidustat improves anemia in erythropoietin hyporesponsive state. ***Current Research in Pharmacology and Drug Discovery***. 2022; 100102. https://doi.org/10.1016/j.crphar.2022.100102.
4. Outcomes of Desidustat Treatment in People with Anemia and Chronic Kidney Disease: A Phase 2 Study. ***Am J Nephrol.*** 2019;49:470–478.
5. Phase I Clinical Study of ZYAN1, A Novel Prolyl-Hydroxylase (PHD) Inhibitor to Evaluate the Safety, Tolerability, and Pharmacokinetics Following Oral Administration in Healthy Volunteers. ***Clin Pharmacokinet.*** 2018 Jan; 57(1):87-102.
6. Pharmacological Characterization of ZYAN1, a Novel Prolyl Hydroxylase Inhibitor for the Treatment of Anemia. ***Drug Res (Stuttg).*** 2016 Feb; 66(2):107-12.
7. Influence of acute and chronic kidney failure in rats on the disposition and pharmacokinetics of ZYAN1, a novel prolyl hydroxylase inhibitor, for the treatment of chronic kidney disease-induced anemia. ***Xenobiotica.*** 2018 Jan; 48(1):37-44.
8. A sensitive assay for ZYAN1 in human whole blood and urine utilizing positive LC-MS/MS electrospray ionization. ***Bioanalysis.*** 2017 May; 9(9):719-732.
9. Pharmacological inhibition of prolyl hydroxylase protects against inflammation-induced anemia via efficient erythropoiesis and hepcidin downregulation. ***Eur J Pharmacol.*** 2019 Jan 15; 843:113-120.

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10. Prolyl Hydroxylase Inhibitors: A Breakthrough in the Therapy of Anemia Associated with Chronic Diseases. ***J Med Chem.*** 2018 Aug 23; 61(16):6964-6982.
11. Prolyl hydroxylase inhibitor desidustat protects against acute and chronic kidney injury by reducing inflammatory cytokines and oxidative stress. ***Drug Dev Res.*** 2021; 1–9.
12. Nonclinical Pharmacokinetic Evaluation of Desidustat: a Novel Prolyl Hydroxylase Inhibitor for the Treatment of Anemia, ***European Journal of Drug Metabolism and Pharmacokinetics.*** 2022 Jul 26. doi: 10.1007/s13318-022-00788-3

About Zydus

The Zydus Group with an overarching purpose of empowering people with freedom to live healthier and more fulfilled lives, is an innovative, global lifesciences company that discovers, develops, manufactures, and markets a broad range of healthcare therapies. The group employs over 23000 people worldwide and is driven by its mission to unlock new possibilities in life-sciences through quality healthcare solutions that impact lives. The group aspires to transform lives through path-breaking discoveries. For more details visit www.zyduslife.com

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