



Ardelyx Reports Additional Positive Data Supporting Clinical Utility of Tenapanor at ASN's Kidney Week 2021

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- **First patient reported outcome data on tenapanor from OPTIMIZE trial demonstrates improved overall patient experience and benefit of one pill twice daily dosing regimen with tenapanor compared to binder therapies**
- **Post-hoc analysis shows comparable phosphate lowering in patients undergoing hemodialysis (HD) and peritoneal dialysis (PD) with a mean change from baseline to week 26 of -1.70 mg/dL in PD group**
- **Additional post-hoc analysis shows that in a subset of patients with severe hyperparathyroidism, tenapanor lowers parathyroid hormone and fibroblast growth factor 23 levels**
- **Tenapanor novel mechanism of action shown to selectively decrease serum phosphorus by inhibiting paracellular phosphate absorption, without impacting other serum electrolytes (sodium, bicarbonate, chloride, potassium, calcium, magnesium) or albumin**

FREMONT, Calif. and WALTHAM, Mass., Nov. 5, 2021 /PRNewswire/ -- Ardelyx, Inc. (Nasdaq: ARDX), a biopharmaceutical company focused on the discovery, development, and commercialization of innovative first-in-class medicines to improve treatment for people with kidney and cardiorenal diseases, today announced multiple presentations covering additional positive clinical observations with tenapanor at the American Society of Nephrology Kidney Week 2021 (ASN Kidney Week), which is taking place virtually November 4 - November 7, 2021. Ardelyx has completed three successful Phase 3 pivotal trials, and an additional clinical trial (OPTIMIZE) for tenapanor, an investigational, first-in-class phosphate absorption inhibitor for the control of serum phosphorus in adult patients with chronic kidney disease (CKD) on dialysis. Tenapanor was discovered and developed by Ardelyx.



"These data provide additional perspective on the potential benefits of tenapanor and further support its utility in the management of serum phosphorus," said Laura Williams, M.D., MPH, chief medical officer for Ardelyx. "We continue to pursue approval of this first-in-class, novel therapy which we believe represents an important innovation for the nephrology community."

"As a person living with kidney disease who has struggled with managing phosphorus, it gives me great hope to see the patient perspective and patient priorities being incorporated into clinical studies," said Derek Forfang, chair, NKF Kidney Patient Advocacy Committee and co-chair, Forum of ESRD Networks' Kidney Patient Advisory Council. "The OPTIMIZE results suggest that tenapanor could have an enormous positive impact on the health and quality of life of many patients on dialysis through its novel mechanism that blocks, not binds, phosphorus. Tenapanor has the potential to help more patients achieve target phosphorus levels and reduce the treatment burden associated with currently available hyperphosphatemia therapies. The incorporation of the patient voice into the clinical trial design and evaluation of tenapanor is a huge step forward for patients."

Pablo E. Pergola, M.D., Ph.D., director, Clinical Advancement Center, Renal Associates PA, San Antonio, Texas, added, "These data for tenapanor reported at ASN reveal new important observations, including its efficacy in both peritoneal dialysis and hemodialysis, its ability to lower PTH and FGF23 levels, and its lowering of serum phosphorus without affecting other electrolytes. In addition, the new data reported from the OPTIMIZE trial provides a first glimpse into the real-world use of tenapanor, showing its ability not only to help more patients achieve target phosphorus levels, but also its ability to improve the patient experience regarding the management of hyperphosphatemia."

New clinical observations presented at ASN:

- **ePoster # PO1733 titled "Patient-Reported Experience with Tenapanor in the OPTIMIZE Trial"** presents the first data generated from the randomized, open-label OPTIMIZE trial designed to evaluate ways to integrate tenapanor into clinical practice to optimize phosphorus management in patients with CKD on dialysis. Patients who were being treated with phosphate binders were equally divided into two groups: one (n=123) that was switched from binders to tenapanor (straight switch arm), and another (n=123) that reduced their binder dose by 50% upon starting tenapanor 30 mg twice daily (50% binder dose reduction arm). 82.1% of patients in the straight switch arm and 85.4% of patients in the 50% binder dose reduction arm reported an improvement in their overall experience managing phosphorus with tenapanor compared to their previous experience managing phosphorus, primarily due to an improved medication regimen. Approximately 30% of patients reported improved frequency of bowel movements as the top reason for the improved treatment experience with tenapanor.
- **ePoster # PO0544 titled "[Impact of Tenapanor in Peritoneal Dialysis](#),"** based on a post-hoc analysis from the PHREEDOM study, demonstrates similar safety and efficacy in serum phosphorus reduction among patients on peritoneal dialysis (PD) (n=42) and patients on hemodialysis (HD) (n=365) treated with tenapanor. The mean change from baseline to week 26 was -1.70 mg/dL in the PD group vs. -1.33 in the HD group, and the safety profile of tenapanor was also similar

between the groups.

- **ePoster # TH-OR18 titled "Tenapanor Controls Serum Phosphorus and Reduces PTH and FGF-23 in Patients on Dialysis with Severe Secondary Hyperparathyroidism"** evaluates tenapanor's effect on serum phosphorus (sP), parathyroid hormone (PTH) and fibroblast growth factor 23 (FGF23) levels in patients with severe secondary hyperparathyroidism (iPTH>600 pg/mL). In this post-hoc analysis from PHREEDOM, patients treated with tenapanor had ~22%, 34% and 41% reductions in sP, PTH and FGF23, respectively. PTH is a common co-morbidity and elevated levels of FGF23 have been linked to greater risks of LVH (left ventricular hypertrophy) and mortality in patients with CKD.
- **ePoster # PO1732 titled "Long-Term Safety of Tenapanor for the Control of Serum Phosphorus in Patients with CKD on Dialysis: Serum Electrolytes and Albumin"** evaluates the effects of tenapanor on serum electrolytes and albumin, based on a post-hoc analysis from the three tenapanor pivotal trials, all of which met their primary and key secondary endpoints, and shows that tenapanor decreases serum phosphorus selectively by inhibiting paracellular absorption of phosphate without affecting other serum electrolytes (sodium, bicarbonate, chloride, potassium, calcium, magnesium) or serum albumin.

About OPTIMIZE

OPTIMIZE is a randomized, open label study, which included 330 patients with chronic kidney disease (CKD) on dialysis with hyperphosphatemia. The study was designed to evaluate different methods of initiating tenapanor to optimize phosphorus management in both binder-naïve and binder-treated patients. The objective was to evaluate the ability of tenapanor, with its novel blocking mechanism, administered as core therapy for the treatment of hyperphosphatemia in adult patients with chronic kidney disease (CKD) on dialysis, alone or in combination with phosphate binders, to achieve target serum phosphorus (s-P) levels ≤ 5.5 mg/dL. Patients with s-P > 5.5 and ≤ 10.0 mg/dL during stable phosphate binder treatment were randomized in a 1:1 ratio to two different treatment cohorts: Cohort 1, a straight switch approach where current phosphate binder treatment was discontinued and patients were switched to tenapanor 30 mg twice daily (BID) or Cohort 2, where current phosphate binder dose was reduced by at least 50% and tenapanor therapy was initiated at 30 mg BID. After week 2, investigators could adjust phosphate binder dose to achieve a phosphorus level of ≤ 5.5 mg/dL with tenapanor as the core therapy and binders as adjunctive. A third cohort comprised of phosphate binder naïve patients with s-P > 4.5 and ≤ 10.0 mg/dL (Cohort 3) were enrolled and initiated on tenapanor 30 mg BID.

About Tenapanor

Tenapanor, discovered and developed by Ardelyx, is a first-in-class phosphate absorption inhibitor (PAI) that has a unique mechanism of action and acts locally in the gut to inhibit the sodium hydrogen exchanger 3 (NHE3), reducing phosphate absorption through the paracellular pathway, the primary pathway of phosphate absorption. This novel blocking mechanism enables a one 30mg tablet BID dosing regimen. The most common side effect with tenapanor in clinical trials was diarrhea.

About Hyperphosphatemia

Hyperphosphatemia is a serious condition resulting in an abnormally elevated level of phosphorus in the blood that is estimated to affect the vast majority of the 550,000 patients in the United States with CKD on dialysis. The kidney is the organ responsible for regulating phosphorus levels, but when kidney function is significantly impaired, phosphorus is not adequately eliminated from the body. As a result, hyperphosphatemia is a nearly universal condition among people with CKD on dialysis with internationally recognized KDIGO treatment guidelines that recommend lowering elevated phosphate levels toward the normal range (2.5-4.5mg/dL).

About Ardelyx, Inc.

Ardelyx is focused on discovering, developing, and commercializing innovative first-in-class medicines to enhance the lives of patients with kidney and cardiorenal diseases. Ardelyx is developing tenapanor, a novel product candidate to control serum phosphorus in adult patients with CKD on dialysis, which has completed three successful Phase 3 trials. Ardelyx is also advancing RDX013, a potassium secretagogue, for the potential treatment of elevated serum potassium, or hyperkalemia, a problem among certain patients with kidney and/or heart disease and has an early-stage program in metabolic acidosis, a serious electrolyte disorder in patients with CKD. In addition, tenapanor has already received FDA approval for the treatment of irritable bowel syndrome with constipation (IBS-C) under the tradename IBSRELA®. Ardelyx has established agreements with Kyowa Kirin in Japan, Fosun Pharma in China and Knight Therapeutics in Canada for the development and commercialization of tenapanor in their respective territories.

 View original content to download multimedia: <https://www.prnewswire.com/news-releases/ardelyx-reports-additional-positive-data-supporting-clinical-utility-of-tenapanor-at-asns-kidney-week-2021-301417479.html>

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