X4 Pharmaceuticals Reports Positive Data from Phase 2a Trial of Mavorixafor in Combination with Axitinib in Advanced Clear Cell Renal Cell Carcinoma Patients

September 30, 2019

Subgroup exceeds target of 50% improvement in median progression-free survival

12% of patients remain on combination treatment with durations of 17 months or longer

Hosts investor conference call and webcast on Monday, September 30 at 8:00 AM EDT / 2:00 PM CEST

BARCELONA, Spain--(BUSINESS WIRE)--Sep. 30, 2019-- X4 Pharmaceuticals, Inc. (Nasdaq: XFOR), a clinical-stage biopharmaceutical company focused on the development of novel therapeutics for the treatment of rare diseases, today announced positive results from the Phase 2a portion of its open-label Phase 1/2 clinical trial of mavorixafor (X4P-001) in combination with axitinib (Inlyta®) in patients with advanced clear cell renal cell carcinoma (ccRCC). Data were presented at the European Society for Medical Oncology (ESMO) 2019 Congress today in Barcelona.

Combination therapy with mavorixafor and approved tyrosine kinase inhibitor (TKI) axitinib was generally well tolerated with a manageable safety profile and demonstrated clinical improvement with encouraging median progression free survival (mPFS) in a heavily pretreated advanced ccRCC patient population. Of the 65 patients in the trial, 49 patients (or 75%) received mavorixafor + axitinib as a third- to ninth-line therapy, having received between two and eight prior therapies with a TKI, immuno-oncology (IO) agent, or other systemic therapy. Fifty-seven of the 65 patients in the trial (or 88%) had an intermediate or poor prognosis.

Overall mPFS across clinically evaluable patients receiving mavorixafor + axitinib (n=62) was 7.4 months. Predefined subpopulations examined patients with immediate prior TKI and IO treatment. Patients treated in the subgroup with immediate prior TKI therapy (n=34) demonstrated an objective response rate (ORR) of 18% and an increased mPFS of 7.4 months. This is a greater than 50% improvement from the 4.8-month historical mPFS with axitinib alone.[1] Patients treated with mavorixafor + axitinib in the subgroup with immediate prior IO therapy (n=18) had an ORR of 61% and an increased mPFS of 11.6 months. In addition, eight of the 65 patients remain on the combination therapy today, with durations of treatment of 17 months or longer. Results suggest mavorixafor may enhance clinical response to axitinib and other TKIs that target tumor angiogenesis, as well as immunotherapy agents.

“In recent years a growing number of vascular endothelial growth factor (VEGF) TKI-based therapies (e.g., axitinib + pembrolizumab), have improved outcomes for patients with ccRCC. Despite these advances, most patients eventually develop resistance to therapy, and new treatment options are necessary to meet this unmet medical need,” commented David F. McDermott, M.D., Beth Israel Deaconess Medical Center, Harvard Medical School and lead investigator of the study. “In this trial of mavorixafor, a novel CXCR4 pathway inhibitor, and axitinib in patients with metastatic ccRCC who had failed prior therapy, the combination was well tolerated and the anti-tumor activity was encouraging. We look forward to confirming the efficacy of mavorixafor in a randomized trial.”

This Phase 1/2, multi-center, open-label trial of mavorixafor in combination with axitinib included 65 patients with histologically confirmed advanced ccRCC, all of whom received at least one prior systemic therapy. The safety analyses included 65 patients from Phases 1/2 who were treated with 400 mg mavorixafor (200 mg twice daily or 400 mg once daily) + 5 mg axitinib twice daily. Treatment responses were assessed using Response Evaluation Criteria in Solid Tumor, or RECIST v1.1 (a validated set of criteria to assess changes in tumor burden), every eight weeks from day one for 80 weeks, and then every 12 weeks thereafter, by blinded, independent central review. Treatment-related serious adverse events were diarrhea, hyperkalemia and hypertension (n=2, or 3%) and blood creatinine increased, dehydration, fatigue, hepatic enzyme increase, nausea, sepsis, trachea-oesophageal fistula, and vomiting (n=1 each, or 1.5%).

“These promising results, especially among heavily pre-treated patients with poor prognoses, add to a published body of evidence supporting mavorixafor’s generally favorable safety and tolerability profile and its novel CXCR4 mechanism of action that has been shown to induce immune-mediated antitumor activity as a single agent and in combination with approved therapies,” said Lynne Kelley, M.D., FACS, Chief Medical Officer of X4 Pharmaceuticals. “We are encouraged by these data, including the eight patients who remain on combination therapy with mavorixafor and axitinib for 17 months or longer. We look forward to continuing to explore the potential benefit of mavorixafor in underserved cancer patients with solid tumors, including as a potential triple combination agent in addition to TKI and checkpoint inhibitor therapies or in combination with other standard of care treatments.”

Mavorixafor is a potentially first-in-class, once-daily, oral, small molecule antagonist of chemokine receptor CXCR4. CXCR4 signaling is thought to contribute to the lack or loss of tumor responsiveness to angiogenesis inhibitors, like axitinib. Elevated expression of CXCR4 by RCC tumors is also correlated with an overall poor prognosis. In xenograft models studied previously, mavorixafor in combination with axitinib, a VEGF receptor TKI, reduced myeloid-derived suppressor cell infiltration and proangiogenic signals, and demonstrated greater than additive antitumor activity.

Details of the investor conference call and webcast are as follows:
Time and Date: Monday, September 30 at 8:00 AM EDT / 2:00 PM CEST
US Toll-Free Dial-In Number: (866) 721-7655

International Dial-In Number: (409) 216-0009 / Spain 0934923253
Conference ID: 4787329
Webcast: A live audio webcast of the conference call may be accessed in the “Investors” section of the Company’s website at the following link: http://investors.x4pharma.com/events-and-presentations.

About Mavorixafor

X4 Pharmaceuticals’ lead product candidate, mavorixafor (X4P-001), is a potentially first-in-class, once-daily, oral inhibitor of CXCR4, currently in Phase 2 development for the treatment of clear cell renal cell carcinoma (ccRCC). Mavorixafor has demonstrated single and combination agent activity and proof of mechanism in Phase 1b and Phase 2a trials, respectively, along with a favorable safety and tolerability profile. Mavorixafor is also in development for the treatment of WHIM syndrome, as well as Severe Congenital Neutropenia (SCN) and Waldenström’s macroglobulinemia (WM). Mavorixafor was designated orphan drug status by the U.S. Food and Drug Administration in 2018 and by the European Commission in 2019 for the treatment of WHIM syndrome.

About X4 Pharmaceuticals

X4 Pharmaceuticals is developing novel therapeutics designed to improve immune cell trafficking to treat rare diseases, including primary immunodeficiencies and certain cancers. The company’s oral small molecule drug candidates antagonize the CXCR4 pathway, which plays a central role in immune surveillance. X4’s most advanced product candidate, mavorixafor (X4P-001), is in a global Phase 3 pivotal trial in patients with WHIM syndrome, a rare, inherited, primary immunodeficiency disease, and is currently also under investigation in combination with axitinib in the Phase 2a portion of an open-label Phase 1/2 clinical trial in clear cell renal cell carcinoma (ccRCC). X4 is also planning to commence clinical trials of mavorixafor in Severe Congenital Neutropenia (SCN) and Waldenström’s macroglobulinemia (WM) in 2019. The company was founded and is led by a team with extensive biopharmaceutical product development and commercialization expertise and is committed to advancing the development of innovative medicines on behalf of patients with limited treatment options. X4 is a global company that is headquartered in Cambridge, Massachusetts with research offices based in Vienna, Austria. For more information, please visit www.x4pharma.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. The words “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “target” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements include, but are not limited to, statements regarding X4’s plans for the development of mavorixafor (X4P-001) or any of X4’s other product candidates or programs, including regarding the Phase 2a portion of the Phase 1/2 clinical trial of mavorixafor in combination with axitinib in ccRCC or plans to commence clinical trials of or otherwise evaluate mavorixafor as part of a triple combination therapy or in combination with any other treatments; the potential benefits of mavorixafor; the safety or efficacy of mavorixafor or any of X4’s other product candidates or programs or the commercial opportunity in any target indication. These statements are subject to various risks and uncertainties, actual results could differ materially from those projected and X4 cautions investors not to place undue reliance on the forward-looking statements in this press release. These risks and uncertainties include, without limitation, the risk that trials and studies may be delayed and may not have satisfactory outcomes, potential adverse effects arising from the testing or use of mavorixafor or other product candidates, the risk that prior results, such as signals of safety, activity or durability of effect, observed from preclinical studies or clinical trials will not be replicated or will not continue in ongoing or future studies or trials involving X4’s product candidates, and the risk that costs required to develop mavorixafor or other product candidates or to expand X4’s operations will be higher than anticipated. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, the risks and uncertainties described in the section entitled “Risk Factors” in X4’s most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC), as updated by X4’s Current Report on Form 8-K filed with the SEC on April 11, 2019, and in other filings X4 makes with the SEC from time to time. X4 undertakes no obligation to update the information contained in this press release to reflect subsequently occurring events or circumstances.

---

[1] Rini BI et al. Comparative effectiveness of axitinib versus sorafenib in advanced renal cell carcinoma (AXIS): a randomised phase 3 trial. Lancet. 2011 Dec 3;378(9807):1931-9.

View source version on businesswire.com: https://www.businesswire.com/news/home/20190929005043/en/

Source: X4 Pharmaceuticals, Inc.

Investors:
Stephanie Carrington
Westwicke, an ICR company
646-277-1282
Stephanie.Carrington@icrinc.com

Media:
Darcie Robinson
Westwicke, an ICR company
203-919-7905
Darcie.robinson@icrinc.com