Aldeyra Therapeutics Announces Positive Top-Line Results from Part 1 of Adaptive Phase 3 RENEW Trial in Dry Eye Disease

December 3, 2019

- *Primary objective of RENEW Part 1 achieved: Induction-maintenance dosing regimen of topical ocular reproxalap advanced to RENEW Part 2*
- *Reproxalap statistically superior to vehicle in RENEW co-primary endpoint of ocular dryness score in induction-maintenance regimen - symptomatic improvement observed as early as one week after initiation of therapy and at all measured timepoints*
- *Relative to vehicle, induction-maintenance dosing regimen demonstrated broad and statistically significant activity across majority of assessed symptoms*
- *RENEW Part 2 expected to initiate in the first half of 2020*
- *Conference call to be held at 8:00 AM Eastern Standard Time today*

LEXINGTON, Mass.--(BUSINESS WIRE)--Dec. 3, 2019-- Aldeyra Therapeutics, Inc. (Nasdaq: ALDX) (Aldeyra), a biotechnology company devoted to developing and commercializing next-generation medicines to improve the lives of patients with immune-mediated diseases, announced today positive top-line results from Part 1 of the adaptive Phase 3 RENEW Trial of topical ocular reproxalap in patients with dry eye disease.

"To our knowledge, reproxalap is the first topical dry eye disease drug to demonstrate statistically significant ocular dryness symptom improvement relative to vehicle as soon as one week after initiation of treatment, and thus has the potential to be first-line therapy," commented Todd C. Brady, M.D., Ph.D., President and Chief Executive Officer of Aldeyra. "The breadth of symptomatic activity highlighted by the induction-maintenance dosing regimen results in RENEW Part 1 demonstrate the potential of reproxalap in treating dry eye disease, one of the largest - yet least-served - markets in ophthalmology."

The RENEW Trial is an ongoing adaptive, two-part, multi-center, randomized, vehicle-controlled, double-masked, parallel-group Phase 3 trial of 0.25% topical ocular reproxalap compared to vehicle in patients with moderate to severe dry eye disease. The primary objective of RENEW Part 1 was to confirm dosing regimen, endpoints, and sample size for RENEW Part 2. In Part 1 of RENEW, 422 patients were randomized equally to receive either four-times-daily reproxalap or vehicle for twelve weeks (the constant dosing group) or four-times-daily reproxalap or vehicle for four weeks, followed by twice-daily reproxalap or vehicle for eight weeks (the induction-maintenance dosing group).

The primary objective of RENEW Part 1 was achieved. Observed activity versus vehicle of the induction-maintenance dosing regimen of topical ocular reproxalap was greater than that of the constant dosing group, and the induction-maintenance dosing regimen will be advanced to RENEW Part 2. The planned primary endpoints for RENEW Part 2 are ocular dryness score and fluorescein nasal region ocular staining score. RENEW Part 2 is expected to initiate in the first half of 2020 and enroll approximately 400 patients per arm at approximately 90% power to achieve statistical significance.

In the induction-maintenance dosing group, the RENEW co-primary endpoint of patient-reported visual analog scale (VAS) ocular dryness from Weeks 2 to 12 was achieved ($p=0.0004$), and activity was observed as early as one week after initiation of therapy ($p=0.001$) and was maintained until the end of the trial. In the induction-maintenance dosing group from Weeks 2 to 12, reproxalap was statistically superior to vehicle in VAS ocular endpoints for itching ($p=0.03$), foreign body sensation ($p=0.004$), discomfort ($p=0.003$), photophobia ($p=0.004$), and pain ($p=0.03$). In the induction-maintenance dosing group from Weeks 2 to 12, reproxalap was statistically superior to vehicle in Ocular Discomfort & 4-Symptom Questionnaire ocular endpoints for dryness ($p=0.01$), discomfort ($p=0.03$), burning ($p=0.03$), grittiness ($p=0.003$), and stinging ($p=0.02$). Although the improvement effect size of the co-primary endpoint of fluorescein nasal region ocular staining did not reach statistical significance, reproxalap was statistically superior to vehicle in reduction from baseline in the induction-maintenance dosing group from Weeks 1 to 4 of treatment ($p=0.03$), and statistical separation from vehicle was observed at Week 2 ($p=0.04$).

"The rapid amelioration of symptoms followed by symptomatic control in the induction-maintenance dosing regimen supports the potential of reproxalap to treat a wide range of dry eye disease states, from severe flares to persistent symptoms," stated Dr. David Clark, Chief Medical Officer of Aldeyra. "In addition, consistent with our positive Phase 3 results in allergic conjunctivitis, reproxalap is one of the first dry eye disease drugs to demonstrate activity in reducing ocular itching, a prominent symptom associated with dry eye disease exacerbation, which is especially common during allergy seasons."

Consistent with clinical experience in over 1,100 patients, no adverse findings on safety assessments were observed, and reproxalap was well-tolerated. The most common reported adverse event in reproxalap-treated patients was transient and mild instillation site irritation. Less than 8% of reproxalap-treated patients discontinued the trial due to adverse events, and moderate ocular adverse events were reported in fewer than 1% of subjects.

"Today's dry eye disease population is underserved, and novel therapies are in demand. Currently available therapies often require weeks or months to demonstrate activity, and many patients exhibit limited or no response, leading to between 50% to 80% of patients dropping off therapy between their second and third refill," stated David McMullin, Chief Commercial Officer of Aldeyra. "The early-onset and broad pattern of symptom improvement in the induction-maintenance dosing regimen of reproxalap demonstrated in RENEW Part 1 represents an attractive profile in the dry eye disease market."

Conference Call
Aldeyra will host a conference call to discuss this announcement today, December 3, 2019, at 8:00 a.m. ET. The dial-in numbers are (866) 211-4098 for domestic callers and (647) 689-6613 for international callers. The Conference ID is 1592481. A live webcast of the conference call will also be available on the Investors Relations section of the Aldeyra Therapeutics website at https://ir.aldeyra.com. Presentation slides will be available on the investor relations page approximately 30 minutes prior to the start of the conference call and webcast.

After the live webcast, the event will remain archived on the Aldeyra Therapeutics website for thirty days.

About Reproxalap
Reproxalap is a novel, small-molecule immune-modulating covalent inhibitor of reactive aldehyde species (RASP), which are elevated in ocular and systemic inflammatory disease. Reproxalap's mechanism of action has been validated with the demonstration of statistically significant and clinically relevant activity in multiple physiologically distinct late-phase clinical indications.

About Dry Eye Disease
Dry eye disease is a common inflammatory disease estimated to affect approximately 34 million people in the United States. The disease is characterized by insufficient moisture and lubrication in the anterior surface of the eye, leading to dryness, inflammation, pain, discomfort, irritation, diminished quality of life, and in severe cases, permanent vision impairment. Among physicians and patients, existing therapy for dry eye disease is generally regarded as inadequate and often requires weeks or months to demonstrate activity. In patients with dry eye disease, pro-inflammatory RASP may contribute to ocular inflammation and changes in tear lipid composition. By diminishing RASP levels, Aldeyra's RASP inhibitor platform represents a novel and differentiated approach for the treatment of the symptoms and signs of dry eye disease.

About Aldeyra Therapeutics
Aldeyra Therapeutics is a biotechnology company devoted to developing and commercializing next-generation medicines to improve the lives of patients with immune-mediated diseases. Aldeyra's lead investigational drug product candidates are potential first-in-class treatments in development for dry eye disease, allergic conjunctivitis, proliferative vitreoretinopathy, and Sjögren-Larsson Syndrome. The company is also developing other product candidates for retinal and systemic inflammatory diseases.

Safe Harbor Statement
This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding Aldeyra's development plans and expectations for its product candidates, including plans relating to current or future clinical development of reproxalap in dry eye disease, the potential of reproxalap to treat a wide range of dry eye disease states and reduce ocular itching, and the potential to be first-line therapy and first-in-class. Aldeyra intends such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by terms such as, but not limited to, "may," "might," "will," "objective," "intend," "should," "could," "can," "would," "expect," "believe," "anticipate," "project," "target," "design," "estimate," "predict," "potential," "aim," "plan" or the negative of these terms, and similar expressions intended to identify forward-looking statements. Such forward-looking statements are based upon current expectations that involve risks, changes in circumstances, assumptions and uncertainties. Aldeyra is at an early stage of development and may not ever have any products that generate significant revenue. All of Aldeyra's development timelines may be subject to adjustment depending on recruitment rate, regulatory review, preclinical and clinical results, and other factors that could delay the initiation or completion of clinical trials. Important factors that could cause actual results to differ materially from those reflected in Aldeyra's forward-looking statements include, among others, the timing of enrollment, commencement and completion of Aldeyra's clinical trials; the timing and success of preclinical studies and clinical trials conducted by Aldeyra and its development partners; updated or refined data based on Aldeyra's continuing review and quality control analysis of clinical data; Aldeyra's ability to design clinical trials with protocols and endpoints acceptable to applicable regulatory authorities; the risk that prior results, such as signals of safety, activity or durability of effect, observed from preclinical or clinical trials, will not be replicated or will not continue in ongoing or future studies or trials involving Aldeyra's product candidates; Aldeyra's expectations regarding competition; Aldeyra's anticipated growth strategies; Aldeyra's ability to attract or retain key personnel; Aldeyra's ability to establish and maintain development partnerships; Aldeyra's expectations regarding federal, state and foreign regulatory requirements; regulatory developments in the United States and foreign countries; Aldeyra's ability to obtain and maintain intellectual property protection for its product candidates; the anticipated trends and challenges in Aldeyra's business and the market in which it operates; and other factors that are described in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of Aldeyra's Annual Report on Form 10-K for the year ended December 31, 2018 and Aldeyra's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, which are on file with the Securities and Exchange Commission (SEC) and available on the SEC's website at www.sec.gov.

In addition to the risks described above and in Aldeyra's other filings with the SEC, other unknown or unpredictable factors also could affect Aldeyra's results. No forward-looking statements can be guaranteed and actual results may differ materially from such statements. The information in this release is provided only as of the date of this release, and Aldeyra undertakes no obligation to update any forward-looking statements contained in this release on account of new information, future events, or otherwise, except as required by law.

View source version on businesswire.com: https://www.businesswire.com/news/home/20191203005320/en/

Source: Aldeyra Therapeutics, Inc.

Corporate Contact:
David McMullin
Aldeyra Therapeutics, Inc.
Tel: 781-761-4904 ext. 218
dmcmullin@aldeyra.com

Investor & Media Contact:
Scott Solomon
Sharon Merrill Associates, Inc.
Tel: 617-542-5300

ALDX@investorrelations.com