



Cytokinetics Announces Data From Its ALS Program Presented at the 32nd International Symposium on ALS/MND

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Majority of Initial Patients Enrolled in COURAGE-ALS Show Intended Middle to Fast Disease Progression Phenotype at Baseline

SOUTH SAN FRANCISCO, Calif., Dec. 10, 2021 (GLOBE NEWSWIRE) -- Cytokinetics, Incorporated (Nasdaq: CYTK) today announced that new data were presented at the 32nd International Symposium on ALS/MND including an analysis of baseline characteristics from the initial patients enrolled in COURAGE-ALS (Clinical Outcomes Using *Reldesemtiv* on ALSFRS-R in a Global Evaluation in ALS), the ongoing Phase 3 clinical trial of *relidesemtiv* in patients with amyotrophic lateral sclerosis (ALS). In addition, supplemental analyses from FORTITUDE-ALS (Functional Outcomes in a Randomized Trial of Investigational Treatment with CK-2127107 to Understand Decline in Endpoints – in ALS), the Phase 2 clinical trial of *relidesemtiv* in ALS, were presented, as were results from the IMPACT ALS Europe survey, a patient and caregiver survey funded in part by Cytokinetics.

"The analysis of patients enrolled to date in COURAGE-ALS shows that the great majority of patients have middle and fast pre-study disease progression rates, which was our objective after observing in FORTITUDE-ALS that the treatment effect of *relidesemtiv* was greater in patients with faster disease progression," said Fady I. Malik, M.D., Ph.D., Cytokinetics' Executive Vice President of Research & Development. "While we are not excluding slow progressors, by adjusting the inclusion criteria to enrich the population for faster rates of progression, we may be able to increase the sensitivity of detecting a potential treatment effect of *relidesemtiv*. We look forward to continuing COURAGE-ALS."

COURAGE-ALS: Analysis of Baseline Characteristics for First 27 Patients Enrolled

Stacy Rudnicki, M.D., Vice President, Clinical Research, Cytokinetics, presented an analysis of the baseline characteristics of the first 27 patients enrolled in COURAGE-ALS. COURAGE-ALS is a Phase 3, multi-center, double-blind, randomized, placebo-controlled trial of *relidesemtiv* expected to enroll approximately 555 patients with ALS. Analyses conducted post hoc from FORTITUDE-ALS, the completed Phase 2 clinical trial of *relidesemtiv*, suggested that treatment effects were more evident in patients with faster rates of disease progression. These findings informed the inclusion criteria for COURAGE-ALS with the aim of enrolling a higher proportion of patients with middle to fast disease progression. Key inclusion criteria in COURAGE-ALS include symptom onset within 24 months and ALS Functional Rating Scale-Revised (ALSFRS-R) total score of ≤ 44 . COURAGE-ALS began enrolling patients in August 2021, and 27 patients had been enrolled at the time of this analysis. The disease progression rate of each patient prior to enrollment was estimated using a formula based on ALSFRS-R score at entry into the trial and duration of ALS symptoms; progression rates were categorized as slow (≤ 0.37 points per month), middle (>0.37 – 0.67 points per month) and fast (>0.67 points per month). These categories were defined by equally dividing the disease progression rates of patients enrolled in FORTITUDE-ALS into tertiles. In COURAGE-ALS, the majority of the patients enrolled at the time of this analysis were middle progressors (48.2%) or fast progressors (37.0%). From this analysis it appears that adjusting the inclusion criteria in COURAGE-ALS is achieving the intended goal of increasing the proportion of patients with middle to fast disease progression rates, as compared to FORTITUDE-ALS.

FORTITUDE-ALS: Grip Strength Correlated with Fine Motor Function and Arm Function

Andrew Wolff, M.D., Senior Vice President, Senior Fellow, Clinical Research and Development, Cytokinetics, presented supplemental analyses from FORTITUDE-ALS evaluating the relationship between declining grip strength and motor function. In FORTITUDE-ALS, secondary and exploratory endpoints included change from baseline in the ALSFRS-R, in which higher scores represent better physical function, change from baseline in the ALS Assessment Questionnaire (ALSAQ-5), a patient reported measure of health status in which higher scores represent worse quality of life, and change from baseline in grip strength. Measurements for ALSFRS-R, ALSAQ-5, and bilateral grip strength were collected at Screening, Day 1, Weeks 2, 4, 8, 12 and Follow-up. For all seven time points collected, average grip strength was strongly correlated with the ALSFRS-R fine motor domain sub-score with an overall Spearman correlation coefficient of 0.723 ($p < 0.0001$), indicating that declining grip strength was strongly correlated with decreasing ALSFRS-R fine motor domain sub-scores. Average grip strength was moderately inversely correlated with scores for Question 2 of the ALSAQ-5, which assesses the patients' perception of difficulty using their arms and hands, with an overall Spearman correlation coefficient of -0.634 ($p < 0.0001$), suggesting that declining grip strength was moderately correlated with increasing scores for Question 2 of the ALSAQ-5. These findings indicate that grip strength, which is frequently included as an outcome measure in ALS clinical trials and may be assessed as part of routine care for people with ALS, has clinical relevance due to its correlation to fine motor function and patient reported quality of life.

FORTITUDE-ALS: Extremity Muscle Strength Correlated with Physical Function and Quality of Life

Bill Jacobsen, M.D., Neurologist, Gregory W. Fulton ALS and Neuromuscular Disease Center and Assistant Professor, Department of Neurology at the Barrow Neurological Institute, presented an additional analysis from FORTITUDE-ALS exploring how muscle strength relates to functional status and quality of life. Muscle strength was measured using hand-held dynamometry in three upper extremity muscles and three lower extremity muscles, and the average strength of each muscle bilaterally was used for this analysis. Functional status was based on scores in the ALSFRS-R fine motor domain and gross motor domain. Quality of life was based on Question 1 of the ALSAQ-5, which assesses the patient's perception of difficulty in standing up, as well as Question 2 of the ALSAQ-5. Each of these measurements were performed at Screening, Day 1, Weeks 2, 4, 8, 12, and Follow-up. Correlation was assessed using Spearman's rank correlation coefficient, defining scores of <0.3 as very weak, 0.3 – 0.49 as weak, 0.5 – 0.69 as moderate, 0.7 – 0.8 as strong, and >0.8 as very strong. Upper extremity muscle strength, individually and summed, was moderately to strongly correlated with the ALSFRS-R fine motor domain, and moderately inversely correlated with Question 2 of ALSAQ-5. Lower extremity muscle strength, individually and summed, was moderately correlated with the ALSFRS-R gross motor domain, and moderately inversely correlated with Question 1 of the ALSAQ-5. In general, summed relationships were stronger than those observed with individual muscles. Overall, these findings suggest that extremity muscle strength is moderately to strongly related to physical function and quality of life.

IMPACT ALS Europe Survey Results Reveal ALS Patient and Caregiver Perspectives on Burden of Disease and Treatment

Mark Heverin, Research Manager, and Miriam Galvin, Ph.D., Senior Research Fellow, both of the Academic Unit of Neurology, Trinity College Dublin, presented new results from IMPACT ALS, a self-reported online survey of ALS patients and caregivers in Europe designed to gather quantitative and qualitative information regarding perspectives on burden of disease and views on treatment. The survey was adapted from the original IMPACT ALS US survey, with versions designed for ALS patients, caregivers and bereaved caregivers. The survey was developed in collaboration with industry

experts, ALS clinical thought leaders, and representatives from industry partners, with financial support from Biogen, Inc., Ionis Pharmaceuticals, Inc., and Cytokinetics. There were 1,538 participants from nine countries in Europe, including 870 people with ALS, 450 caregivers, and 218 bereaved caregivers. Results showed that within the previous two weeks, nearly every person with ALS experienced at least one symptom, including weakness in the hands, arms feet and/or legs, fatigue, speech problems and swallowing problems. Among responders who indicated which symptoms they preferred a new treatment to address, the most commonly chosen symptom was disease progression, followed by respiratory function, mobility, communication and muscle weakness. Of the respondents, 73.6% indicated they had fears about the future, with the most common fears for patients being leaving their family too soon, being isolated from family and friends, and dying from respiratory failure. Caregivers of someone living with ALS indicated that in the previous two weeks their stress levels were extremely high, with many reporting high or maximum stress levels. Additionally, many caregivers reported that their current health was worse than before they began caring for the person with ALS. These results characterizing the patient and caregiver experience in Europe mirror the findings from the US survey results and may help inform global ALS drug development.

About Reldesemtiv

Skeletal muscle contractility is driven by the sarcomere, the fundamental unit of skeletal muscle contraction and a highly ordered cytoskeletal structure composed of several key proteins. Skeletal muscle myosin is the motor protein that converts chemical energy into mechanical force through its interaction with actin. A set of regulatory proteins, which includes tropomyosin and several types of troponin, make the actin-myosin interaction dependent on changes in intracellular calcium levels. *Reldesemtiv* is an investigational, selective, small molecule fast skeletal muscle troponin activator (FSTA) arising from Cytokinetics' skeletal muscle contractility program. *Reldesemtiv* was designed to slow the rate of calcium release from the regulatory troponin complex of fast skeletal muscle fibers, which sensitizes the sarcomere to calcium, leading to an increase in skeletal muscle contractility. *Reldesemtiv* has demonstrated pharmacological activity that may lead to new therapeutic options for diseases associated with muscle weakness and fatigue. In non-clinical models of ALS, a skeletal muscle activator has demonstrated increases in submaximal skeletal muscle force and power in response to neuronal input and delays in the onset and reductions in the degree of muscle fatigue.

The development program for *rel-desemtiv* is assessing its potential for the treatment of ALS and includes FORTITUDE-ALS and COURAGE-ALS, the ongoing Phase 3 clinical trial designed to evaluate the effect of treatment with *rel-desemtiv* compared to placebo on measures of disease progression, functional outcomes and survival.

About ALS

Amyotrophic lateral sclerosis (ALS) is a progressive neurodegenerative disease that afflicts approximately 27,000 people in the United States and a comparable number of patients in Europe. Approximately 6,300 new cases of ALS are diagnosed each year in the United States. The average life expectancy of a person with ALS is approximately three to five years after diagnosis and only approximately 10 percent of people with ALS survive for more than 10 years. Death is usually due to respiratory failure because of diminished strength in the skeletal muscles responsible for breathing. Few treatment options exist for these patients, resulting in a high unmet need for new therapies to address functional deficits and disease progression.

About Cytokinetics

Cytokinetics is a late-stage biopharmaceutical company focused on discovering, developing and commercializing first-in-class muscle activators and next-in-class muscle inhibitors as potential treatments for debilitating diseases in which muscle performance is compromised. As a leader in muscle biology and the mechanics of muscle performance, the company is developing small molecule drug candidates specifically engineered to impact muscle function and contractility. Cytokinetics has communicated its objective to submit a U.S. NDA for *omecamtiv mecarbil*, its novel cardiac muscle activator, following positive results from GALACTIC-HF, a large, international Phase 3 clinical trial in patients with heart failure. Cytokinetics is conducting METEORIC-HF, a second Phase 3 clinical trial of *omecamtiv mecarbil*. Cytokinetics is also developing *aficamten*, a next-generation cardiac myosin inhibitor, for the potential treatment of hypertrophic cardiomyopathies (HCM). The company has announced positive results from Cohorts 1 and 2 in REDWOOD-HCM, a Phase 2 clinical trial of *aficamten* in patients with obstructive HCM. Cytokinetics is conducting start-up activities for SEQUOIA-HCM, the Phase 3 clinical trial of *aficamten* in patients with obstructive HCM. Cytokinetics is also developing *rel-desemtiv*, a fast skeletal muscle troponin activator, currently the subject of COURAGE-ALS, a Phase 3 clinical trial in patients with ALS. Cytokinetics continues its over 20-year history of pioneering innovation in muscle biology and related pharmacology focused to diseases of muscle dysfunction and conditions of muscle weakness.

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Forward-Looking Statements

This press release contains forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995 (the "Act"). Cytokinetics disclaims any intent or obligation to update these forward-looking statements and claims the protection of the Act's Safe Harbor for forward-looking statements. Examples of such statements include, but are not limited to, statements relating to the potential benefits of *rel-desemtiv*; Cytokinetics' continued evaluation of *rel-desemtiv* as a treatment for patients with ALS; and our ability to fully enroll COURAGE-ALS, and statements regarding the properties and potential benefits of Cytokinetics' other drug candidates or the progress of any of our other clinical trials. Such statements are based on management's current expectations, but actual results may differ materially due to various risks and uncertainties, including, but not limited to, potential difficulties or delays in the development, testing, regulatory approvals for trial commencement, progression or product sale or manufacturing, or production of Cytokinetics' drug candidates that could slow or prevent clinical development or product approval; Cytokinetics may incur unanticipated research and development and other costs or be unable to obtain additional financing necessary to conduct development of its products; standards of care may change, rendering Cytokinetics' drug candidates obsolete; competitive products or alternative therapies may be developed by others for the treatment of indications Cytokinetics' drug candidates and potential drug candidates may target; and risks and uncertainties relating to the timing and receipt of payments from its partners, including milestones and royalties on future potential product sales under Cytokinetics' collaboration agreements with such partners. For further information regarding these and other risks related to Cytokinetics' business, investors should consult Cytokinetics' filings with the Securities and Exchange Commission.

Contact:
Cytokinetics
Joanna Siegall
Senior Manager, Corporate Communications, Investor Relations
(425) 314-1721

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