Landmark AdVance Study Shows Adenovirus Burden Correlates with Mortality in Pediatric Allogeneic Hematopoietic Cell Transplant Recipients

October 4, 2018

– First Study to Show that Adenovirus Area Under the Curve is an Optimal Indicator of Clinical Outcomes in Adenovirus Infection –

DURHAM, N.C., Oct. 04, 2018 (GLOBE NEWSWIRE) -- Chimerix (NASDAQ:CMRX), a biopharmaceutical company developing novel antivirals to address unmet medical needs, today announced the full analysis of adenovirus (AdV) viral load dynamics and all-cause mortality in pediatric patients. These data from the AdVance study, the first large, multi-center study of AdV incidence, natural history, management and clinical outcomes in allogeneic hematopoietic cell transplant (allo-HCT) recipients will be presented at IDWeek™ 2018, held October 3-7 in San Francisco, CA.

Prior to the AdVance study, the epidemiology of AdV after allo-HCT has been generally understood via single-center studies, with little data on the correlation between AdV viral load and risk of mortality. Historically, acceptance of virologic endpoints as surrogates for clinical outcomes such as survival have been important in progressing antiviral development in other viral diseases.

“AdVance represents a significant step forward in our understanding of the impact of adenovirus on allo-HCT recipients. Although clinicians have long held anecdotal correlations of high adenovirus measures and mortality in the six months after transplant, we now have data from transplant centers across Europe that support the correlation of AdV viral burden and mortality,” said Garrett Nichols, MD, MS, Chief Medical Officer of Chimerix. “AdVance shows for the first time that viral burden measured as adenovirus area under the curve is predictive of short-term survival. These data further validate the use of this primary endpoint in our ongoing AdAPT trial of brincidofovir in pediatric allo-HCT recipients.”

The AdVance natural history study was a multi-center, multinational analysis conducted in 2017 that examined the incidence, practice patterns, hospitalization and clinical outcomes of 4,276 (1,736 pediatric, 2,540 adults) allo-HCT recipients. At IDWeek in San Francisco, an analysis will be presented which further explores the relationship between pediatric (<18 years) AdV viral load dynamics and all-cause mortality. Notably, 241 patients had AdV viremia ≥1,000 copies/mL within six months of allo-HCT. Eighteen percent (18%, 43/241) of pediatric patients died within six months of experiencing their first plasma AdV ≥1000 copies/mL.

The statistical analysesexplored the relationship between six different dynamic AdV viral load measures and all-cause mortality, including:

- AdV time-averaged area under the curve (AAUC)
- Peak AdV viremia
- AdV viral load over time
- Two-week change in AdV viremia
- Days of viremia <1,000 copies/mL
- Days of undetectable AdV viremia

Key findings include a greater than ten-fold risk of mortality with highest AdV burden.

- Patients in the highest quartile of AdV AAUC had a mortality hazard ratio of 11.6 relative to those in the lowest quartile, showing that AAUC is a clinically useful indicator for AdV infection outcome.
- Peak AdV viral load and persistence of AdV viremia were associated with stepwise increases in mortality, even after adjusting for immune reconstitution.
- AdV AAUC incorporates both viral peak and persistence, with each $\log_{10}$ increase in AdV AAUC associated with approximately a doubling of mortality risk.
- In multivariate analyses, all AdV viral dynamic measures were shown to be significantly associated with, and independent predictors of, all-cause mortality.

Oral presentation details:

- **Abstract Title:** *Adenovirus Load Dynamics Are Consistently Correlated with Risk of Mortality in Pediatric Allogeneic Hematopoietic Cell Transplant Recipients: Findings from the Landmark AdVance Study* (1732)
- **Oral Abstract Session:** Transplant and Immunocompromised Hosts: Emerging Issues
- **Location & Time:** Room W 2002; Saturday, October 6, 2018, 9:15 a.m. PDT (12:15 p.m. EDT)

About Brincidofovir

Chimerix's lead product candidate, brincidofovir, is a nucleotide analog that has antiviral activity against all five families of DNA viruses that affect humans, including adenoviruses and variola virus, the virus that causes smallpox. Brincidofovir has a high barrier to resistance, no myelosuppression and a low risk of nephrotoxicity. Brincidofovir has received Fast Track designation from the FDA for cytomegalovirus (CMV) and smallpox. Brincidofovir

has also received Orphan Medicinal Product Designation from the European Commission for the treatment of adenovirus, for the prevention of CMV disease, and for the treatment of smallpox, and Orphan Drug Designation from the FDA for the treatment of smallpox.

About Chimerix

Chimerix is a biopharmaceutical company dedicated to discovering, developing and commercializing medicines that improve outcomes for immunocompromised patients. Chimerix's proprietary lipid conjugate technology and compound library have produced brincidofovir (BCV, CMX001); CMX157, which was licensed to ContraVir Pharmaceuticals; and CMX521, the first clinical-stage direct-acting antiviral for the treatment and prevention of norovirus. For further information, please visit Chimerix's website, www.chimerix.com.

Forward-Looking Statements

This press release includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks, uncertainties and other factors, including the possibility our current or future clinical trials of brincidofovir may not be successful, that FDA and other regulatory authorities may not approve brincidofovir or brincidofovir-based regimens, and that marketing approvals, if granted, may have significant limitations on their use. As a result, brincidofovir may never be successfully commercialized. In addition, Chimerix may be unable to file for regulatory approval for brincidofovir with other regulatory authorities. Similar risks and uncertainties apply to the Company's development of CMX521. These risks, uncertainties and other factors could cause actual results to differ materially from those expressed or implied by such forward-looking statements. Risks are described more fully in the Company's filings with the Securities and Exchange Commission, including without limitation the Company's most recent Quarterly Report on Form 10-Q and other documents subsequently filed with or furnished to the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

CONTACT:
Investor Relations:
Michelle LaSpaluto
(919) 972-7115
ir@chimerix.com
or
Will O'Connor
Stern Investor Relations
Will@sternir.com
212-362-1200

Media:
Laurie Masonson
W2O Group
lmasonson@w2group.com
(917) 459-6164

CHIMERIX

Source: Chimerix, Inc.