



## **Tetraphase Pharmaceuticals Announces Positive Data from Post-Hoc Analysis of Phase 3 Trials Demonstrating Efficacy of XERAVA™ (eravacycline) in Obese and Renally Impaired Patients with Complicated Intra-Abdominal Infections**

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WATERTOWN, Mass., Oct. 23, 2018 (GLOBE NEWSWIRE) -- [Tetraphase Pharmaceuticals, Inc.](http://www.tetraphase.com) (NASDAQ:TTPH), a biopharmaceutical company focused on developing and commercializing novel antibiotics to treat life-threatening multidrug-resistant (MDR) infections, announced data from two post-hoc analyses of pooled data from two Phase 3 IGNITE (Investigating Gram-Negative Infections Treated with Eravacycline) studies of XERAVA in patients with complicated intra-abdominal infections (cIAI). These data were presented at the 2018 American College of Clinical Pharmacy (ACCP) Global Conference on Clinical Pharmacy, held October 20-23 in Seattle, WA.

"Treatment failure risk can increase in certain subgroups with cIAI, including patients who are obese, and those with altered renal function," said Larry Tsai, M.D., Chief Medical Officer of Tetraphase. "Obesity may put patients at higher risk due to altered pharmacokinetics and comorbidities, while renal function can be highly dynamic in patients with serious infections, which can result in significant over- or under-dosing of antibiotics."

Dr. Tsai added, "We believe the data presented at the 2018 ACCP Global Conference confirm the efficacy of XERAVA in both obese and renally impaired high-risk patient populations. In fact, one of the many benefits of XERAVA is that physicians do not have to dose adjust the therapy for renally impaired patients, which when combined with this post-hoc sub-analysis, highlight how XERAVA is an ideal option for those with altered renal function. Overall, these pooled data from two Phase 3 IGNITE studies further reinforce the use of XERAVA as an empiric treatment of choice for appropriate patients."

### ***Efficacy of Eravacycline in Obese Patients: Pooled Analysis of IGNITE1 and IGNITE4***

In this post-hoc sub-analysis, the objective was to evaluate clinical cure rate at the test of cure (TOC) visit in patients with varying body mass indexes (BMIs) who received XERAVA versus comparators ertapenem and meropenem. Subjects were classified into six categories based on BMI. The categories were Obese Class III (BMI > 40 kg/m<sup>2</sup>); Obese Class II (BMI 35-39.9 kg/m<sup>2</sup>); Obese Class I (BMI 30-34.9 kg/m<sup>2</sup>); Overweight (BMI 25-29.9 kg/m<sup>2</sup>); Healthy Weight (BMI 18.5-24.9 kg/m<sup>2</sup>); and Underweight (BMI < 18.5 kg/m<sup>2</sup>).

Data showed that in the most obese patients (Obese Class III subgroup), XERAVA achieved an 85.7% cure rate versus 89.1% for the comparator, while in the Obese Class II subgroup, XERAVA was 93.9% effective, and the comparator was 89.7% effective. In the Obese Class I subgroup, XERAVA demonstrated an 87% clinical cure rate versus 88.5% for the comparator. Overall, XERAVA was effective in treating patients with cIAI regardless of BMI. These data support XERAVA as an effective, empiric treatment option for obese patients with cIAI comparable to carbapenems.

### ***Effect of Renal Function on Efficacy of Eravacycline: Pooled Analysis of IGNITE1 and IGNITE4***

In this post-hoc sub-analysis, researchers examined how baseline creatinine clearance (CrCL) affects the clinical efficacy of XERAVA. Subjects were classified into three renal function categories based on baseline CrCL. The categories were Moderately to Severely Decreased Renal Function (CrCL 15 to <60 mL/minute); Mildly Decreased to Normal Renal Function (CrCL ≥ 60 to <130 mL/minute); and Augmented Renal Function (CrCL ≥ 130 mL/min).

In patients with Moderately to Severely Decreased Renal Function, XERAVA was 84.8% effective, versus 75.9% for the comparator therapy, and in patients with Mildly Decreased to Normal Renal Function, XERAVA was 89% effective, versus 91.7% for the comparator therapy. Finally, for patients with Augmented Renal Function, 91.9% achieved clinical cure with XERAVA, versus 92.8% in the comparator group. Overall, similar clinical cure rates were observed for XERAVA across all classifications of renal function.

These data further suggest that XERAVA is an effective, empiric treatment for cIAI comparable to other approved antibiotics. Additionally, XERAVA may provide an alternative to the use of antibiotics that require dosing modification in patients with altered renal function.

### **About XERAVA™**

XERAVA (eravacycline) for injection is a tetracycline class antibacterial indicated for the treatment of complicated intra-abdominal infections (cIAI) in patients 18 years of age and older. XERAVA was investigated for the treatment of cIAI as part of the Company's IGNITE (Investigating Gram-Negative Infections Treated with Eravacycline) Phase 3 program. In the first pivotal Phase 3 trial in patients with cIAI, twice-daily intravenous (IV) XERAVA met the primary endpoint by demonstrating statistical non-inferiority of clinical response compared to ertapenem and was well-tolerated. In the second Phase 3 clinical trial in patients with cIAI, twice-daily IV XERAVA met the primary endpoint by demonstrating statistical non-inferiority of clinical response compared to meropenem and was well-tolerated. In both trials, XERAVA achieved high cure rates in patients with Gram-negative pathogens, including resistant isolates.

### **Indications and Usage**

XERAVA is indicated for the treatment of complicated intra-abdominal infections (cIAI) caused by susceptible microorganisms: *Escherichia coli*, *Klebsiella pneumoniae*, *Citrobacter freundii*, *Enterobacter cloacae*, *Klebsiella oxytoca*, *Enterococcus faecalis*, *Enterococcus faecium*, *Staphylococcus aureus*, *Streptococcus anginosus* group, *Clostridium perfringens*, *Bacteroides species*, and *Parabacteroides distasonis* in patients 18 years or older.

### **Limitations of Use**

XERAVA is not indicated for the treatment of complicated urinary tract infections (cUTI).

## Usage

To reduce the development of drug-resistant bacteria and maintain the effectiveness of XERAVA and other antibacterial drugs, XERAVA should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

## Important Safety Information

XERAVA is contraindicated for use in patients with known hypersensitivity to eravacycline or to tetracycline-class antibacterial drugs. Life-threatening hypersensitivity (anaphylactic) reactions have been reported with XERAVA.

The use of XERAVA during tooth development (last half of pregnancy, infancy and childhood to the age of eight years) may cause permanent discoloration of the teeth (yellow-gray-brown) and enamel hypoplasia.

The use of XERAVA during the second and third trimester of pregnancy, infancy and childhood up to the age of eight years may cause reversible inhibition of bone growth.

*Clostridium difficile* associated diarrhea (CDAD) has been reported with use of nearly all antibacterial agents and may range in severity from mild diarrhea to fatal colitis.

The most common adverse reactions observed in clinical trials (incidence  $\geq$  3%) were infusion site reactions (7.7%), nausea (6.5%), and vomiting (3.7%).

XERAVA is structurally similar to tetracycline-class antibacterial drugs and may have similar adverse reactions. Adverse reactions including photosensitivity, pseudotumor cerebri, and anti-anabolic action which has led to increased blood urea nitrogen, azotemia, acidosis, hyperphosphatemia, pancreatitis, and abnormal liver function tests, have been reported for other tetracycline-class antibacterial drugs, and may occur with XERAVA. Discontinue XERAVA if any of these adverse reactions are suspected.

**To report SUSPECTED ADVERSE REACTIONS, contact Tetrphase Pharmaceuticals Inc., at 1-833- 7-XERAVA (1-833-793-7282) or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch)**

Please see full prescribing information for XERAVA at [www.XERAVA.com](http://www.XERAVA.com).

## About Tetrphase Pharmaceuticals, Inc.

Tetrphase is a biopharmaceutical company using its proprietary chemistry technology to create novel antibiotics for serious and life-threatening bacterial infections, including those caused by many of the multidrug-resistant bacteria highlighted as urgent public health threats by the World Health Organization and the Centers for Disease Control and Prevention. The Company has created more than 3,000 novel tetracycline compounds using its proprietary technology platform. Tetrphase's lead product XERAVA is approved for the treatment of complicated intra-abdominal infections by the U.S. Food and Drug Administration and the European Medicines Agency. The Company's pipeline also includes TP-271 and TP-6076, which are in Phase 1 clinical trials. Please visit [www.tphase.com](http://www.tphase.com) for more company information.

## Forward-Looking Statements

*Any statements in this press release about our future expectations, plans and prospects, including statements regarding our strategy, future operations, prospects, plans and objectives, and other statements containing the words "anticipates," "believes," "expects," "plans," "will" and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including whether eravacycline will be successfully distributed and marketed; whether results obtained in previous clinical trials will be indicative of results obtained in future clinical trials; whether any clinical candidate will advance through the clinical trial process on a timely basis or at all and other regulatory and commercial risk factors discussed in the "Risk Factors" section of our quarterly report on Form 10-Q for the period ended June 30, 2018, filed with the Securities and Exchange Commission on August 2, 2018. In addition, the forward-looking statements included in this press release represent our views as of October 22, 2018. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so.*

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