



# WBB Securities, LLC

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**Tetraphase Pharmaceuticals, Inc. (NasdaqGS: TTPH) Initiating Coverage**  
Initiating Coverage with a Speculative Buy Rating February 22, 2018  
and a 12-Month Price Target of \$6.00

## Tetraphase Prepares for Commercialization of a Needed Antibiotic

Tetraphase Pharmaceuticals, Inc. (TTPH) is a clinical stage pharmaceutical company, with eravacycline as its lead candidate. It is a novel tetracycline-derived antibiotic to treat resistant and multidrug-resistant infections, including multidrug-resistant Gram-negative infections. Following successful IGNITE1 and IGNITE4 Phase 3 trials in complicated intra-abdominal infections (cIAI), a New Drug Application (NDA) was filed with the FDA and a Marketing Authorisation Application (MAA) was submitted to the EMA for IV eravacycline.

Two days ago, TTPH announced an exclusive licensing agreement with Everest Medicines Limited, a C-bridge Capital-backed biopharmaceutical company based in China, to develop and commercialize eravacycline in mainland China, Taiwan, Hong Kong, Macau, South Korea, and Singapore (known as the Territories). Tetraphase will receive an initial upfront payment of \$7.0 million and may receive clinical and regulatory milestones of up to \$16.5 million as well as a maximum of \$20.0 million via achieving annual sales milestones. Everest will be exclusively responsible for the development and commercialization of eravacycline in the Territories. TTPH will also be eligible to receive tiered royalties on net sales of eravacycline in the Territories.

On February 13, 2018 top-line results from the Phase 3 (IGNITE3) clinical trial of IV eravacycline in complicated urinary tract infections (cUTI) were reported. In this trial, eravacycline did not achieve co-primary endpoints of responder rates (a combination of clinical cure and microbiological success) at the end-of-IV treatment visit and the test-of-cure visit, though it was well tolerated and maintained a safety profile consistent with prior studies.

As TTPH management explained, many drugs are effective in one disease but not others. With positive results in cIAI and an excellent safety profile, the company has reported it is preparing for commercialization of eravacycline once approved. We believe that the critical demand for new antibiotics in the infectious disease armamentarium is an opportunity for the TTPH franchise. **We are therefore initiating coverage of TTPH with a Speculative Buy Rating and a 12-month price target of \$6.00.**

Current Price	\$2.20
<b>12 Month Target Price</b>	<b>\$6.00</b>
12-Month Trading Range	\$2.05-\$9.93
Market Capitalization (Mil)	\$113.50
Shares Outstanding (Mil)	51.59
Avg. Daily Volume	872,642
L.T. Debt (Mil)	0.00
Dividend/Yield	N/A
Book Value P/S	\$2.92
NASDAQ Composite	7,218.23
S&P 500	2,701.33

Historical Performance and Disclosures on Page 10 - 11  
Source: QUODD+

## Valuation

### Rating Legend:

**Strong Buy** – Should be aggressively purchased.  
**Buy** - Should be purchased on market weakness.  
**Hold** - Fairly valued.

**Sell** - Stock should be sold on market strength  
**Sell Short** - Should be aggressively sold.  
**Speculative Buy** – For aggressive accounts only

This company is entering a crucial year as it prepares for the likely approval of intravenous eravacycline in the United States and EU. As a determined franchise, TTPH has still been able to position itself with a clinical candidate to enter into the infectious disease market, an area of pharma in which we continuously advocate for greater acknowledgement and improved therapies. Additionally, TTPH has been recognized and supported by public and private entities, as apparent by their non-dilutive government contracts through NIAID, BARDA and CARB-X as well as the licensing agreement with Everest Medicines Ltd.

Right now, the TTPH franchise is now trading below its cash value. This metric gives us confidence in highlighting the investment value thesis below. Using a sum-of-the-parts calculation we arrive at the \$6.00 value by assigning a discounted value of \$3.00 per share in cash and \$3.00 per share to the eravacycline program in cIAI. Using a 51.59 million share count, we arrive at our 12-month valuation of \$6.00 and initiate TTPH at a Speculative Buy recommendation.

## Eravacycline

Eravacycline is being developed as a broad-spectrum IV and oral antibiotic for use as a first-line monotherapy for the treatment of Multiple Drug Resistant (MDR) infections. During *in vitro* studies it was shown to be effective against a wide range of Gram positive and Gram negative aerobic and anaerobic pathogens, including carbapenem-resistant microbes, strains of community-acquired methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus faecium* and penicillin-resistant strains of *Streptococcus pneumoniae*.

The FDA granted Fast Track designations for both the IV and oral formulations of eravacycline after being designated a Qualified Infectious Disease Product (QIDP), making eravacycline eligible for priority review and an additional five years of U.S. market exclusivity, upon approval.

### **Eravacycline for cIAI**

TTPH's lead program focuses on IV eravacycline for treating cIAI. An NDA was submitted to FDA in January 2018 based on data from two Phase 3 clinical trials, IGNITE1 and IGNITE4. Twice-daily IV eravacycline was well tolerated, achieved high clinical cure rates and demonstrated statistical non-inferiority to ertapenem and meropenem, respectively, in both trials. An eravacycline NDA is now being reviewed for acceptance by the FDA and eravacycline is under review by the EMA for European approval in the same indication, however the MAA is solely supported by the IGNITE1 trial.

## Eravacycline for cUTI

Eravacycline IV and oral formulations were evaluated for patients experiencing cUTI, in the IGNITE2 and IGNITE3 clinical trials. IGNITE3 top-line data was reported this February. In this trial, 1,205 patients were randomized 1:1 to receive IV eravacycline (1.5mg/kg every 24 hours) or ertapenem (1g every 24 hours) for a minimum of 5 days, and then were eligible for transition to an appropriate approved oral agent. The co-primary endpoints were responder rate (a combination of clinical cure and microbiological success) in the microbiological intent-to-treat (micro-ITT) population at the last visit of IV treatment and at the test-of-cure (TOC) visit (Day 5-10 post therapy) using a 10% non-inferiority margin. Neither of the co-primary endpoints were achieved. Responder rates in the micro-ITT population at the end-of-IV (EOI) visit were 84.8% for eravacycline (n=363/428) and 94.8% ertapenem (n=382/403) (-10% CI: -14.1%, -6.0%). Responder rates at the TOC visit were 68.5% for eravacycline (n=293/428) and 74.9% for ertapenem (n=302/403), respectively (-6.5% CI: -12.6%, -0.3%).

IGNITE2 was a 908-patient randomized study evaluating IV and oral eravacycline (1.5 mg/kg IV every 24 hours followed by 200 mg orally every 12 hours) versus levofloxacin (750 mg IV every 24 hours followed by 750 mg orally every 24 hours). Each patient received a minimum of three days of IV dosing and then, if clinically indicated, patients were eligible to transition to oral therapy for the remaining doses for a total treatment period of 7 days. The prime analysis evaluated the responder outcome (a combination of clinical cure rate and microbiological response) in the micro-ITT population at the visit 6-8 days after the completion of therapy using a 10% non-inferiority margin. For the EMA, the primary analysis evaluated the microbiological response in the microbiologically modified micro-MITT population and microbiologically evaluable (ME) populations at the post-treatment visit using a 10% non-inferiority margin. As reported initially in September 2015, eravacycline did not achieve the primary endpoint under either analysis.

## Additional Eravacycline Information

Tetracycline was patented in 1953 and came into commercial use in 1978. If approved, eravacycline will be the first tetracycline derivative approved since 2005.

Eravacycline is a fully synthetically-produced tetracycline. Traditional tetracyclines, made predominantly through a fermentation process, are similar to one another. The fermentation process allows molecular change on only a few parts of the drug molecule.

The TPPH drug development process facilitates making more extensive changes to the basic tetracycline chemical structure than the traditional process. Infectious bacteria are becoming increasingly drug-resistant to existing tetracyclines and they are ineffective against Gram negative bacteria. The TPPH process makes creation of drugs that are effective against tetracycline-resistant and Gram-negative bacteria possible.

## TP-271

TP-271 is a clinical stage antibiotic for treating respiratory disease caused by bacterial biothreats and antibiotic-resistant public health pathogens. TP-271 is anticipated to protect

against tularemia, bubonic plague and anthrax disease, as well as community acquired bacterial pneumonia (CABP).

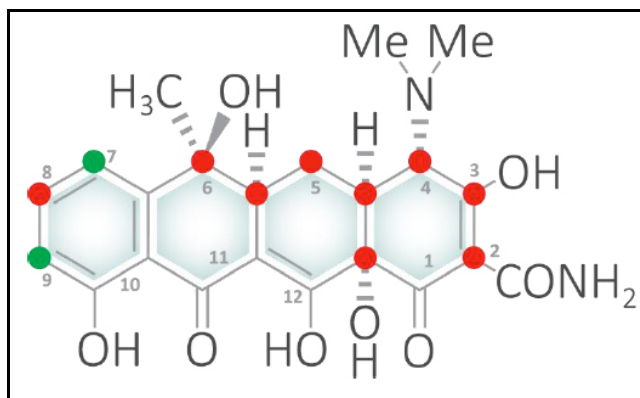
The FDA has granted QIDP and Fast Track designations for TP-271 for the treatment of CABP. Ongoing preclinical development, manufacturing and Phase 1 clinical evaluations of safety and pharmacokinetics are funded by the NIH's National Institute of Allergy and Infectious Disease. The Phase 1 randomized, placebo-controlled, double-blind, multiple ascending dose study assessing safety, tolerability and pharmacokinetics of IV TP-271 in 40 healthy adults is estimated to complete on April 30, 2018. There is a second Phase 1 study evaluating 56 healthy participants in the safety and tolerability of up to 6 different single ascending oral doses of TP-271, which is expected to complete in May 2018.

## TP-6076

TTPH is pursuing discovery and development of additional tetracycline-derived compounds effective against the most urgent MDR Gram-negative bacterial threats identified by the CDC and the The World Health Organization. Pathogens targeted include carbapenem-resistant variants of *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Escherichia coli* and *Pseudomonas aeruginosa*. TTPH has generated compounds that have demonstrated potent activity against a broad range of these MDR Gram-negative pathogens. Pathogens targeted include carbapenem-resistant strains of *Klebsiella pneumoniae*, *Acinetobacter baumannii* and *Escherichia coli*. TP-6076 is TTPH's lead candidate from this program and the company reports it is currently being evaluated in a Phase 1 clinical trial.

## Proprietary Technology

The following diagram illustrates the benefit of the TTPH process over conventional method for developing tetracycline derivatives. Both the red and green dots on the diagram represent all the positions on the tetracycline molecule that can be altered using TTPH proprietary technology, leased from Harvard University. The positions marked with green dots are those that have been modified to date using semi-synthetic approaches to create tetracycline analogs. The TTPH process, which has the ability to modify more positions provides greater protection from antibiotic resistance.



Source: Tetrphase Pharmaceuticals, Inc.

## Management

**Guy Macdonald, B.Sc., President, CEO, Board Member** since January 2008. From August 2003 until January 2008, he served as Executive Vice President, Operations, of Idenix Pharmaceuticals, Inc. He served at Merck & Co., Inc from 1981 to 2003, most recently as the Vice President for Anti-Infective and Hospital Products. Mr. Macdonald currently serves as chairman of the board of directors of Scynexis, Inc. He received an Honours Degree in biochemistry from Dundee University in Dundee, Scotland.

**Jacques Dumas, Ph.D., Chief Scientific Officer** since July 2015. Prior to joining Tetrphase, Dr. Dumas served as vice president, Idenix, at Merck Research Laboratories, related to his prior role as chief scientific officer at Idenix Pharmaceuticals Inc. From 2007 to 2014, Dr. Dumas worked for AstraZeneca, most recently as vice president and head of strategy, infection innovative medicines. Prior to AstraZeneca, he worked at Bayer Healthcare for 15 years, most recently as director of medicinal chemistry. He is a co-inventor of two marketed drugs, Nexavar<sup>®</sup> and Stivarga<sup>®</sup>. Dr. Dumas received his Ph.D. in Organic Chemistry from Paris VI University in France and completed a Postdoctoral Fellowship at Stanford University.

**Larry Edwards, Chief Commercial Officer** since January 2017. Mr. Edwards joined Tetrphase in July 2015 as Vice President of Marketing and became Vice President of Commercial Operations in January 2016. Prior to joining Tetrphase, he served as Senior Director of Marketing, gram negative franchise, with Cubist Pharmaceuticals, Inc., (Cubist acquired by Merck). He also served as Global Marketing Director, clostridium difficile and new infectious disease products, with Merck & Co., as well as Associate Director of Marketing, vaccines and infectious diseases. Mr. Edwards received a Bachelor of Science in Business & Healthcare Administration from Ohio University.

**Maria Stahl, Senior Vice President and General Counsel** since March 2015. Prior to joining Tetrphase, Ms. Stahl served as senior vice president, general counsel and secretary of Idenix Pharmaceuticals. Ms. Stahl previously served as Idenix's vice president, associate general counsel and as assistant general counsel. Prior to rejoining Idenix, Ms. Stahl served as general counsel of Zipcar, Inc., a car sharing company and as vice president, corporate counsel of Capital Crossing Bank. Prior to that, Ms. Stahl was at Wilmer Cutler Pickering Hale and Dorr LLP. Ms. Stahl has a Bachelor of Arts from Providence College and a Juris Doctorate from Yale Law School.

**Larry Tsai, M.D., Chief Medical Officer** since January 2018. Dr. Tsai joined the company in 2014, first as senior medical director and then as vice president of clinical development in 2015. Prior to joining Tetrphase, he held various positions at Aeris Therapeutics, most recently serving as vice president of research & development. Dr. Tsai holds a Bachelor of Science in Biology from Stanford University and an M.D. from the Health Sciences and Technology Program at Harvard Medical School. He is board certified in critical care medicine, internal medicine and pulmonary disease.

**Kamalam Unnayar, Chief Financial Officer** since October 2017. Prior to joining Tetrphase, Ms. Unnayar managed finance organizations at Thermo Fisher Scientific where she directed financial operations and corporate financial planning and analysis, and was the finance lead



supporting business strategy. Ms. Unninayar holds a Master of Science in administration from Wichita State University, as well as a master of finance & control and bachelor of commerce from the University of Delhi, India.

## Board of Directors

**L. Patrick Gage, Ph.D.** *Chairman* has served as a member of the board of directors and as Chairman of the board of directors since December 2011. Since July 2002, Dr. Gage has served as a consultant to the biopharmaceutical industry. From 1998 to 2002, Dr. Gage served as President of Wyeth Research (now part of Pfizer, Inc.) and Senior Vice President, Science and Technology. Prior to joining Wyeth Research, he served in various positions at Genetics Institute, Inc., first as head of Research and Development, then as Chief Operating Officer and eventually as President. Dr. Gage served in various positions in research management with Hoffmann-La Roche Inc. most recently serving as Vice President responsible for U.S. drug discovery. Dr. Gage has served on the board of directors of Cytokinetics, Incorporated since November 2009 and as Chairman of its board of directors since March 2010. Dr. Gage also currently serves on the board of directors of Alvine Pharmaceuticals, Corridor Pharmaceuticals and Permeon Biologics, and serves in an advisory role to other private companies and organizations. Previously, he served on the board of directors of PDL BioPharma, Inc. from 2003 through 2008, as the Chairman of its board of directors in 2007, and as its Interim Chief Executive Officer from 2007 to 2008. Dr. Gage currently serves on the board of directors of two non-profit organizations, the Marine Biological Laboratories and The Wistar Institute. Dr. Gage received an S.B. in physics from the Massachusetts Institute of Technology and a Ph.D. in biophysics from the University of Chicago.

**Garen Bohlin** has served as a member of the board of directors since July 2010. Since May 2012, Mr. Bohlin has served on the board of directors and as a consultant to multiple life sciences companies. From January 2010 until April 2012, he served as Executive Vice President of Constellation Pharmaceuticals, Inc. Prior to joining Constellation Pharmaceuticals, Mr. Bohlin served as Chief Operating Officer of Sirtris Pharmaceuticals. Mr. Bohlin was the founding Chief Executive Officer of Syntonix Pharmaceuticals, Inc. from 1999 through December 2005. Earlier in his career, he held multiple executive positions at Genetics Institute and was a partner at Arthur Andersen & Co. Mr. Bohlin currently serves on the board of directors of Collegium Pharmaceuticals, Inc., Karyopharm Therapeutics, Inc. and Proteon Therapeutics, Inc. He also served on the board of directors for Acusphere, Inc. from 2005 to 2014, SpringLeaf Therapeutics, Inc. from 2010 to 2013 and Precision Dermatology, Inc. from 2012-2014. Mr. Bohlin received his B.S. in accounting and finance from The University of Illinois.

**Jeffrey A. Chodakewitz, M.D.** has served as a member of the board of directors since June 2014. Dr. Chodakewitz is the Executive Vice President, Global Medicines Development and Medical Affairs, and Chief Medical Officer of Vertex Pharmaceuticals Incorporated, where he oversees all global clinical development programs, medical affairs and other related functions. Prior to joining Vertex, Dr. Chodakewitz spent more than 20 years at Merck & Co., Inc., where he held a variety of roles including Vice President of Clinical Research – Infectious Diseases & Vaccines, Vice President of Clinical Pharmacology/Early Stage Development, Senior Vice President of Late Stage Development, and Senior Vice President of Global Scientific Strategy

(Infectious Diseases, Respiratory/Immunology). Prior to his tenure at Merck, he served as the Director of the HIV Outpatient Clinic at the Veterans Administration Medical Center in West Haven, Connecticut, and held various academic positions at Yale University and New York University Schools of Medicine. Dr. Chodakewitz is a Diplomate of the National Board of Medical Examiners, the American Board of Internal Medicine (both Internal Medicine and Infectious Diseases), and is a member of the Infectious Disease Society of America (IDSA) and the American Society for Clinical Pharmacology & Therapeutics (ASCPT). He received a B.S. in Biochemistry from Yale University, cum laude, and an M.D. from the Yale University School of Medicine.

**John G. Freund, M.D.** has served as a member of the board of directors since October 2012. Dr. Freund co-founded Skyline Ventures in 1997 and has served as a partner at Skyline since its founding. Prior to joining Skyline, Dr. Freund served as managing director in the private equity group of Chancellor Capital Management, a private capital investment firm. In 1995, he co-founded Intuitive Surgical, a medical device company, and served on its board of directors until 2000. From 1988 to 1994, Dr. Freund served in various positions at Acuson Corporation, a maker of ultrasound equipment that is now part of Siemens, most recently as Executive Vice President. Prior to joining Acuson, Dr. Freund was a general partner of Morgan Stanley Venture Partners from 1987 to 1988. From 1982 to 1988, Dr. Freund was at Morgan Stanley & Co. where he co-founded the Healthcare Group in the Corporate Finance Department in 1983. He has served on the board of directors of Proteon Therapeutics, Inc. since 2014 and XenoPort, Inc. since 1999. Dr. Freund also serves on the board of directors of three U.S. registered investment funds managed by Capital Research and Management. He also previously served on the board of directors of Map Pharmaceuticals, Hansen Medical, Mako Surgical Corp. and Concert Pharmaceuticals, Inc. Dr. Freund is a member of the Advisory Board for the Harvard Business School Healthcare Initiative, and is a member of the Therapeutics Advisory Council of Harvard Medical School. Dr. Freund received a B.A. in history from Harvard College, an M.D. from Harvard Medical School, and an M.B.A. from Harvard Business School.

**Gerri Henwood** has served as a member of the board of directors since April 2015. Ms. Henwood currently serves as President and Chief Executive Officer and a director of Recro Pharmaceuticals, Inc., a publicly-traded, specialty pharmaceutical company developing non-opioid therapeutics for the treatment of acute pain. Previously, Ms. Henwood served as the President of Malvern Consulting Group. She is the co-founder of Auxilium Pharmaceuticals, Inc., and served as its President, Chief Executive Officer and director from 1999 to 2006. Prior to founding Auxilium, Ms. Henwood founded and was President and Chief Executive Officer of a publically-traded contract research organization, IBAH, Inc., which was acquired by Omnicare, Inc. Prior to founding IBAH, Inc., Ms. Henwood began her career with Smith Kline & French, now part of GlaxoSmithKline plc, in the pharmaceutical management program, most recently as Group Director—Marketing in the International Pharmaceutical Division. Ms. Henwood currently serves on the board of directors of one private company. Ms. Henwood received a B.S. in Biology from Neumann College.

**Guy Macdonald, B.Sc.**, has served as Tetrphase's President and CEO since January 2008.

**Nancy J. Wysenski** has served as a member of the board of directors since March 2014. From December 2009 through June 2012, Ms. Wysenski served as the Executive Vice President and

Chief Commercial Officer of Vertex Pharmaceuticals Incorporated. Prior to joining Vertex, Ms. Wysenski held the position of Chief Operating Officer of Endo Pharmaceuticals where she led sales, marketing, commercial operations, supply chain management, human resources and various business development initiatives. Prior to Endo, Ms. Wysenski participated in the establishment of EMD Pharmaceuticals, Inc., where she held various leadership positions, including the role of President and Chief Executive Officer from 2001 to 2006 and Vice President of Commercial. Ms. Wysenski held several sales-focused roles at major pharmaceutical companies, including Vice President of Field Sales for Astra Merck, Inc. Ms. Wysenski serves as a director of Alkermes plc and Inovio Pharmaceuticals. She is a founder of the Research Triangle Park Chapter of the Healthcare Businesswomen's Association and served on the Nominating Committee and National Advisory Board of the Healthcare Businesswomen's Association. Ms. Wysenski received a B.S.N. in Nursing from Kent State University and an M.B.A. from Baldwin-Wallace College.

## Risks

Risks were excerpted from TTPH's SEC filing 10-Q for the quarterly period ending September 30, 2017. Abbreviated risks are marked by ellipses.

### **Risks Relating to Our Financial Position and Need for Additional Capital**

*Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.*

Currently, our only external source of funds is funding under subcontracts awarded to us by CUBRC pursuant to government contracts from BARDA and NIAID, and an award from CARB-X. Although the BARDA contract and our subcontract with CUBRC under the BARDA contract have terms which currently expire on May 10, 2018, BARDA is entitled to terminate the project for convenience at any time, and is not obligated to provide continued funding beyond current-year amounts from congressionally approved annual appropriations. To the extent that BARDA ceases to provide funding of the program to CUBRC, CUBRC has the right to cease providing funding to us. Committed funding from CUBRC under our BARDA subcontract is for up to \$41.6 million from the initial contract date through May 10, 2018, of which \$34.7 million had been received through September 30, 2017.

Similarly, although the NIAID contract and our subcontract with CUBRC under the NIAID contract have terms which currently expire on December 31, 2018, NIAID is entitled to terminate the project for convenience at any time, and is not obligated to provide continued funding beyond December 31, 2018. To the extent NIAID ceases to provide funding of the programs to CUBRC, CUBRC has the right to cease providing funding to us. Committed funding from CUBRC under our subcontract with respect to the NIAID contract is for up to \$15.1 million, of which \$12.9 million had been received through September 30, 2017. In addition, the NIAID Grant and our subaward from CUBRC expired on May 31, 2017.

Similarly, although the CARB-X Award has a term which currently expires on December 31, 2018, CARB-X is entitled to terminate the project for convenience at any time. Committed funding from the CARB-X Award is for up to \$4.0 million from the initial award date through December 31, 2018, of which none had been received through September 30, 2017.

As a result, unless and until we can generate a substantial amount of revenue from our product candidates, we expect to finance our future cash needs through public or private equity offerings, debt financings or collaborations and licensing arrangements. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. [...]



## Risks Related to Product Development and Commercialization

*We face substantial competition from other pharmaceutical and biotechnology companies and our operating results may suffer if we fail to compete effectively.*

[...] There are a variety of available therapies marketed for the treatment of resistant or even multidrug-resistant infections that we would expect would compete with eravacycline, including meropenem/vaborbactam, which is being marketed by The Medicines Company as Vabomere, ceftazidime/avibactam, which is marketed by Allergan, Inc. as Avycaz; meropenem, which is marketed by AstraZeneca as Merrem; ceftolozane/tazobactam, imipenem/cilastatin, and ertapenem which are marketed by Merck & Co., Inc. as Zerbaxa, Primaxin and Invanz, respectively; tigecycline, which is marketed by Pfizer, Inc. as Tygacil; and piperacillin/tazobactam, which is marketed by Pfizer, Inc. as Zosyn. Many of the available therapies are well established and widely accepted by physicians, patients and third-party payors. Insurers and other third-party payors may also encourage the use of generic products. If eravacycline is approved, it may be priced at a significant premium over other competitive products. This may make it difficult for eravacycline to compete with these products.

There are also a number of products currently in phase 3 development by third parties to treat multidrug-resistant infections, including plazomicin, which is being developed by Achaogen, Inc., imipenem/relebactam, which is being developed by Merck & Co., Inc., and cefiderocol, which is being developed by Shionogi. Some of these companies may obtain marketing approval from the FDA or comparable foreign regulatory authorities for their product candidates more rapidly than we do, which could result in our competitors establishing a strong market position before we are able to enter the market. [...]

## Legal Proceedings

Source: 10-Q for quarterly period ending 9/30/17

In January 2016 and March 2016, two securities class action lawsuits were filed against [TTPH], our chief executive officer, our former chief operating officer and our former chief financial officer, in the United States District Court for the District of Massachusetts. In May 2016, the court consolidated the two lawsuits and appointed lead plaintiffs and lead counsel. ... The complaint generally alleges that the defendants violated the federal securities laws by, among other things, making material misstatements or omissions concerning IGNITE2. The complaint seeks, among other relief, unspecified compensatory damages, attorneys' fees, and costs. In October 2016, we filed a motion to dismiss the second amended complaint in its entirety, which plaintiffs have opposed. That motion is pending. We believe we have valid defenses against these claims, and will engage in a vigorous defense of such litigation.

In addition, in May 2016, Donald Britton filed a shareholder derivative complaint against our chief executive officer, our former chief operating officer, our former chief financial officer, all the members of our current board of directors, a former board member, and against Tetrphase as nominal defendant, in Massachusetts Superior Court (Suffolk County). The complaint generally alleges that the individual defendants breached fiduciary duties owed to Tetrphase and its shareholders by disseminating materially false and misleading statements to the market concerning IGNITE2. [...]

## Historical & Future EPS Performance

<b>EPS</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Q1	(0.46)A	(0.79)A	
Q2	(0.47)A	(0.83)A	
Q3	(0.58)A	(0.63)A	
Q4	(0.61)A	(0.70)E	
Year	(2.11)A	(2.95)E	(2.95)E
P/E	NM	NM	NM
EPS Growth	NM	NM	NM
FY Rev. (Mil)	5.145A	9.0E	11.0E
<b>FY:DEC</b>			

### Other Companies Mentioned in this Report:

Everest Medicines Limited  
C-Bridge Capital

Distribution of Ratings and Disclosure of Banking Relationships: The following table shows WBB's ratings distribution expressed as a percentage of all securities rated as of the end of the most recent calendar quarter, as well as the percentage of subject companies within each rating category for whom WBB has provided investment banking services within the previous 12 months.

	<b>Percentage of Covered Securities</b>	<b>Percentage of Banking Clients</b>
Buy	62%	25%
Hold	23%	0%
Sell	15%	0%

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