



Zai Lab and Innoviva Specialty Therapeutics Announce NMPA Approval for XACDURO® (Sulbactam-Durlobactam or SUL-DUR) for Hospital-Acquired and Ventilator-Associated Pneumonia Caused by *Acinetobacter Baumannii-Calcoaceticus* Complex in China

May 20, 2024

Drug-resistant Acinetobacter baumannii is a growing global health threat and high priority pathogen needing new antibiotics, according to World Health Organization

China NMPA approval based on comprehensive clinical data demonstrating robust activity of SUL-DUR against carbapenem-resistant bacterial strains

In China, it is estimated there are approximately 300,000 cases of Acinetobacter infections and approximately 74% of them are carbapenem-resistant

SHANGHAI & CAMBRIDGE, Mass. & WALTHAM, Mass.--(BUSINESS WIRE)--May 20, 2024-- Zai Lab Limited (NASDAQ: ZLAB; HKEX: 9688) and Innoviva Specialty Therapeutics today announced that China's National Medical Products Administration (NMPA) has approved Zai Lab's New Drug Application (NDA) for XACDURO® (sulbactam-durlobactam) for the treatment of hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia (HABP/VABP) caused by susceptible isolates of *Acinetobacter baumannii-calcoaceticus* complex in patients 18 years of age and older. The World Health Organization considers *Acinetobacter* a top-priority pathogen worldwide that needs novel antibiotics¹.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20240519020622/en/>

"The NMPA approval of XACDURO demonstrates Zai Lab's commitment to developing and delivering innovative therapies that address high unmet medical needs for patients in China and around the world," said Dr. Harald Reinhart, President and Head of Global Development, Neuroscience, Autoimmune & Infectious Diseases, Zai Lab. "The public threat of dangerous pan-resistant *Acinetobacter* infections requires urgent action, as treatment options are limited and mortality rates remain high. We believe XACDURO represents a major step forward in an area of significant patient need."

The NMPA approval of XACDURO in China is based on positive results from the ATTACK trial (NCT03894046), a global, Phase 3 registrational trial evaluating the safety and efficacy of XACDURO versus colistin in patients with infections caused by *A. baumannii*. In the pivotal study, XACDURO demonstrated statistical non-inferiority versus colistin for the primary endpoint of 28-day all-cause mortality in patients with carbapenem-resistant *Acinetobacter* infections and a statistically significant improvement in clinical cure rates. XACDURO was well tolerated and exhibited a favorable safety profile across the clinical program. Zai Lab participated in the global ATTACK study by enrolling patients in China. The Chinese patient cohort data confirm the findings of the global study regarding mortality and clinical response improvement.

In May 2023, Innoviva Specialty Therapeutics announced that the U.S. Food and Drug Administration (FDA) approved XACDURO for the treatment of hospital-acquired bacterial pneumonia and ventilator-associated pneumonia caused by susceptible isolates of *Acinetobacter baumannii-calcoaceticus* complex – the first such FDA-approved pathogen-targeted therapy.

"Six years ago, our two companies shared the vision of creating an innovative antibiotic therapy that could effectively address the global rise of drug-resistant *Acinetobacter*-related infections," said Matt Ronsheim, PhD, President of Innoviva Specialty Therapeutics. "This approval is a testament to our strong and successful partnership with Zai Lab. Their invaluable collaboration during the Phase 3 trials provided the crucial data needed to move XACDURO through the regulatory process in China, just one year after it was approved in the U.S."

About XACDURO® (sulbactam-durlobactam)

XACDURO® (sulbactam-durlobactam) is an intravenous drug developed by Entasis Therapeutics Inc., an affiliate of Innoviva Specialty Therapeutics, which is a combination of sulbactam, a β -lactam antibiotic, and durlobactam, a β -lactamase inhibitor, or BLI. XACDURO has been approved in the United States and mainland China for the treatment of adult patients with hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia (HABP/VABP), caused by susceptible isolates of *Acinetobacter baumannii-calcoaceticus* complex. Zai Lab has an exclusive license to develop and commercialize XACDURO in Greater China (mainland China, Hong Kong, Taiwan and Macau, collectively), Korea, Vietnam, Thailand, Cambodia, Laos, Malaysia, Indonesia, the Philippines, Singapore, Australia, New Zealand and Japan.

About *Acinetobacter Baumannii*

Members of the *Acinetobacter baumannii-calcoaceticus* complex (*Acinetobacter*) are Gram-negative, opportunistic human pathogens that predominantly infect critically ill patients and often result in severe pneumonia and bloodstream infections.¹ They can also infect other body sites, such as the urinary tract and the skin. *Acinetobacter* is considered a global threat in the healthcare setting due in part to its ability to acquire multidrug resistance. *Acinetobacter* is resistant to penicillins and has also acquired resistance genes for almost all antibiotics used to treat Gram-negative bacteria, including fluoroquinolones, aminoglycosides, cephalosporins, and carbapenems.

The Centers for Disease Control and Prevention (CDC) has identified carbapenem-resistant micro-organisms as an urgent threat.² Globally, *Acinetobacter baumannii* was among the top six leading pathogens for deaths associated with resistance in 2019.³ Carbapenem-resistant *Acinetobacter* is considered a Priority 1 pathogen by the World Health Organization (WHO)⁴.

In the U.S., there are an estimated 40,000 to 80,000 cases of *Acinetobacter* each year, and about 40 percent of those are carbapenem-resistant *Acinetobacter*.^{5,6} Globally, there are about a million cases each year of *Acinetobacter*, and about two-thirds of those are carbapenem-resistant *Acinetobacter baumannii*.⁵ More than 300,000 global deaths annually are associated with carbapenem-resistant *Acinetobacter*.⁷

About *Acinetobacter baumannii* Infections in China and Eastern Asia

Based on the 2022 Annual Report of CARSS (China Antimicrobial Resistance Surveillance System), approximately 300,000 *Acinetobacter* infections were reported in mainland China. According to the most recent CHINET report, resistance of *Acinetobacter baumannii* to the carbapenem class of antibiotics has risen to approximately 74% in China. *Acinetobacter* is also the most common pathogen that leads to hospital-acquired pneumonia and ventilator-associated pneumonia in China⁸. With commercially available therapy, the mortality rate is estimated to be 38% in China and 43% in Eastern Asia⁹.

XACDURO® INDICATION & USAGE FROM U.S. PRESCRIBING INFORMATION

Indication

XACDURO (sulbactam for injection; durlobactam for injection), co-packaged for intravenous use is indicated in adults for the treatment of hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia (HABP/VABP) caused by susceptible isolates of *Acinetobacter baumannii-calcoaceticus complex*.

Limitations of Use

XACDURO is not indicated for the treatment of HABP/VABP caused by pathogens other than susceptible isolates of *Acinetobacter baumannii-calcoaceticus complex*.

Usage

To reduce the development of drug-resistant bacteria and maintain the effectiveness of XACDURO and other antibacterial drugs, XACDURO should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria.

IMPORTANT SAFETY INFORMATION FROM U.S. PRESCRIBING INFORMATION

Contraindications: XACDURO is contraindicated in patients with a history of known severe hypersensitivity to the components of XACDURO or other beta-lactam antibacterial drugs.

Warnings and Precautions:

- Hypersensitivity was observed in patients treated with XACDURO in clinical trials. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions and serious skin reactions have been reported in patients receiving beta-lactam antibacterial drugs. Before initiating therapy with XACDURO, careful inquiry should be made concerning previous hypersensitivity reactions to carbapenems, penicillins, cephalosporins, other beta lactams, and other allergens. If an allergic reaction occurs, discontinue XACDURO.
- Clostridioides 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. Evaluate if diarrhea occurs. If CDAD is suspected or confirmed, the risk/benefit of continuing treatment with XACDURO should be assessed.
- Prescribing XACDURO in the absence of a proven or strongly suspected bacterial infection or a prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

Adverse Reactions: The most common adverse reactions reported in >10% of patients treated with XACDURO were liver test abnormalities (19%), diarrhea (17%), anemia (13%), and hypokalemia (12%).

For U.S. patients: please see the [Full Prescribing Information for XACDURO](#).

About Zai Lab

Zai Lab (NASDAQ: ZLAB; HKEX: 9688) is an innovative, research-based, commercial-stage biopharmaceutical company based in China and the United States. We are focused on discovering, developing and commercializing innovative products that address medical conditions with significant unmet needs in the areas of oncology, autoimmune disorders, infectious disease and neuroscience. Our goal is to leverage our competencies and resources to positively impact human health in China and worldwide.

For additional information about Zai Lab, please visit www.zailaboratory.com or follow us at www.twitter.com/Zail_ab_Global.

Zai Lab Forward-Looking Statements

This press release contains forward-looking statements relating to our future expectations, plans, and prospects, including, without limitation, statements relating to the possible benefits, safety, and efficacy of SUL-DUR; the treatment of infections caused by *Acinetobacter baumannii*, including carbapenem-resistant strains; clinical trial data; and risks and uncertainties associated with drug development and commercialization. All statements, other than statements of historical fact, included in this press release are forward-looking statements, and can be identified by words such as “aim,” “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “may,” “plan,” “possible,” “potential,” “will,” “would,” and other similar expressions. Such statements constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not guarantees or assurances of future performance. Forward-looking statements are based on our expectations and assumptions as of the date of this press release and are subject to inherent uncertainties, risks, and changes in circumstances that may differ materially from those contemplated by the forward-looking statements. We may not actually achieve the plans, carry out the intentions, or meet the

expectations or projections disclosed in our forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results may differ materially from those indicated by forward-looking statements as a result of various important factors, including but not limited to (1) our ability to successfully commercialize and generate revenue from our approved products, (2) our ability to obtain funding for our operations and business initiatives, (3) the results of our clinical and pre-clinical development of our product candidates, (4) the content and timing of decisions made by the relevant regulatory authorities regarding regulatory approvals of our product candidates, (5) risks related to doing business in China, and (6) other factors identified in our most recent annual and quarterly reports and in other reports we have filed with the U.S. Securities and Exchange Commission (SEC). We anticipate that subsequent events and developments will cause our expectations and assumptions to change, and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise, except as may be required by law. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this press release.

Our SEC filings can be found on our website at www.zailaboratory.com and the SEC's website at www.sec.gov.

About Innoviva Specialty Therapeutics

Innoviva Specialty Therapeutics, a subsidiary of Innoviva, Inc., is focused on delivering innovative therapies in critical care and infectious disease. Innoviva Specialty Therapeutics' products, through its affiliate, La Jolla Pharmaceutical Company, include GIAPREZA[®] (angiotensin II), approved to increase blood pressure in adults with septic or other distributive shock, and XERAVA[®] (eravacycline) for the treatment of complicated intra-abdominal infections in adults. Innoviva Specialty Therapeutics' products, through its affiliate, Entasis Therapeutics Inc., include XACDURO[®] (sulbactam for injection; durlobactam for injection), co-packaged for intravenous use approved for the treatment of adults with hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia caused by susceptible strains of *Acinetobacter baumannii-calcoaceticus* complex (*Acinetobacter*). For more information about Innoviva Specialty Therapeutics, please visit [here](#).

Innoviva Forward-Looking Statements

This press release contains certain "forward-looking" statements as that term is defined in the Private Securities Litigation Reform Act of 1995 regarding, among other things, statements relating to goals, plans, objectives, and future events. Innoviva 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. The words "anticipate", "expect", "goal", "intend", "objective", "opportunity", "plan", "potential", "target" and similar expressions are intended to identify such forward-looking statements. Such forward-looking statements involve substantial risks, uncertainties, and assumptions. These statements are based on the current estimates and assumptions of the management of Innoviva as of the date of this press release and are subject to known and unknown risks, uncertainties, changes in circumstances, assumptions and other factors that may cause the actual results of Innoviva to be materially different from those reflected in the forward-looking statements. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, among others, risks related to: expected cost savings; the commercialization of XACDURO[®] in the jurisdictions in which these products have been approved; the strategies, plans and objectives of Innoviva (including Innoviva's growth strategy and corporate development initiatives); the timing, manner, and amount of potential capital returns to shareholders; the status and timing of clinical studies, data analysis and communication of results; the potential benefits and mechanisms of action of product candidates; expectations for product candidates through development and commercialization; the timing of regulatory approval of product candidates; and projections of revenue, expenses and other financial items; the impact of the novel coronavirus (COVID-19); the timing, manner and amount of capital deployment, including potential capital returns to stockholders; and risks related to the Company's growth strategy. Other risks affecting Innoviva are described under the headings "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in Innoviva's Annual Report on Form 10-K for the year ended December 31, 2023, and Quarterly Reports on Form 10-Q, which are on file with the Securities and Exchange Commission (SEC) and available on the SEC's website at www.sec.gov. Past performance is not necessarily indicative of future results. No forward-looking statements can be guaranteed, and actual results may differ materially from such statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. The information in this press release is provided only as of the date hereof, and Innoviva assumes no obligation to update its forward-looking statements on account of new information, future events or otherwise, except as required by law.

Notes:

(1) Tala, B., Jad, A., Claude, A., Jihad, I., Chantal, L., Rakan, N., & Eid, A. (2017). Risk Factors, Clinical Presentation, and Outcome of *Acinetobacter baumannii* Bacteremia. *Front. Cell. Infect. Microbiol.*, 04 May 2017, Sec. Molecular Bacterial Pathogenesis Volume 7 – 2017: <https://doi.org/10.3389/fcimb.2017.00156>

(2) Centers for Disease Control and Prevention, "Carbapenem-resistant *Acinetobacter baumannii* (CRAB): An urgent public health threat in United States healthcare facilities," August 2021: <https://arpsp.cdc.gov/story/cra-urgent-public-health-threat>

(3) Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *Lancet*. 2022; 399(10325):629-655. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02724-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02724-0/fulltext)

(4) World Health Organization, "WHO publishes list of bacteria for which new antibiotics are urgently needed," February 27, 2017: <https://www.who.int/news/item/27-02-2017-who-publishes-list-of-bacteria-for-which-new-antibiotics-are-urgently-needed>

(5) Spellberg B, Rex JH. The value of single-pathogen antibacterial agents. *Nat Rev Drug Discov*. 2013 Dec;12(12):963. doi: 10.1038/nrd3957-c1. Epub 2013 Nov 15.

(6) Centers for Disease Control and Prevention. Antibiotic Resistance & Patient Safety Portal. "Carbapenem-resistant *Acinetobacter*," May 2023: <https://arpsp.cdc.gov/profile/antibiotic-resistance/carbapenem-resistant-acinetobacter>

(7) Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *Lancet*. 2022; 399(10325):629-655. Supplementary Material. Supplementary appendix. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02724-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02724-0/fulltext)

(8) China Diagnosis and Treatment Guideline for hospital-acquired pneumonia and ventilator-associated pneumonia, 2018;

(9) Mohd 2021Sazlly Lim S, et al. The global prevalence of multidrug-resistance among Acinetobacter baumannii causing hospital-acquired and ventilator-associated pneumonia and its associated mortality: A systematic review and meta-analysis. J Infect. 2019 Dec;79(6):593-600.

View source version on [businesswire.com](https://www.businesswire.com/news/home/20240519020622/en/): <https://www.businesswire.com/news/home/20240519020622/en/>

For more information:

Zai Lab Investor Relations:

Christine Chiou / Lina Zhang

+1 (917) 886-6929 / +86 136 8257 6943

christine.chiou1@zailaboratory.com / lina.zhang@zailaboratory.com

Innoviva, Inc. Investor Relations

Argot Partners

+1 212.600.1902

innoviva@argotpartners.com

Zai Lab Corporate Communications:

Shaun Maccoun / Xiaoyu Chen

+1 (857) 270-8854 / +86 185 0015 5011

shaun.maccoun@zailaboratory.com / xiaoyu.chen@zailaboratory.com

Innoviva Specialty Therapeutics Corporate Communications

David Patti

+1 908.421.5971

David.Patti@inva.com

Source: Zai Lab Limited