

## PRESS RELEASE

# Basilea announces agreement with FDA on Special Protocol Assessments for antibiotic ceftobiprole phase 3 clinical studies in bloodstream and skin infections

- **Initiation of ceftobiprole pivotal phase 3 clinical program under BARDA contract anticipated within the next three to six months**

**Basel, Switzerland, April 21, 2017** – Basilea Pharmaceutica Ltd. (SIX: BSLN) announced today that it has reached agreement with the US Food and Drug Administration (FDA) on Special Protocol Assessments (SPAs) for its two planned phase 3 clinical studies of Basilea's antibiotic ceftobiprole. The two studies will evaluate ceftobiprole for the treatment of *Staphylococcus aureus* bacteremia (bloodstream infections) and acute bacterial skin and skin structure infections. If successful, the studies would be cross-supportive for a US registration in both indications and could separately support label extensions in other parts of the world.

Prof. Achim Kaufhold, Basilea's Chief Medical Officer, said: "With the agreement on the SPAs, we are on track to initiate the pivotal phase 3 program under our contract with BARDA within the next three to six months. We plan to initially seek US registration for the treatment of bloodstream and skin infections as there is a significant medical need in these indications. In particular, there are only a limited number of approved therapies available for the treatment of bacteremia caused by methicillin-resistant *Staphylococcus aureus*."

In 2016, Basilea entered into a contract with the Biomedical Advanced Research and Development Authority (BARDA) for the clinical phase 3 development of ceftobiprole to support a potential regulatory filing in the US.<sup>1</sup> BARDA is providing initial funding of approximately USD 20 million for the preparation of the phase 3 program. The total value of the BARDA contract could reach USD 100 million over a period of 4.5 years if pre-defined milestones are met.

Both phase 3 studies will be multi-center, double-blind, randomized non-inferiority studies. One study will compare ceftobiprole with daptomycin in the treatment of adult patients with *Staphylococcus aureus* bacteremia, including infective endocarditis. The FDA-agreed primary endpoint is overall success at a post-treatment visit 70 days after randomization, assessed by an independent Data Review Committee. The other study will compare ceftobiprole with vancomycin and aztreonam in the treatment of adult patients with acute bacterial skin and skin structure infections. The FDA-agreed primary endpoint of this study is early clinical response at 48-72 hours after start of treatment.

Ceftobiprole provides Gram-positive antibacterial coverage with rapid bactericidal activity against both methicillin-susceptible and resistant *Staphylococcus aureus* bacteria (MSSA, MRSA) and also covers clinically important Gram-negative bacteria.<sup>2, 3</sup> Previously conducted phase 3 studies demonstrated the potential utility of ceftobiprole in the treatment of bacterial skin infections.<sup>4</sup> The potential of ceftobiprole in the treatment of *Staphylococcus aureus* bacteremia is supported by preclinical data that showed rapid clearance of heart valve bacterial vegetations and also by data of patients with bacteremia treated in previously conducted phase 3 studies.<sup>5, 6</sup>

## About Special Protocol Assessments (SPAs)

An SPA provides agreement between the study sponsor and the FDA that the design and planned analysis of a clinical study adequately address the objectives necessary to support a regulatory submission for the approval of a drug.

## About ceftobiprole

Ceftobiprole is a cephalosporin antibiotic for intravenous administration with rapid bactericidal activity against a wide range of Gram-positive and Gram-negative bacteria, including methicillin-susceptible and resistant *Staphylococcus aureus* (MSSA, MRSA) and susceptible *Pseudomonas* spp. The drug is approved for sale in 13 European countries (European trade name Zevtera® or Mabelio®, depending on the country) and several non-European countries for the treatment of adult patients with community-acquired bacterial pneumonia (CABP) and hospital-acquired bacterial pneumonia (HABP), excluding ventilator-associated bacterial pneumonia (VABP).<sup>2</sup> Basilea is currently marketing the drug in Germany, Italy, the UK, France, Austria and Switzerland. Ceftobiprole received Qualified Infectious Disease Product (QIDP) designation from the US FDA for the potential treatment of community-acquired bacterial pneumonia (CABP) and acute bacterial skin and skin structure infections (ABSSSI). The drug is not approved for commercial sale in the United States.

## About *Staphylococcus aureus* bacteremia

*Staphylococcus aureus* bacteremia is a leading cause of bloodstream infections, responsible for a broad variety of complications and has been associated with significant morbidity and a mortality of 20 to 40%.<sup>7, 8</sup> Several studies have demonstrated that MRSA bacteremia is associated with a significantly higher mortality rate compared with methicillin-susceptible *Staphylococcus aureus* (MSSA) bacteremia.<sup>9, 10</sup> Infections of the inner lining of the heart or heart valves (infective endocarditis) and bone infections (osteomyelitis) are common complications of *Staphylococcus aureus* bacteremia.

## About acute bacterial skin and skin structure infections

Acute bacterial skin and skin structure infections (ABSSSIs) are among the most common infections encountered in both community and hospital settings, and include infections with resistance to previously effective antibacterial treatments.<sup>11</sup> Increasing in incidence, they have become a challenging medical problem associated with high direct and indirect costs to both the medical system and society.<sup>12</sup> Infections due to bacteria with resistance to previously effective antibacterial treatments, such as methicillin-resistant *Staphylococcus aureus* (MRSA), are increasing in incidence and have led to higher rates of complications and hospitalization. MRSA has emerged as the most common cause of pus-forming infections in the United States and many other areas.

## About Basilea

Basilea Pharmaceutica Ltd. is a biopharmaceutical company developing products that address the medical problem of increasing resistance and non-response to current treatment options in the therapeutic areas of bacterial infections, fungal infections and cancer. The company uses the integrated research, development and commercial operations of its subsidiary Basilea Pharmaceutica International Ltd. to discover, develop and commercialize innovative pharmaceutical products to meet the medical needs of patients with serious and life-threatening conditions. Basilea Pharmaceutica Ltd. is headquartered in Basel, Switzerland and listed on the SIX Swiss Exchange (SIX: BSLN). Additional information can be found at Basilea's website [www.basilea.com](http://www.basilea.com).

## Disclaimer

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For further information, please contact:

Peer Nils Schröder, PhD Head of Corporate Communications & Investor Relations +41 61 606 1102 media_relations@basilea.com investor_relations@basilea.com
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This press release can be downloaded from [www.basilea.com](http://www.basilea.com).

## References

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