



**NABRIVA THERAPEUTICS PRESENTS EXTENDED SPECTRUM PLEUROMUTILIN ANTIBIOTICS
AT THE 24TH EUROPEAN CONGRESS OF CLINICAL MICROBIOLOGY AND INFECTIOUS
DISEASES, BARCELONA**

Vienna, Austria, 12 May 2014: Nabriva Therapeutics AG, a biotechnology company focused on developing pleuromutilins, a new class of antibiotics for treatment of serious infections caused by resistant pathogens, announces that four posters will be presented on the *Extended Spectrum Pleuromutilins (ESP) Program* at the 24th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID 2014) in Barcelona on Tuesday May 13 at 12:30pm CET.

Ralf Schmid, Chief Executive Officer of Nabriva, commented: “The rapid spread of multi-drug resistance in Gram-positive and Gram-negative pathogens has led to an urgent need for new and effective treatment options to fight serious infections.”

Zrinka Ivezic Schoenfeld, PhD, Vice President Non-Clinical of Nabriva, noted: “Our new generation of pleuromutilins – the extended spectrum pleuromutilins (ESP) – has demonstrated a potent antibacterial profile which covers the most prevalent Gram-positive and Gram-negative bacterial organisms, including multi-drug resistant strains. These ESP offer potential as new, effective treatment options.”

The four posters are as follows:

Antibacterial *In Vitro* Activity of Novel Extended Spectrum Pleuromutilins Against Gram-Positive and -Negative Bacterial Pathogens

S. Paukner, H. Kollmann, K. Thirring, W. Heilmayer, Z. Ivezic-Schoenfeld

This study investigated the antimicrobial activity of various novel derivatives of the new generation of pleuromutilin antibiotics - the extended spectrum pleuromutilins (ESP). Novel ESP demonstrated potent activity against the most prevalent Gram-positive and Gram-negative organisms including not only common multi-drug resistant isolates, but also carbapenemase-producing strains. The improved activity against *Enterobacteriaceae* represents a significant extension of the antibacterial profile of conventional pleuromutilins. Thus, further development of ESP is aimed at offering additional treatment options for patients with infections caused by multi-drug resistant bacteria such as carbapenemase-producing *E. coli* and *K. pneumoniae*.

***In Vitro* Metabolism and *In Vivo* Pharmacokinetics of Novel Extended Spectrum Pleuromutilin Antibiotics**

D.B. Strickmann, W.W. Wicha, H. Kollmann, Z. Ivezic-Schoenfeld

Extended spectrum pleuromutilins the second generation of pleuromutilin antibiotics that demonstrates an enhanced antimicrobial spectrum, showed good *in vitro* metabolic stability and *in vivo* PK properties after s.c. administration. In murine models of infection, the ESP achieved exposures that resulted in high *in vivo* efficacy against *S. aureus* and *E. coli* infections.

***In Vivo* Activity of Extended Spectrum Pleuromutilins in Murine Sepsis Model**

W. W. Wicha and Z. Ivezic-Schoenfeld

Extended spectrum pleuromutilins demonstrated excellent efficacy in severe murine septicemia caused by *S. aureus* and *E. coli*. Activity of the tested ESP against sepsis caused by *S. aureus* and *E. coli* was comparable to that of benchmark antibiotics linezolid and tigecycline. Based on these data, ESP will be further investigated in *in vivo* efficacy models including initial pre-clinical PK/PD studies.

Extended Spectrum Pleuromutilins: Mode-of-Action Studies

S. Paukner, D.B. Strickmann, Z. Ivezic-Schoenfeld

Novel ESP translated potent inhibition of prokaryotic protein synthesis in Gram-negative and Gram-positive organisms into potent antibacterial activity, thereby differentiating the ESP from first-generation pleuromutilins. The ESP displayed high uptake by target cells and appeared less subject to AcrAB-TolC mediated efflux than first-generation pleuromutilins. Thus, ESP are a new generation of pleuromutilins with a broad antimicrobial profile covering not only the most prevalent bacterial pathogens (e.g. staphylococci, streptococci, typical and atypical respiratory pathogens) but also multi-drug-resistant *Enterobacteriaceae*.

For further information, please contact:

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Notes to editors

About Nabriva Therapeutics AG

Nabriva Therapeutics is a biotechnology company focused on developing a new class of antibiotics, the pleuromutilins, for the treatment of patients with serious infections caused by multi-drug resistant pathogens. Nabriva's world-class medicinal chemistry expertise has achieved an industry first with the development of both intravenously administered and orally available pleuromutilins that are therefore ideal for i.v. to oral switch therapy.

Nabriva's lead product BC-3781 is about to enter Phase 3 studies. Due to its broad spectrum, oral and i.v. formulations and a favorable safety profile, BC-3781 is the first of a new class of antibiotics ideally positioned for the treatment of community-acquired bacterial pneumonia (CABP), plus hospital-acquired and ventilator-associated bacterial pneumonia (HABP/VABP), as well as acute bacterial skin and skin structure infections (ABSSSI), with potential in several other indications (sexually transmitted diseases including MDR gonorrhea; osteomyelitis) including pediatric use.

Extended Spectrum Pleuromutilins

Extended Spectrum Pleuromutilins (ESPs), Nabriva's preclinical program, expands the activity of pleuromutilins to include major enteric Gram-negative pathogens such as *E. coli* and *K. pneumoniae*. The targeted indications for the ESP extend beyond the current use of the first-generation pleuromutilins, thereby filling important gaps in treatment options of both marketed antibiotics and compounds in development. As a new class of antibiotics for therapeutic use in humans, pleuromutilins target important infections caused by resistant pathogens such as MRSA. Pleuromutilins are clearly differentiated from other antibiotics, both marketed and in development, and show a very low propensity for resistance development. Nabriva's pleuromutilins have a favorable safety profile, a unique spectrum and a world-class patent-protected portfolio.