ContraFect Announces Four Abstracts Published in the 30th ECCMID Abstract Book

Abstracts highlight the advancement of three new antibacterial modalities: novel native lysins, engineered lysins and amurin peptides

YONKERS, N.Y., May 11, 2020 (GLOBE NEWSWIRE) -- ContraFect Corporation (Nasdaq:CFRX), a clinical-stage biotechnology company focused on the discovery and development of direct lytic agents (DLAs), including lysins and amurin peptides, as new medical modalities for the treatment of life-threatening, antibiotic-resistant infections, today announced the publication of four abstracts in the 30th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) abstract book.

“ContraFect has been dedicated to the discovery and development of novel therapies with the potential to defeat serious, life-threatening infectious diseases. The current COVID-19 pandemic emboldens us to push forward and advance our portfolio of assets as rapidly and as safely as possible to patients in desperate need of new therapeutic options,” said Roger J. Pomerantz, M.D., President, Chief Executive Officer, and Chairman of ContraFect. “We would like to thank ECCMID for its ongoing support of research to combat antibiotic resistance and including our abstracts in the publication of the abstract book.”

The abstracts discussed below are currently available on ECCMID’s website.

**Exebacase: A native lysin targeting Staphylococcus aureus, including MRSA, in Phase 3 clinical development**

Exebacase is currently being studied in the Phase 3 DISRUPT (Direct Lysis of Staph aureus Resistant Pathogen Trial) superiority design study of exebacase in patients with Staph aureus bacteremia, including right-sided endocarditis. Enrollment into the Phase 3 DISRUPT study is ongoing, with patients being randomized, and clinical trial sites open and active. Exebacase was the subject of the following two abstracts published in the ECCMID Abstract Book.

**Abstract Title:** Therapeutic innovation in bone and joint infections: evaluation of the activity of exebacase (CF-301 lysin) on clinical strains belonging to Staphylococcus epidermidis species
ContraFect provided early access to exebacase to individual named patients with chronic post-operative prosthetic joint infections (PJIs) under Temporary Authorizations for Use from the French National Agency for Medicines and Health Products Safety in collaboration with Dr. Tristan Ferry at the Hôpital de la Croix Rousse in Lyon, France. The abstract describes the results of four patients who were treated with exebacase, administered intra-articularly. All had chronic, relapsing prosthetic joint infections, with several previous prosthetic knee revisions and other procedures. Two had clinical signs of septic arthritis and the two others had fistula. No adverse events occurred during arthroscopy. After 1 year follow up, the outcome was favorable in the two septic arthritis patients, with disappearance of clinical signs of septic arthritis. The Company believes this is an early indication that exebacase has the potential to be used in patients with relapsing prosthetic joint Staph aureus infections.

In this rigorous rabbit model of endovascular MRSA infection, multiple dose regimens of exebacase administered in addition to oxacillin significantly reduced MRSA counts by $5 \log_{10}$ cfu/g tissue ($p<0.0001$) compared to oxacillin treatment alone, exebacase alone, and growth controls. This marked reduction in target tissue MRSA CFUs is consistent with resensitization of MRSA to oxacillin. The potential ability of exebacase to resensitize MRSA to oxacillin could have important therapeutic implications with the potential for exebacase to “reverse” antimicrobial resistance.

**CF-370: An engineered lysin targeting Pseudomonas aeruginosa, including extensively resistant strains**

ContraFect announced its next product candidate, CF-370, in December 2019. CF-370 was selected for further development based on its potent *in vitro* bactericidal and antibiofilm activity and *in vivo* activity and tolerability in preclinical animal models. In addition, the Company found CF-370 to have favorable properties for manufacturing and potentially favorable intellectual property rights as a proprietary engineered lysin. The potent *in vivo* activity in preclinical models is the subject of the abstract discussed below.

The *in vivo* activity of CF-370 against *P. aeruginosa* was studied in a rabbit pneumonia model. CF-370 was well-tolerated and conferred a survival advantage to animals with 100% survival compared to only 40% survival among vehicle control animals. In animals receiving either meropenem or CF-370 alone, the mean bacterial lung counts decreased by $1.5-2 \log_{10}$
CFU/g versus pretreatment or vehicle-treated controls (p ≤ 0.0016). CF-370 (10 mg/kg) in addition to meropenem was synergistic, with bacterial counts in all target tissues decreasing by an additional $2\log_{10}$ CFU/g versus meropenem or CF-370 alone (p ≤ 0.02). This study provides in vivo proof-of-concept for CF-370 as a potential treatment for P. aeruginosa lung infections and for lysins as a new modality to combat the threat of multidrug-resistant Gram-negative pathogens.

Amurin Peptides: Another new modality with broad spectrum activity against antibiotic-resistant Gram-negative pathogens

Amurin peptides have demonstrated potent in vitro activity against a wide range of resistant Gram-negative pathogens, including carbapenem-resistant Enterobacteriaceae and Acinetobacter baumannii (A. baumannii), both designated as urgent threats by the U.S. Centers for Disease Control (CDC). Amurin peptides exhibit the hallmark properties of DLAs, including rapid antibacterial activity, synergy with conventional antibiotics, eradication of biofilms and no detectable spontaneous resistance.

Abstract Title: First report of the discovery of amurin peptides: direct lytic agents with broad activity against carbapenem-resistant Enterobacteriaceae, Acinetobacter, and Pseudomonas, including colistin-resistant strains

Abstract No. : 1669; Selected for Oral Presentation

Abstract Link: Part 1 (page 810)

The table below summarizes the highly potent in vitro activity (minimal inhibitory concentrations) of three promising amurin peptide candidates observed against clinical infection isolates from the CDC & FDA Antibiotic Resistant Isolate Panels comprised of 177 strains including Enterobacteriaceae, A. baumannii, and P. aeruginosa, including carbapenem-resistant and extensively-resistant strains, that are resistant even to antibiotics of last resort.

<table>
<thead>
<tr>
<th>Panel (no. of strains)</th>
<th>AM1</th>
<th>AM2</th>
<th>AM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(MIC$_{90}$)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterobacteriaceae (46)</td>
<td>1</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Acinetobacter baumannii (41)</td>
<td>1</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa (55)</td>
<td>1</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Imipenem/relebactam (24)</td>
<td>1</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Isolates with new or novel resistance (11)</td>
<td>1</td>
<td>0.25</td>
<td>0.125</td>
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</tbody>
</table>

About ContraFect

ContraFect is a biotechnology company focused on the discovery and development of direct lytic agents (DLAs), including lysins and amurin peptides, as new medical modalities for the treatment of life-threatening, antibiotic-resistant infections. An estimated 700,000 deaths worldwide each year are attributed to antimicrobial-resistant infections. We intend to address life threatening infections using our therapeutic product candidates from our platform of DLAs, which include lysins and amurin peptides. Lysins are a new class of DLAs which are recombinantly produced antimicrobial proteins with a novel mechanism of action associated with the rapid killing of target bacteria, eradication of biofilms and synergy with conventional
antibiotics. Amurin peptides are a novel class of DLAs which exhibit broad-spectrum activity against a wide range of antibiotic-resistant Gram-negative pathogens, including *Pseudomonas aeruginosa* (P. aeruginosa), *Acinetobacter baumannii*, and *Enterobacter* species. We believe that the properties of our lysins and amurin peptides will make them suitable for targeting antibiotic-resistant organisms, such as methicillin-resistant *Staph aureus* (MRSA) and *P. aeruginosa*, which can cause serious infections such as bacteremia, pneumonia and osteomyelitis. We have completed a Phase 2 clinical trial for the treatment of *Staph aureus* bacteremia, including endocarditis, with our lead lysin candidate, exebacase, which is the first lysin to enter clinical studies in the U.S. Exebacase, currently being studied in a pivotal Phase 3 clinical study, was granted Breakthrough Therapy designation by the FDA for the treatment of MRSA bloodstream infections (bacteremia), including right-sided endocarditis, when used in addition to standard-of-care (SOC) anti-staphylococcal antibiotics in adult patients.

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**Forward-Looking Statements**

This press release contains, and our officers and representatives may make from time to time, “forward-looking statements” within the meaning of the U.S. federal securities laws. Forward-looking statements can be identified by words such as “projects,” “may,” “will,” “could,” “would,” “should,” “believes,” “expects,” “anticipates,” “estimates,” “intends,” “plans,” “potential,” “promise” or similar references to future periods. Examples of forward-looking statements in this release include, without limitation, statements regarding ContraFect’s ability to discover and develop DLAs as new medical modalities for the treatment of life-threatening, antibiotic-resistant infections, statements regarding the abstract publications and the ECCMID abstract book, statements made by Dr. Pomerantz, whether the abstracts highlight the advancement of the new antibacterial modalities, abstract information, statements regarding exebacase, CF-370 and amurins, ContraFect’s ability to address life threatening infections using its DLA platform, whether lysins are a new class of DLAs which are recombinantly produced, antimicrobial proteins with a novel mechanism of action associated with the rapid killing of target bacteria, eradication of biofilms and synergy with conventional antibiotics, whether amurins exhibit broad-spectrum activity against a wide range of antibiotic-resistant Gram-negative pathogens, and whether the properties of ContraFect’s lysins and amurins will make them suitable for targeting antibiotic-resistant organisms, such as MRSA and *P. aeruginosa*. Forward-looking statements are statements that are not historical facts, nor assurances of future performance. Instead, they are based on ContraFect’s current beliefs, expectations and assumptions regarding the future of its business, future plans, strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent risks, uncertainties and changes in circumstances that are difficult to predict and many of which are beyond ContraFect’s control, including those detailed under the caption “Risk Factors” in ContraFect’s filings with the Securities and Exchange Commission. Actual results may differ from those set forth in the forward-looking statements. Important factors that could cause actual results to differ include, among others, our ability to develop treatments for drug-resistant infectious diseases. Any forward-looking statement made by ContraFect in this press release is based only on information currently available and speaks only as of the date on which it is made. Except as required by applicable law, ContraFect expressly disclaims any obligations to publicly update any
forward-looking statements, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

**Investor Relations Contacts**

Michael Messinger  
ContraFect Corporation  
Tel: 914-207-2300  
Email: mmessinger@contrafect.com

Source: ContraFect Corporation