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Anixa Biosciences' Covid-19 Compounds Expected to be Effective Against the Delta Variant

SAN JOSE, Calif., Aug. 25, 2021 /PRNewswire/ --Anixa Biosciences, Inc. (NASDAQ: ANIX), a biotechnology company focused on the treatment and prevention of cancer and infectious diseases, announced today that a genomic variant analysis indicates that its potential compounds may be even more effective against the Delta variant than the original wild type SARS-CoV-2.

While vaccination has proven to be an effective strategy to prevent Covid-19, the need exists for inexpensive, room-temperature stable, and orally bioavailable therapeutics for COVID-19. Reasons for this need include the large percentage of individuals that have chosen to remain unvaccinated, the logistics and expense of distributing the vaccines worldwide, the reduction in efficacy that is seen for certain variants, and the expected need to continuously require booster shots due to waning immunity.

Anixa's program in collaboration with European partner MolGenie, focuses on identifying novel, small molecule inhibitors of M^{pro}, the main protease of the virus. The current compounds that Anixa is synthesizing and evaluating have demonstrated their ability to inhibit the function of this protein, which the virus needs to replicate.

A key attribute of a successful therapeutic is the need to be effective against the prevailing variants that are circulating, especially if such emerging variants are more infectious. Since the authorized vaccines target a surface protein of the SARS-CoV-2, known as the spike protein, variants demonstrating variability in evading the vaccines are characterized by mutations in this protein. The prevailing variant of concern is known as the Delta variant.

In an attempt to evaluate whether the compounds Anixa is developing might be effective against the Delta variant, Anixa undertook an analysis of the corresponding M^{pro} enzyme mutations in the Delta variant. While mutations in the spike protein do not necessarily force a mutation in other functional proteins like M^{pro}, Anixa's analysis and published work demonstrate that a key mutation in M^{pro} does exist for the Delta variant. Sequence analysis of several Delta variant samples demonstrate that the M^{pro} enzyme often has a mutation that

replaces an asparagine (an amino acid) with leucine (another amino acid) at position 142, near the binding site. This change makes the binding pocket of M^{pro} more hydrophobic. By virtue of this change, the analysis indicates that Anixa's novel compounds will be stronger inhibitors of the variant M^{pro} than the wild-type (original).

"This analysis and conclusion is a theoretical study, but we are pleased that this analysis indicates that our compounds should be effective against the Delta variant," stated Dr. Amit Kumar, President and CEO of Anixa Biosciences. "While this program is relatively early-stage in development, we have already received inbound calls from pharmaceutical companies and funding agencies interested in collaborating at the right time," continued Dr. Kumar.

Dr. Lutz Weber, President and CEO of MolGenie, stated, "We continue to synthesize several candidate compounds to identify the most potent drug candidate which we will take into pre-clinical drug development."

About Anixa Biosciences, Inc.
Anixa is a publicly-traded biotechnology company developing a number of programs addressing cancer and infectious disease. Anixa's therapeutics portfolio includes a cancer immunotherapy program which uses a novel type of CAR-T, known as chimeric endocrine receptor T-cell (CER-T) technology, and a Covid-19 therapeutics program focused on inhibiting certain viral protein function. The company's vaccine portfolio includes a vaccine to prevent breast cancer, and specifically triple negative breast cancer (TNBC), the most deadly form of the disease, and a vaccine to prevent ovarian cancer. These vaccine technologies focus on immunizing against specific proteins that have been found to be expressed in certain forms of cancer. Anixa continually examines emerging technologies in complementary fields for further development and commercialization. Additional information is available at www.anixa.com.

Forward-Looking Statements: Statements that are not historical fact may be considered forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not statements of historical facts, but rather reflect Anixa's current expectations concerning future events and results. We generally use the words "believes," "expects," "intends," "plans," "anticipates," "likely," "will" and similar expressions to identify forward-looking statements. Such forward-looking statements, including those concerning our expectations, involve risks, uncertainties and other factors, some of which are beyond our control, which may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance, or achievements expressed or implied by such forward-looking statements. These risks, uncertainties and factors include, but are not limited to, those factors set forth in "Item 1A - Risk Factors" and other sections of our most recent Annual Report on Form 10-K as well as in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. You are cautioned not to unduly rely on such forward-looking statements when evaluating the information presented in this press release.

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