Medicenna Announces Management Change and Appoints Experienced Development Advisory Committee

January 17, 2022

Phase 1/2 ABILITY study of MDNA11 remains on track for an update on additional safety pharmacokinetic (PK), and pharmacodynamic (PD) data in low-dose cohorts in Q1 2022 and initial efficacy results in mid-2022

TORONTO and HOUSTON, Jan. 17, 2022 (GLOBE NEWSWIRE) -- Medicenna Therapeutics Corp. ("Medicenna" or "the Company") (NASDAQ: MDNA TSX: MDNA), a clinical stage immuno-oncology company, today announced that Mann Muhsin has resigned as Chief Medical Officer of the Company to assume a position closer to home. Martin Bexon, MBBS, who has managed many aspects of Medicenna's clinical programs since 2016, will serve as Acting Chief Medical Officer in addition to his current role as the Medical Monitor for the Phase 1/2 ABILITY study. Medicenna also announces the appointment of industry veterans to its Development Advisory Committee.

"We extend our thanks to Mann for his contributions to the Company and wish him well in his new endeavour." said Dr Fahar Merchant, President and CEO of Medicenna. "Martin's extensive experience in managing global oncology clinical trials at Roche has been an invaluable asset for Medicenna over the last 5 years, and we are pleased to have him as our acting CMO. In addition, we have appointed a world-class cadre of industry veterans to our Development Advisory Committee to leverage the full commercial potential of MDNA11 and our pipeline of BiSKITs ™ **B**i**S**uper**K**ine **I**mmuno**T**herapie**s**). In addition to Dr. Bexon, we are delighted to welcome Mr. Paul Smith, Dr. Bruce Pearce and Dr. Peter Lloyd, who have been instrumental in supporting MDNA11's pre-clinical safety, PK/PD studies, international regulatory filings and designing the ABILITY study."

Dr. Martin Bexon has worked as a strategic adviser, study medical expert, and medical monitor in a number of oncology programs in both solid tumors and hematological malignancies. While at CSL Behring (Bern, Switzerland), he led multiple global clinical studies across a range of indications. At Hoffman-La Roche (U.K. and Switzerland), Martin designed and executed multiple global clinical trials enrolling more than 10,000 subjects to support product commercialization. He obtained his MBBS (MD equivalent) from the University of Newcastle upon Tyne, U.K. Most recently, Dr. Bexon has worked for BioNTech as consult medical expert in their COVID-19 vaccine program and early human studies.

Paul Smith brings 25 years of global regulatory experience with a focus on oncology. He has held positions of increasing responsibilities during his 20-year tenure at Amgen before joining Tusk Therapeutics (an immuno-oncology company targeting the IL-2 CD25 receptor) as VP of Regulatory Affairs until its acquisition by Roche and more recently has been guiding Medicenna's global regulatory submissions and strategy for MDNA11.

Dr. Peter Lloyd, PhD, has more than 25 years of drug development experience, mostly at Novartis. His expertise spans PK/PD models, immunogenicity assessment and exposure response relationships with both small molecule and biologics. He was formerly the Head of DM/PK Biologics at Novartis and has been the key contributor to MDNA11's PK studies and PK modeling.

Dr. L. Bruce Pearce has more than 30 years of experience in early and late-stage development of biologics, toxicological risk assessment, design and management of all aspects of non-clinical studies supporting IND, BLA and NDA submissions and translational pharmacology, bridging nonclinical and clinical studies and has been responsible for MDNA11's non-GLP and GLP pre-clinical studies over the past 2 years. Bruce has a PhD from State University of New York at Buffalo and was NIH postdoctoral fellow in pharmacology at Yale University School of Medicine and Harvard Medical School and subsequently an Alfred P. Sloan Foundation Fellow.

Medicenna continues to grow its scientific team with the addition of four PhD level scientists to expand its discovery activities guided by Chief Scientific Officer, Dr. Kevin Moulder and two clinicians to support MDNA11's pharmacovigilance activities.

About Medicenna

Medicenna is a clinical stage immunotherapy company focused on the development of novel, highly selective versions of IL-2, IL-4 and IL-13 Superkines and first in class Empowered Superkines. Medicenna's long-acting IL-2 Superkine, MDNA11, is a next-generation IL-2 with superior CD122 (IL-2 receptor beta) binding without CD25 (IL-2 receptor alpha) affinity thereby preferentially stimulating cancer killing effector T cells and NK cells. Medicenna's early-stage BiSKITs™ program, (**B**i**S**uper**K**ine **I**mmuno**T**herapie**s**) is designed to enhance the ability of Superkines to treat immunologically "cold" tumors. Medicenna's IL-4 Empowered Superkine, MDNA55, has been studied in 5 clinical trials including a Phase 2b trial for recurrent GBM, the most common and uniformly fatal form of brain cancer. MDNA55 has obtained Fast-Track and Orphan Drug status from the FDA and FDA/EMA, respectively.

Forward-Looking Statement

This news release contains forward-looking statements within the meaning of applicable securities laws that relate to the future operations of the Company and other statements that are not historical facts including, but not limited to, statements related to the clinical and commercial potential and development of MDNA11 and the timing for additional data and results for the Phase 1/2 ABILITY study of MDNA11 and the BiSKITs™ program and its potential. Forward-looking statements are often identified by terms such as "will", "may", "should", "anticipate", "expect", "believe", "seek" and similar expressions. All statements other than statements of historical fact, included in this release, including statements on the future plans and objectives of the Company, are forward-looking statements that are subject to risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations include the risks detailed in the annual information form for the year ended March 31, 2021, which is available on SEDAR at www.sedar.com, and Form 40-F of the Company filed with the United States Securities and Exchange Commission and in other filings made by the Company with the applicable securities regulators from time to time in Canada and the United States.

The reader is cautioned that assumptions used in the preparation of any forward-looking information may prove to be incorrect. Events or circumstances may cause actual results to differ materially from those predicted, as a result of numerous known and unknown risks, uncertainties, and

other factors, many of which are beyond the control of the Company. The reader is cautioned not to place undue reliance on any forward-looking information. Such information, although considered reasonable by management, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement. The forward-looking statements contained in this news release are made as of the date hereof and except as required by law, we do not intend and do not assume any obligation to update or revise publicly any of the included forward-looking statements.

Further Information

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Source: Medicenna Therapeutics Corp.