



MediciNova Announces Positive Results from a Glioblastoma Animal Model Study Presented at the 2017 American Society of Clinical Oncology Annual Meeting in Chicago, Illinois

June 5, 2017

LA JOLLA, Calif., June 05, 2017 (GLOBE NEWSWIRE) -- MediciNova, Inc., a biopharmaceutical company traded on the NASDAQ Global Market (NASDAQ:MNOV) and the JASDAQ Market of the Tokyo Stock Exchange (Code Number: 4875), today announced that Associate Professor Kerrie McDonald, Head of the Cure Brain Cancer Foundation Biomarkers and Translational Research Group at the Lowy Cancer Research Centre, University of New South Wales, today presented positive results from an animal model study that examined the potential clinical efficacy of MN-166 (ibudilast) for the treatment of glioblastoma at the 2017 American Society of Clinical Oncology (ASCO) Annual Meeting on June 5th, 2017 in Chicago, Illinois.

Major highlights of the presentation titled "**Treating glioblastoma with a cytokine inhibitor, ibudilast in combination with temozolomide extends survival in a patient derived xenograft model,**" are summarized as follows:

- Tumor samples from glioblastoma (GBM) patients, divided into two groups according to overall survival (i.e., "poor survivors" were defined by survival of less than 12 months and "good survivors" were defined by survival of more than 12 months) were examined for protein overexpression.
- Proteomics analysis in frozen GBM tissues identified Macrophage Migration Inhibitory Factor (MIF) overexpression in the cells from "poor survivors;"
- Among 168 GBM patient-derived tumor tissue samples, MIF and its receptor CD-74 were significantly over-expressed in 57% of patients and were found to be associated with poor survival.

A mouse model of GBM was developed by using patient-derived GBM cells and treated with temozolomide (TMZ) (10mg/kg) alone and combination with ibudilast (5mg/kg or 20mg/kg). Findings from this mouse model included the following:

- Median survival for the group that received TMZ treatment-only increased by 5 days (105.5 days $p=0.054$) compared to the control group;
- Median survival for the group that received combination treatment of ibudilast (5mg/kg or 20mg/kg) with TMZ increased by 13.5 days and 11 days, respectively (114 days and 111.5 days, respectively, ($p=0.005$)), compared to the control group.
- Median survival for the control group (i.e., no treatment) was 100.5 days.
- Significant synergism between ibudilast and TMZ was observed.

MediciNova is currently preparing to initiate a Phase 2 clinical trial for the treatment of recurrent Grade IV glioblastoma with University of Sydney Royal North Shore Hospital.

About Glioblastoma

Malignant primary brain tumors represent the most frequent cause of cancer death in children and young adults and account for more deaths than melanoma. According to the American Association of Neurological Surgeons, glioblastoma (GBM) is an aggressive, extremely lethal form of brain malignancy that develops from glial cells (astrocytes and oligodendrocytes) and rapidly grows and commonly spreads into nearby brain tissue. GBM is classified as Grade IV, the highest grade, in the World Health Organization (WHO) brain tumor grading system. The American Brain Tumor Association reports that GBM represents 15% of all brain tumors and 55% of all gliomas and has the highest number of cases of all malignant tumors, with an estimated 12,390 new cases predicted for 2017. Despite decades of advancements in neuroimaging, neurosurgery, chemotherapy, and radiation therapy, only modest improvements have been achieved and the prognosis has not improved for individuals diagnosed with GBM. Median survival is 14.6 months and only approximately 5% of GBM patients survive longer than 36 months.

About MN-166 (ibudilast)

MN-166 (ibudilast) has been marketed in Japan and Korea since 1989 to treat post-stroke complications and bronchial asthma. MediciNova is developing MN-166 for progressive MS and other neurological conditions such as ALS and drug use disorders. MN-166 (ibudilast) is a first-in-class, orally bioavailable, small molecule phosphodiesterase (PDE) -4 and -10 inhibitor and a macrophage migration inhibitory factor (MIF) inhibitor that suppresses pro-inflammatory cytokines and promotes neurotrophic factors. It attenuates activated glia cells, which play a major role in certain neurological conditions. Ibudilast's anti-neuroinflammatory and neuroprotective actions have been demonstrated in preclinical and clinical study results and provide the rationale for its therapeutic utility in neurodegenerative diseases (e.g., progressive MS and amyotrophic lateral sclerosis [ALS], also known as Lou Gehrig's disease), substance abuse/addiction and chronic neuropathic pain.

About MediciNova

MediciNova, Inc. is a publicly-traded biopharmaceutical company founded upon acquiring and developing novel, small-molecule therapeutics for the treatment of diseases with unmet medical needs with a primary commercial focus on the U.S. market. MediciNova's current strategy is to focus on MN-166 (ibudilast) for neurological disorders such as progressive MS, ALS and substance dependence (e.g., methamphetamine dependence, opioid dependence) and MN-001 (tipelukast) for fibrotic diseases such as nonalcoholic steatohepatitis (NASH) and idiopathic pulmonary fibrosis (IPF). MediciNova's pipeline also includes MN-221 (bedoradrine) for the treatment of acute exacerbations of asthma and MN-029 (denibulin) for solid tumor

cancers. MediciNova is engaged in strategic partnering and other potential funding discussions to support further development of its programs. For more information on MediciNova, Inc., please visit www.medicinova.com.

Statements in this press release that are not historical in nature constitute forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements regarding the future development and efficacy of MN-166, MN-001, MN-221 and MN-029. These forward-looking statements may be preceded by, followed by or otherwise include the words "believes," "expects," "anticipates," "intends," "estimates," "projects," "can," "could," "may," "will," "would," "considering," "planning" or similar expressions. These forward-looking statements involve a number of risks and uncertainties that may cause actual results or events to differ materially from those expressed or implied by such forward-looking statements. Factors that may cause actual results or events to differ materially from those expressed or implied by these forward-looking statements include, but are not limited to, risks of obtaining future partner or grant funding for development of MN-166, MN-001, MN-221 and MN-029 and risks of raising sufficient capital when needed to fund MediciNova's operations and contribution to clinical development, risks and uncertainties inherent in clinical trials, including the potential cost, expected timing and risks associated with clinical trials designed to meet FDA guidance and the viability of further development considering these factors, product development and commercialization risks, the uncertainty of whether the results of clinical trials will be predictive of results in later stages of product development, the risk of delays or failure to obtain or maintain regulatory approval, risks associated with the reliance on third parties to sponsor and fund clinical trials, risks regarding intellectual property rights in product candidates and the ability to defend and enforce such intellectual property rights, the risk of failure of the third parties upon whom MediciNova relies to conduct its clinical trials and manufacture its product candidates to perform as expected, the risk of increased cost and delays due to delays in the commencement, enrollment, completion or analysis of clinical trials or significant issues regarding the adequacy of clinical trial designs or the execution of clinical trials, and the timing of expected filings with the regulatory authorities, MediciNova's collaborations with third parties, the availability of funds to complete product development plans and MediciNova's ability to obtain third party funding for programs and raise sufficient capital when needed, and the other risks and uncertainties described in MediciNova's filings with the Securities and Exchange Commission, including its annual report on Form 10-K for the year ended December 31, 2016 and its subsequent periodic reports on Forms 10-Q and 8-K. Undue reliance should not be placed on these forward-looking statements, which speak only as of the date hereof. MediciNova disclaims any intent or obligation to revise or update these forward-looking statements.

INVESTOR CONTACT:

Geoff O'Brien
Vice President
MediciNova, Inc.
info@medicinova.com



MediciNova, Inc.