UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): March 18, 2010

MEDICINOVA, INC.

(Exact name of Registrant as Specified in Its Charter)

DELAWARE	**001-33185**	**33-0927979**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

4350 LA JOLLA VILLAGE DRIVE, SUITE 950, SAN DIEGO, CA	**92122**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's telephone number, including area code: (858) 373-1500

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01. Regulation FD Disclosure.

On March 18, 2010, MediciNova, Inc. (the "Registrant") updated the slide presentation to be used by the Registrant at investor meetings. A copy of the revised slide presentation is attached hereto as Exhibit 99.1.

The information in this Current Report on Form 8-K being provided under this Item 7.01, including Exhibit 99.1 furnished herewith, is being furnished and shall not be deemed "filed" for any purpose of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of such Section. The information in this current report on Form 8-K shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) *Exhibits.*

99.1 Slide Presentation of the Registrant.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, MediciNova has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MEDICINOVA, INC.

Date: March 18, 2010

By: /s/ SHINTARO ASAKO
Name: **Shintaro Asako**
Title: **Chief Financial Officer**

Accelerating the global development and commercialization of innovative pharmaceuticals

Forward-Looking Statements

Statements in this presentation 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 statements regarding MediciNova's clinical trials supporting the safety and efficacy of its product candidates and the potential novelty of such product candidates as treatments for disease, plans and objectives for clinical trials and product development, strategies, future performance, expectations, assumptions, financial condition, liquidity and capital resources. 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," or similar expressions. Actual results or events may differ materially from those expressed or implied in any forward-looking statements due to various factors, including the risks and uncertainties inherent in clinical trials and product development and commercialization, such as the uncertainty in results of clinical trials for product candidates, 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, 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, cost and design of future clinical trials and research activities; the timing of expected filings with the FDA; MediciNova's failure to execute strategic plans or strategies successfully; MediciNova's collaborations with third parties; MediciNova's ability to realize the anticipated strategic and financial benefits from its acquisition of Avigen, Inc., to integrate the two ibudilast development programs and to pursue discussions with potential partners to secure a strategic collaboration to advance the clinical development of the combined development program; the availability of funds to complete product development plans and MediciNova's ability to raise sufficient capital when needed, or at all; intellectual property or contract rights; and the other risks and uncertainties described in MediciNova's filings with the Securities and Exchange Commission, including MediciNova's annual report on Form 10-K for the year ended December 31, 2008 and its subsequent periodic reports on Forms 10-Q, 10-K and 8-K. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date March 17, 2010. MediciNova disclaims any intent or obligation to revise or update these forward-looking statements.

MEDICINOVA

Corporate Overview: MediciNova, Inc.

MediciNova Overview:

- Founded in September 2000
- Headquartered in San Diego, CA
  - Additional office in Tokyo, Japan
- Dual-listing on NasdaqGM: **MNOV** and Osaka Securities Exchange as **4875**
- $100.1 million Market Cap (NasdaqGM) as of 3/16/2010

Development Company Focused on Differentiated Product Candidates

- Unique access to differentiated, potentially high-value assets primarily from Japanese alliances (Kyorin, Kissei, Mitsubishi Tanabe Pharma, Meiji)

New Approaches to Treat Serious Medical Conditions:

- MN-221: Intravenous (IV) acute asthma and COPD candidate
  - Potential $1 billion+ combined market opportunity worldwide*
- MN-166: oral multiple sclerosis candidate; additional enabled neurological conditions
  - In 2008, over $8 billion in worldwide MS therapeutic sales**

Source: Internal MediciNova projections

**Source: Individual annual reports of leading MS companies, 2008*

MEDICINOVA

MN-221 for Exacerbations of Acute Asthma and COPD

Definition:

- **Acute Asthma Exacerbations:** Long-lasting and severe asthma episodes that are not responsive to initial bronchodilator or corticosteroid therapies
- **COPD Exacerbations:** Sustained worsening of the patient's condition, from the stable state and beyond normal day-to-day variations, that is acute in onset

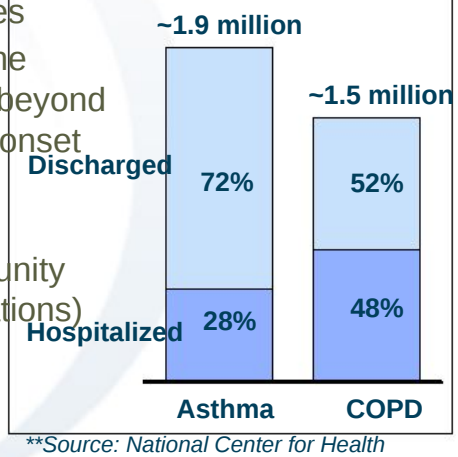
Market Opportunity:

- Potential $1 billion+ combined market opportunity worldwide* (acute asthma & COPD exacerbations)

Current Standard of Care (SOC):

- Beta agonists – Inhaled
- Anticholinergics – Inhaled
- Corticosteroids – IV or oral

Hospitalization Rates Amongst Asthma and COPD Patients**

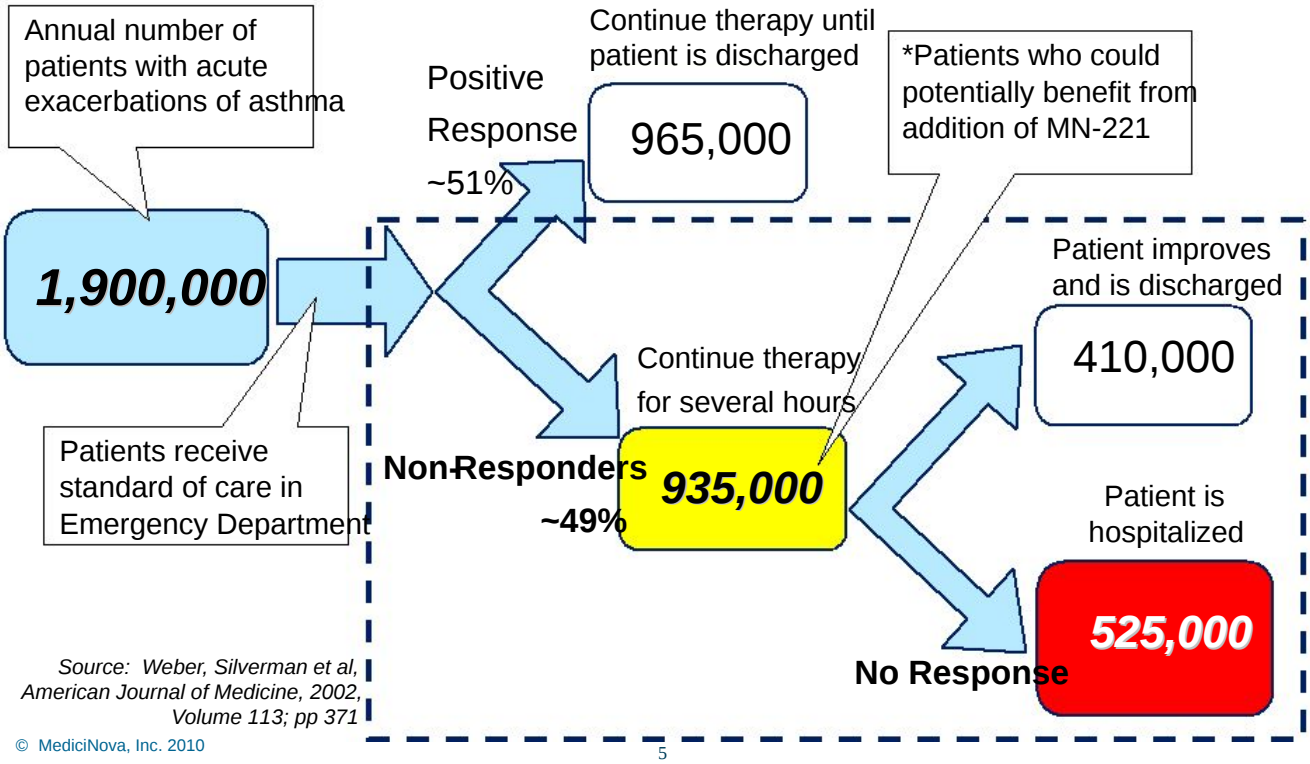


***Source: National Center for Health Statistics / CDC, WHO website, "Core Health indicators"*

**Source: Internal MediciNova projections*

MEDICINOVA

Acute Asthma Treatment Flow in Emergency Departments in the U.S.



Source: Weber, Silverman et al, American Journal of Medicine, 2002, Volume 113; pp 371

MN-221: A New Approach to Treating Exacerbations of Acute Asthma & COPD

MN-221: A novel, highly selective β_2- adrenergic receptor agonist

Three potential advantages over current therapy:

1. **Improved Efficacy**
   - **Route of Administration (IV v. Inhalation)**
2. **Improved Safety**
   - **Higher selectivity for β_2 receptor than β_1**
     - **42.4 fold β_2 selectivity (IC_{50}-β_1 / IC_{50}-β_2)**
   - **Partial agonist for β_1 receptor**
3. **Reduced Health Care Expenses**

MEDICINOVA

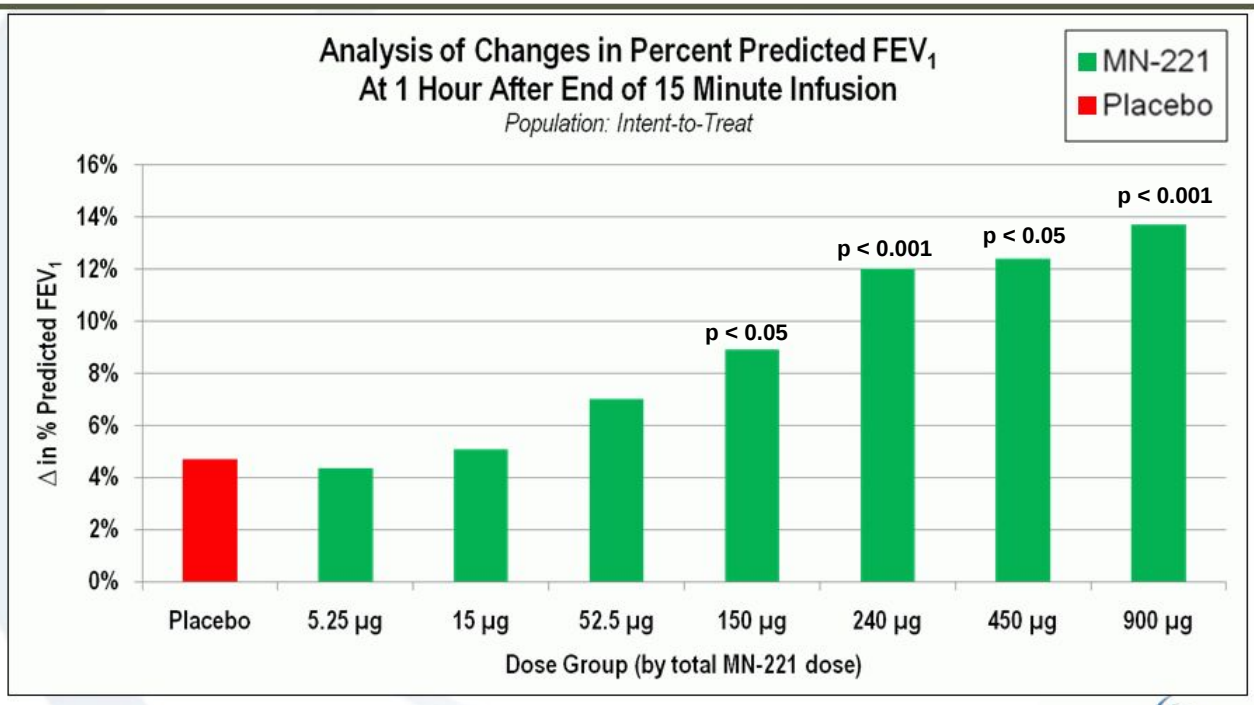
MN-221 Clinical Trials

	Completed				Ongoing
Study	**CL-004**	**CL-005**	**CL-006**	**CL-010**	**CL-007**
Indication	Mild-to-moderate Asthmatics	Moderate-to-Severe Asthmatics	Acute Exacerbations of Asthma	Moderate-to-Severe COPD patients	Acute Exacerbations of Asthma
FEV_1 (Entry Criteria)	$FEV_1 \geq 60\%$	$75\% \geq FEV_1 \geq 40\%$	$FEV_1 \leq 55\%$	$80\% \geq FEV_1 \geq 30\%$	$FEV_1 \leq 50\%$
Number of Patients	23	17	29	48	200
Number of Sites	4	4	8	6	~35
Doses Tested Compared to Placebo	5.25, 15, 52.5, 150, 240, 450, 900 µg over 15 min	1080 µg over 2-hr; 1,125 µg over 1-hr	240, 450 µg over 15 min; 1080 µg over 2-hr	300, 600, 1200 µg over 1-hr	1200 µg over 1-hr

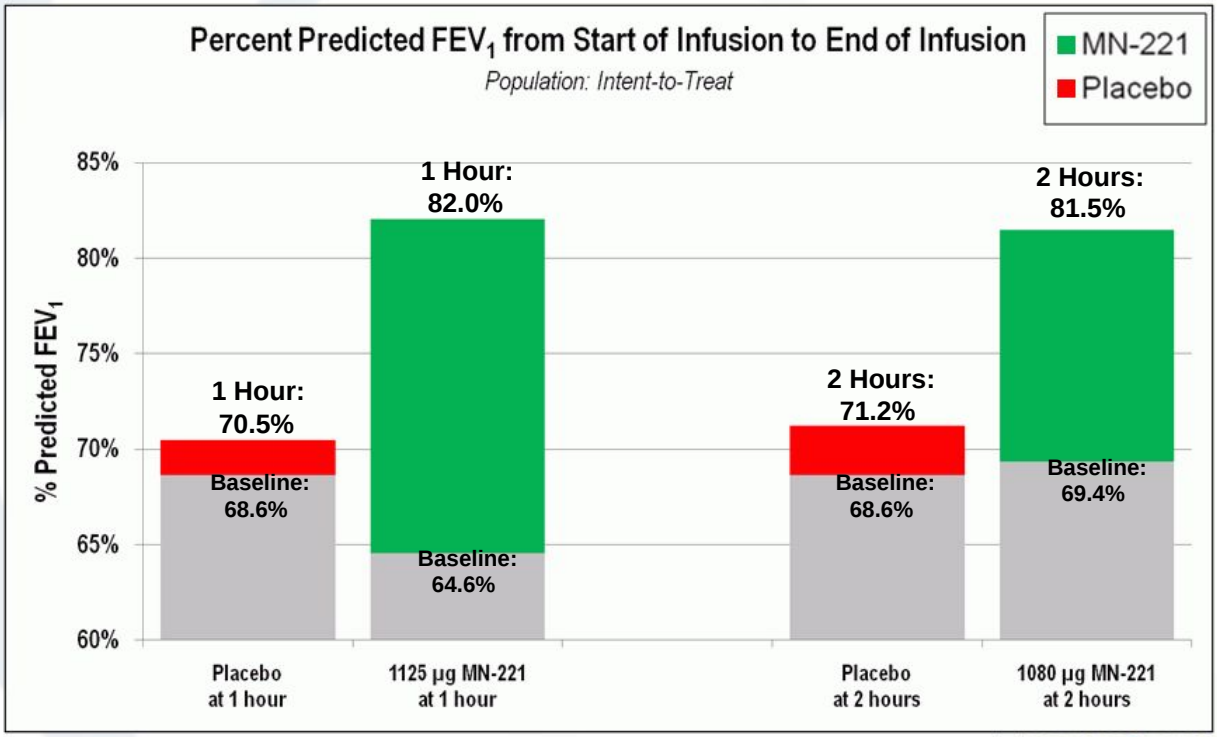
Note: CL-004, CL-005, CL-010 located in clinical sites. CL-006, CL-007 located in emergency departments.

MEDICINOVA

MN-221-CL-004:
Mean Change in FEV$_1$

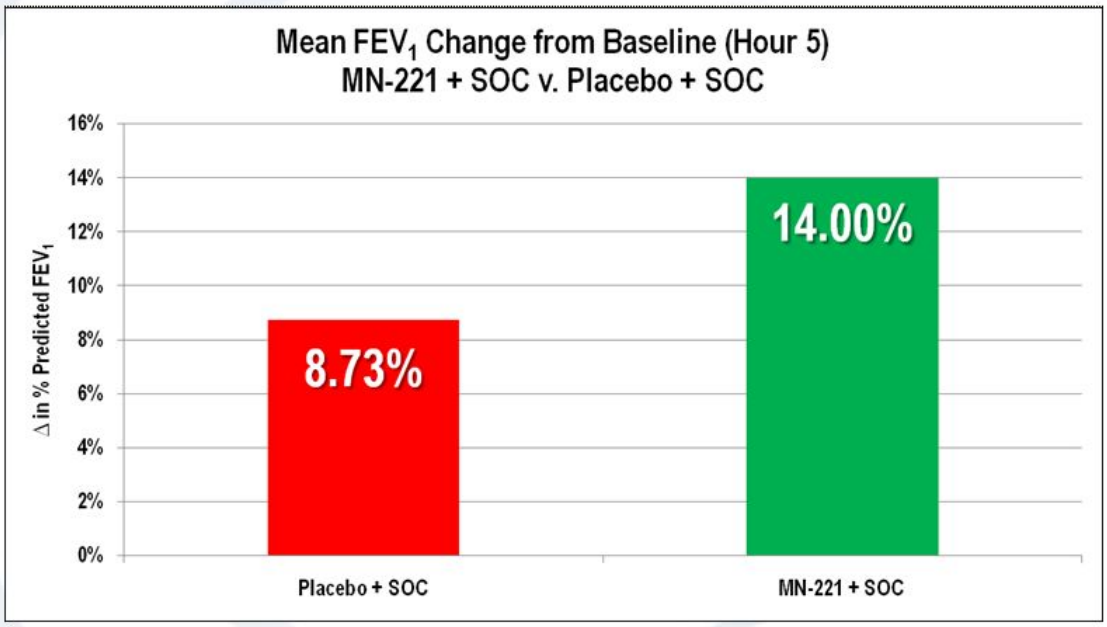


MN-221-CL-005:
Mean Change in FEV_1



MEDICINOVA

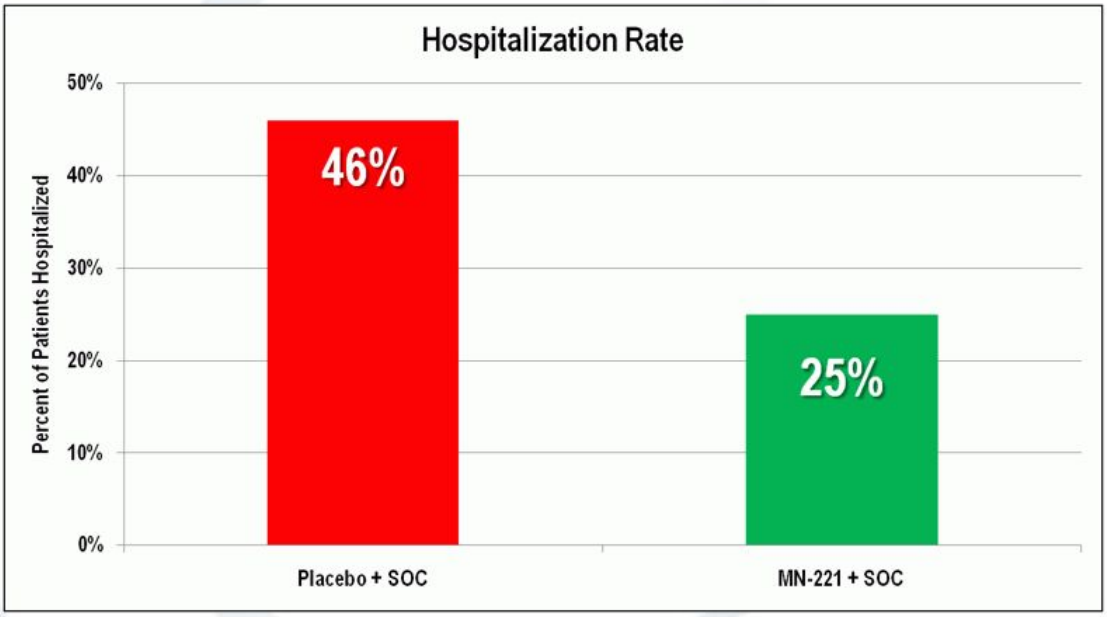
MN-221-CL-006
Mean Change in FEV_1



Mean change in FEV_1 from baseline was 5.27% higher in the MN-221 dose groups versus the placebo group

MEDICINOVA

MN-221-CL-006:
Hospitalization Rate by Treatment Group



MN-221 reduced the hospitalization rate by 45%

Note: SOC means standard of care.

MEDICINOVA

MN-221-CL-006: What have we learned?

What did we learn from the MN-221-CL-006 clinical trial?

- There were no safety concerns with adding MN-221 to the standard of care.
- There was a reduction in the hospitalization rate among patients treated with MN-221.
- Overall, improvement in FEV_1 was greater for patients receiving MN-221 than placebo.
- A dose of 1,200 µg of MN-221 administered over one hour was selected for the MN-221-CL-007 clinical trial.

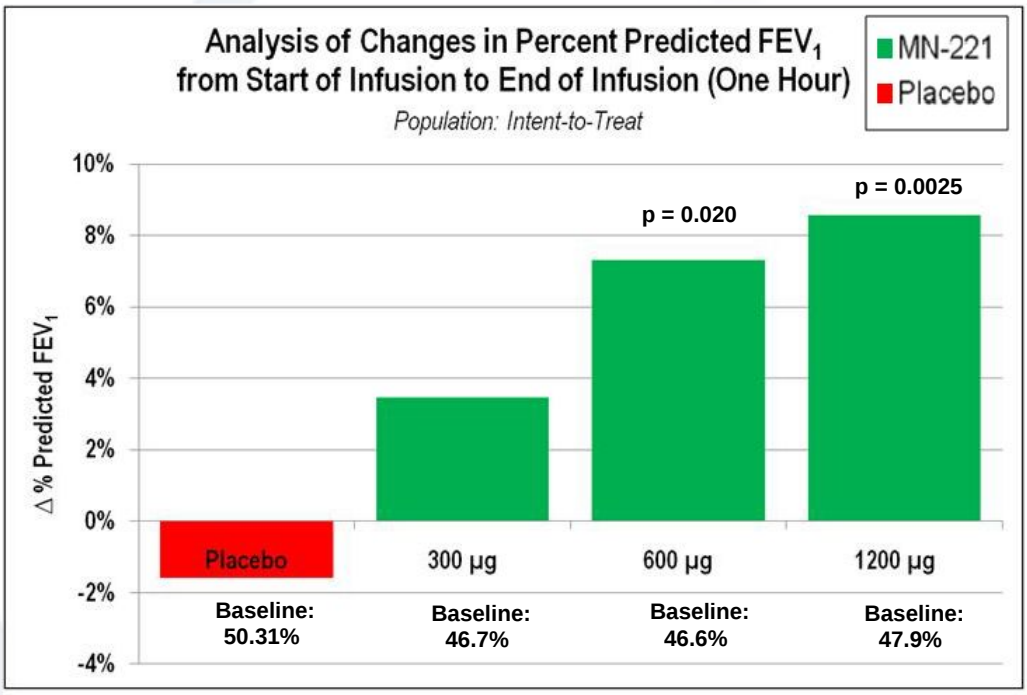
MN-221-CL-007: Study Design

- Randomized, placebo-controlled, double-blind, multi-center Phase II clinical trial
- 200 patients with severe, acute exacerbations of asthma ($FEV_1 \leq 50\%$ predicted) at ~35 Emergency Department sites in US, Canada, Australia, and New Zealand
- Dose Groups (~100 patients/group):
  - 1,200 µg MN-221 over 1 hour (600 µg in 15 minutes, 600 µg in 45 minutes)
  - Placebo
- Patients will receive Standard of Care (SOC) treatment in addition to adjunctive treatment with MN-221 or placebo
- Primary efficacy endpoint will be improvement in FEV_1 (% predicted) at 5 hours
  - *The study is designed to have 80% power to detect a treatment difference of 5 percentage points in FEV_1 (% predicted) when comparing MN-221 + SOC to Placebo + SOC at a two sided a-level of 0.05.*
- Anticipated completion in 2H, 2010*

**Anticipated completion date based on current projections*
Note: Development plans / timelines for MN-221 clinical trials are subject to change

MEDICINOVA

MN-221-CL-010:
Mean Change in FEV_1



MEDICINOVA

MN-166 for the Treatment of Multiple Sclerosis

MN-166 for Multiple Sclerosis (MS):

- Oral administration
- Multiple mechanisms of action, both neuroprotective and anti-inflammatory
- MN-166 targets primarily chronic aspects of MS
- Benign safety profile

Mechanisms of Action:

Potentially Neuroprotective

- Inhibits nitric oxide and reactive oxygen species production
- Stimulates release of neuronal growth factors
- Reduces demyelination

Anti-inflammatory

- Inhibits PDE's and MIF, leukotriene release, proinflammatory cytokines (TNFα, IL-1b, MCP, IL-6)
- Can increase IL-10 release

Current Standard of Care:

- Beta interferons (Rebif®, Avonex®, Betaseron/Betaferon®), Copaxone®, Tysabri®
- Primary focus is on acute treatment of MS symptoms (i.e., relapse rate)

MEDICINOVA

Completed Clinical Study: MN-166-CL-001

Placebo-controlled, Randomized, Double-blind Phase II Study:

- Year 1 Placebo, 30 mg/day, 60mg/day
- Year 2 30 mg/day, 60mg/day
- 297 patients (~100 patients/group) @ 25 sites in Serbia, Ukraine, Belarus, Bulgaria and Romania

Key Inclusion Criteria:

- Males or females aged 18 to 55 years, with relapsing remitting (RR) and/or secondary progressive (SP) Multiple Sclerosis with continued relapses;
- One MRI scan taken two weeks prior to treatment start using a standardized MRI protocol with at least one Gd-enhancing lesion;
- An Expanded Disability Status Scale (EDSS) score of 5.5 or less at the screening and baseline visits.

Safety Profile:

- 89% (264 of 297) of subjects completed the first 12 months of the study
- 82.5% (245 of 297) of subjects completed the full 24 months of the study
- Adverse effects reported more frequently in MN-166-treated than placebo-treated subjects: GI effects & depression

MN-166-CL-001 Study Results

Indicative of Potential Neuroprotective Effect

- Reduced brain volume loss — ***P-Value: 0.035***
- Reduced conversion of acute lesions to persistent black holes — ***P-Value: 0.004***
- Sustained disability progression was significantly less likely (~50%) — ***P-Value: 0.026***

Acute Clinical Benefit:

- Prolong time to relapse (by 127 days.) — ***P-Value: 0.04***
- Annualized relapse rate — ***P-Value: 0.08***

Protocol-Defined Primary Endpoint (Surrogate Endpoint):

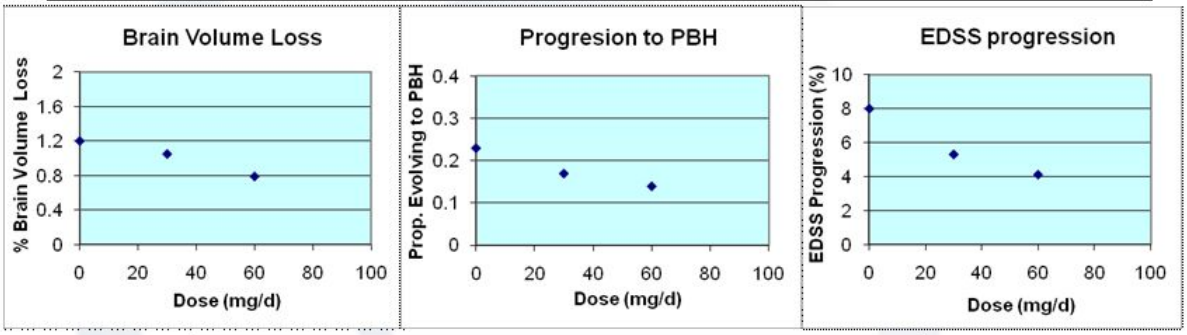
- No significant reduction in the cumulative number of active (gadolinium-enhancing (T1) and non-enhancing new/enlarging (T2)) lesions on cranial MRI scans over 12 months of treatment was observed
- Positive trends were observed in volume of gadolinium-enhancing (T1) lesions — ***P-Value: 0.09***

Note: P-values listed on this slide compare placebo group to 60mg/day group of MN-166

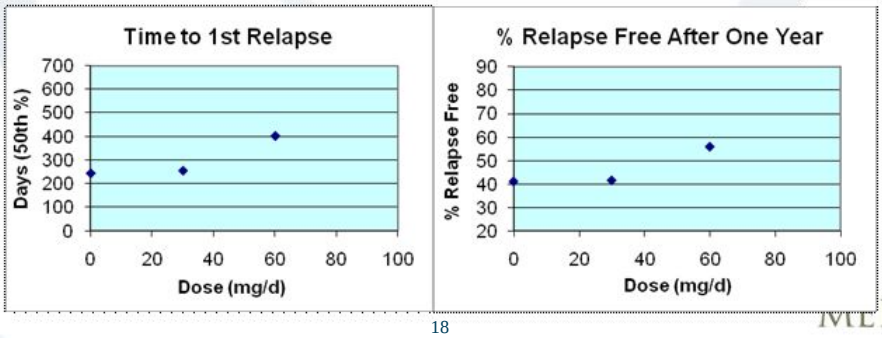
MEDICINOVA

MN-166-CL-001: Efficacy Review (One Year)

Endpoints Indicative of Neuroprotective Effect (Chronic aspects of MS):



Endpoints Relating to Acute Clinical Benefit:



Additional Value from Avigen Deal

Value to MediciNova

- AV411 is now part of MediciNova's MN-166 program; both are ibudilast
- API and drug product supply
- 4 completed Phase I and IIb/IIa clinical trials
- Open IND for ibudilast (Analgesia, Addiction)
- Clinical & preclinical support for MN-166 program; dosing up to 100 mg/day
- 2 method of use patents issued in 2009; multiple filings in progress
- Analog compounds behind ibudilast
  - First-generation development candidate: AV1013 – composition of matter patent issued
  - Second-generation dual target leads

Opioid Withdrawal & Neuropathic Pain Indications

- Ibudilast is a good glial cell attenuator *in vitro* and in the central nervous system (CNS) *in vivo.*
- Glial cell activation contributes to reward and withdrawal aspects of opioids and the development and maintenance of neuropathic pain.
- This may represent a new pharmacotherapy approach for drug addiction and neuropathic pain.

MN-166: Opioid Withdrawal

MN-166: Ongoing clinical trial

- Study Objective: Assess MN-166 safety/tolerability/PK and preliminary efficacy for opiate withdrawal in heroin-dependent subjects
- Ongoing clinical trial run jointly by the New York State Psychiatric Institute and Columbia University in NYC (Investigator IND study, MediciNova is not the sponsor)
- Trial to enroll ~30 patients (10 completers/cohort)

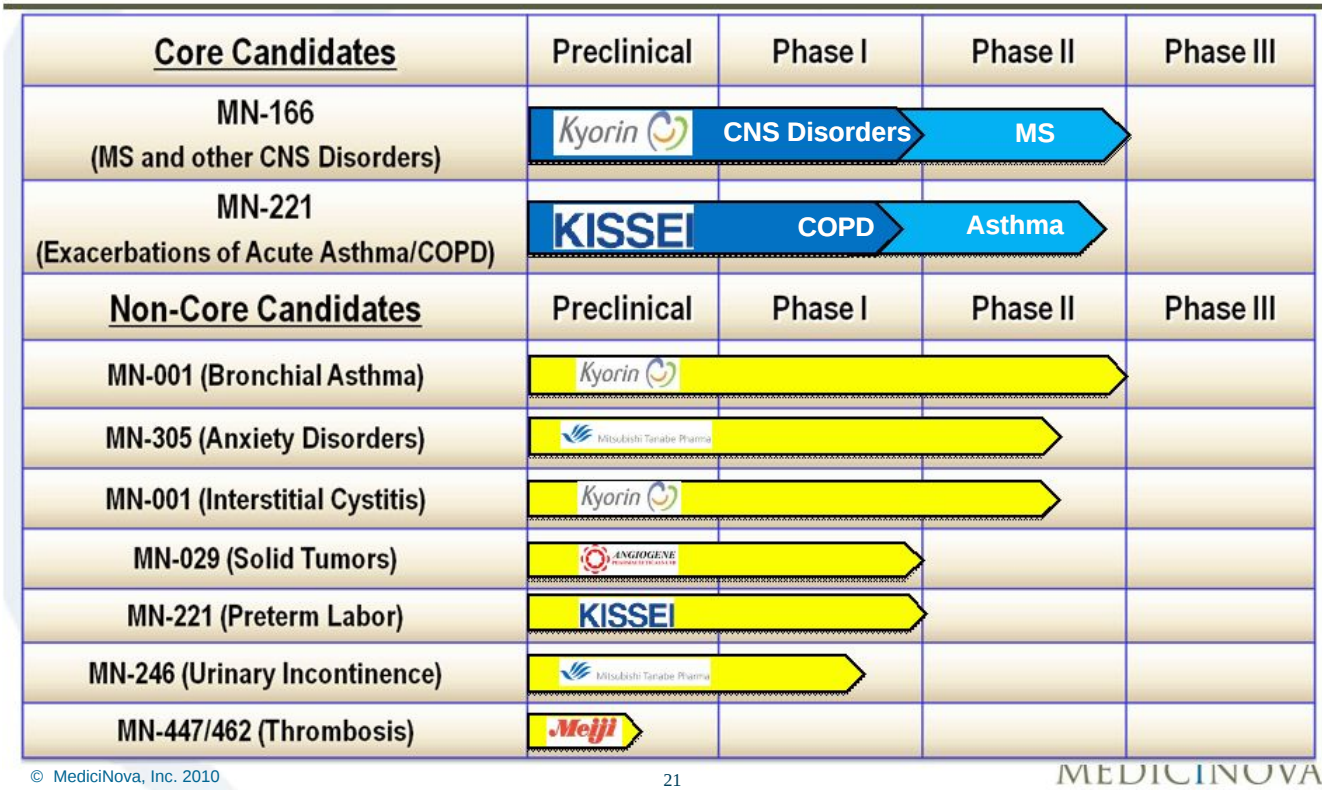
Trial Design/Endpoints			
Week	**1**	**2**	**3**
Treatment	Morphine (30 mg QID) and Placebo BID	Morphine (30 mg QID) and Placebo BID or 20 mg BID of Ibudilast or 40 mg BID of Ibudilast	Placebo BID or 20 mg BID of Ibudilast or 40 mg BID of Ibudilast
Endpoints	Safety, Tolerability, PK	Safety, Tolerability, PK	Withdrawal scores, Safety, Tolerability, PK

- Anticipated completion in mid-2010*

**Anticipated completion date based on current projections*
Note: QID refers to taking the medication four times per day; BID refers to taking the medication twice a day

MEDICINOVA

Commercially-Attractive Diversified Portfolio



Management Team with Global Experience

Leadership	Years Experience	Background
Yuichi Iwaki, MD, PhD CEO & President	34	Professor at USC, formerly Professor at University of Pittsburgh; Advisor to JAFCO, Tanabe
Shintaro Asako, CPA Chief Financial Officer	12	KPMG USA (Audit), Arthur Andersen USA
Kirk Johnson, Ph.D. Chief Scientific Officer	20	Avigen, Genesoft Pharmaceuticals, Chiron Corporation
Masatsune Okajima, CMA VP, Head of Japanese Office	18	Daiwa Securities SMBC, Sumitomo Capital Securities, Sumitomo Bank
Alan Dunton, MD, PhD Clinical Development Consultant & Board Member	27	CEO of Panacos & Metaphore; President of the Janssen Research Foundation, a J&J company

MEDICINOVA

Investment Highlights

Upcoming Near-Term Business Milestones:

1. Secure a global partnership for MN-166
2. Secure a regional partnership (ex-US/Japan rights) for MN-221

Upcoming Clinical Milestones:

1. MN-221-CL-007 Phase II Study for Acute Exacerbations of Asthma
   - Anticipated completion 2H, 2010*
2. MN-166 Study for Opioid Withdrawal
   - Anticipated completion in mid-2010*

Completed Milestones:

1. Completed Avigen merger December 18, 2009
2. Announced Positive MN-221-CL-010 Phase IIa Study Results in Moderate-to-Severe COPD Patients on March 17, 2010

**Anticipated completion dates based on current projections*

MEDICINOVA