UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 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): September 4, 2009

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:

☒ 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 8.01 Other Events.

Representatives of MediciNova, Inc. (the "Registrant") will be attending the Rodman and Renshaw Annual Global Investment Conference commencing on September 9, 2009 and are scheduled to make a presentation at such conference on September 9, 2009 at 4:30 p.m. Eastern time. The information to be presented by the Registrant at this conference and investor meetings is attached hereto as Exhibit 99.1 to this Current Report.

The information in this Current Report, including Exhibit 99.1 furnished herewith, is being furnished and shall not be deemed "filed" for any purpose, including for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section. The information in this Current Report shall not be deemed 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 to this Current Report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit	Description
99.1	Slide presentation of the Registrant

SIGNATURES

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

MEDICINOVA, INC.

Dated: September 4, 2009

By: /s/ Shintaro Asako
Shintaro Asako
Vice President and Chief Financial Officer

EXHIBIT INDEX

Exhibit	Description
99.1	Slide presentation of the Registrant

Exhibit 99.1

MEDICINOVA

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 safety and efficacy of product candidates and the potential novelty of such product candidates as treatments for disease, plans and objectives for clinical trials and product development, anticipated benefits of the merger with Avigen, Inc., value and benefits to stockholders from such transaction, strategies, future performance, 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," "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; failure to complete the merger with Avigen, Inc. on a timely basis or at all; the availability of funds to complete product development plans and MediciNova's ability to raise sufficient capital when needed; 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 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.

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This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval. This material is not a substitute for the registration statement/prospectus/proxy statement MediciNova, Inc. and Avigen, Inc. will file with the SEC or any other documents that the parties may file with the SEC and send to their respective shareholders in connection with the transaction. INVESTORS AND SECURITY HOLDERS OF AVIGEN, INC. ARE URGED TO READ ANY SUCH DOCUMENTS FILED WITH THE SEC CAREFULLY IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE TRANSACTION. Investors and security holders will be able to obtain free copies of any documents filed with the SEC by MediciNova, Inc. and Avigen, Inc. through the website maintained by the SEC at http://www.sec.gov.

MEDICINOVA

Corporate Overview: MediciNova, Inc.

Development Company Focused on Differentiated Product Candidates

- Unique access to differentiated, potentially high-value assets primarily from Japanese alliances

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
  - In 2008, over $8B in worldwide MS therapeutic sales*
- A diversified portfolio consisting of six additional compounds

MNOV Headquarters: San Diego, CA

Key Financials:

- Signed Definitive Merger Agreement w/ Avigen, Inc. on 8/20/2009; anticipated closing 4Q09
- Dual listed company on NasdaqGM and Osaka Securities Exchange - Hercules
- ~$40.7 million net Cash, Cash Equivalents and Marketable Securities as of 6/30/2009
- ~$85.5 million Market Cap (NasdaqGM) as of 8/19/09

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

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Business Model: Return On Investment

In-License:

- Novel, small-molecule product candidates with significant clinical or preclinical data packages and attractive market opportunities

Conduct Proof-of-Concept Clinical Trials:

- Conduct Phase I and Phase II clinical trials to demonstrate safety and efficacy of compound

Two Pathways Towards ROI After Phase II:

1. Continue internal development of compound towards commercialization
2. Seek partnership for further development of compound

MediciNova intends to pursue further development of MN-221 independently in the United States; however, following our completion of the Phase II clinical trial of MN-166 for the treatment of MS, we are not planning to pursue any further significant clinical development of MN-166 until we secure a strategic collaboration to further development.

Avigen Transaction Overview

Transaction

- Signed Definitive Merger Agreement with Avigen, Inc. on 8/20/2009.
- Following the completion of the transaction, Avigen will become a wholly-owned subsidiary of MediciNova.
- Anticipated closing will be 4Q, 2009.

Rationale

- AV-411 (ibudilast) preclinical materials can be used as support for the development pathway for MN-166
  - Anticipated cost savings of up to ~$7.0 million for MediciNova to reproduce data.
- Clinical data with higher dose of ibudilast, an open IND and obtaining control of the AV-411 use patent are expected to enhance partnering potential and shorten the time to approval.
- Avigen's significant cash balance represents a potential financing opportunity with MediciNova potentially deriving proceeds of up to $37 million, assuming some or all of Avigen's stockholders elect to receive MediciNova convertible notes in the transaction and subsequently convert those notes.

Avigen Transaction Overview

Merger Consideration

- Each Avigen stockholder will have the option of receiving their pro rata allocation of cash or convertible notes aggregating approximately $37.0 million, subject to potential upward and downward adjustments as set forth in the merger agreement:
  - First payment consideration of approximately $35.5 million; and
  - Second payment consideration of approximately $1.5 million payable on June 30, 2010.
    - This holdback amount is being held for any adjustments to certain Avigen defined expenses, marketable security risk, sub-tenant risk, and other liabilities in excess of amounts agreed by the parties.
- Contingent Payment Rights
  - Provides for payment of certain assets to Avigen shareholders on a pro rata basis:
    - $6.0 million milestone payment from Genzyme Corporation if such payment is received within 20 months of effective time of merger.
    - If the milestone payment has not occurred and the Parkinson's product (as defined in the Genzyme Agreement) is sold by MediciNova within 20 months of the effective time of the merger, 50% of the net proceeds from such sale received within such 20-month period.
    - Certain amounts remaining in a plan trust created by Avigen upon satisfaction of certain severance and benefits payments.

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Avigen Transaction Overview

Convertible Notes Consideration

- 18-month maturity from the date of closing of merger (no early cash redemption).
- Principal from the notes will be held in a trust account with principal invested in certain approved investment options.
- The notes can be converted on a monthly basis into common shares of MediciNova at an initial conversion price equal to $6.80.

Approval Conditions

- Requires affirmative vote of a majority of outstanding stock entitled to vote of:
  - MediciNova for the approval of the issuance of the convertible notes; and
  - Avigen for the adoption of the Merger Agreement.

Other Provisions

- Customary conditions to closing and termination rights.
- No break-up fees to either party; however, if Avigen board changes its recommendation and the merger is not approved, MediciNova entitled to receive 50% of out of pocket expenses up to $500,000.

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Pro Forma Stockholder Review

This pro forma ownership review is presented for illustrative purposes only and does not indicate actual ownership of MediciNova shares at any past, present, of future date. Actual ownership of MediciNova shares will depend on a variety of factors, including the actual amounts of the First Payment Consideration and Second Payment Consideration and the rounding of fractional shares set forth in the indenture governing the convertible notes.

Summary Securities Ownership Review (Fully Diluted Basis)

	Pre -Transaction	Pro Forma Shares Outstanding Post-Transaction[1]		
		Consideration		
	Shares	All Cash	50% Cash 50% Conv. Notes[2][3]	100% Conv. Notes[2][3]
Common Stock Equivalents				
MediciNova Stockholders	12,048,003	12,048,003	12,048,003	12,048,003
Avigen Stockholders	-	-	2,717,712	5,435,424
MediciNova Exercisable Options	1,711,350	1,711,350	1,711,350	1,711,350
	13,759,353	13,759,353	16,477,065	19,194,777
Ownership %				
MediciNova Stockholders	87.6%	87.6%	73.1%	62.8%
Avigen Stockholders	0.0%	0.0%	16.5%	28.3%
MediciNova Exercisable Options	12.4%	12.4%	10.4%	8.9%
	100.0%	100.0%	100.0%	100.0%

(1) Assumes first payment consideration and second payment consideration aggregate $37.0 million and are both paid at closing and that MediciNova issues no shares or options from August 20, 2009 through the first conversion date of the convertible notes.
(2) Assumes the convertible notes convert to MediciNova shares at $6.80.
(3) Assumes all convertible notes are converted into MediciNova shares on the first monthly conversion date.

Sources of information: SEC Edgar Filings

Multiple Sclerosis

Definition:

Multiple sclerosis (MS) is an inflammatory demyelinating disease of the central nervous system (CNS), affecting approximately 500,000 people in the United States and 2 million people worldwide.

There is no cure for the disease.

Multiple Sclerosis Market:

Over $8 billion worldwide sales in 2008*

Current Standard of Care:

- Beta interferons (Rebif, Avonex, Betaserone), Copaxone®, Tysabri®
- Administered either by intramuscular or subcutaneous injection or infusion

MN-166 for Multiple Sclerosis:

- Oral Administration
- Anti-inflammatory and neuroprotective propreties

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

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Completed Clinical Study: MN-166-CL-001

Placebo-controlled, randomized, double-blind Phase II study:

- Year 1 θ, 10 mg three times a day (tid), 20 mg tid
- Year 2 ±10 mg tid, 20 mg tid
- n ~ 100 MS 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;
- A definite diagnosis of relapsing MS using the new International Committee recommendations (MacDonald Criteria);
- 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.

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MN-166 Targets Primarily Chronic Aspects of MS

MN-166 Effects Outcomes Related to Disease Progression in RRMS Patients

Clinical and MRI Outcomes:

Indicative of Potential Neuroprotective Effect:

1. Reduced Brain Volume Loss — ***P-Value: 0.030***
2. Reduced Conversion of Acute Lesions to Persistent Black Holes — ***P-Value: 0.004***
3. Sustained disability progression was significantly less likely (~50%) — ***P-Value: 0.026***

Acute Clinical Benefit:

- Prolong time to relapse (by 127 days.) — ***P-Value: 0.044***

MN-166 was very well tolerated in Phase II study:

- 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
- GI adverse effects as a group and depression were the only adverse events to occur more frequently in MN-166-treated than in placebo-treated subjects

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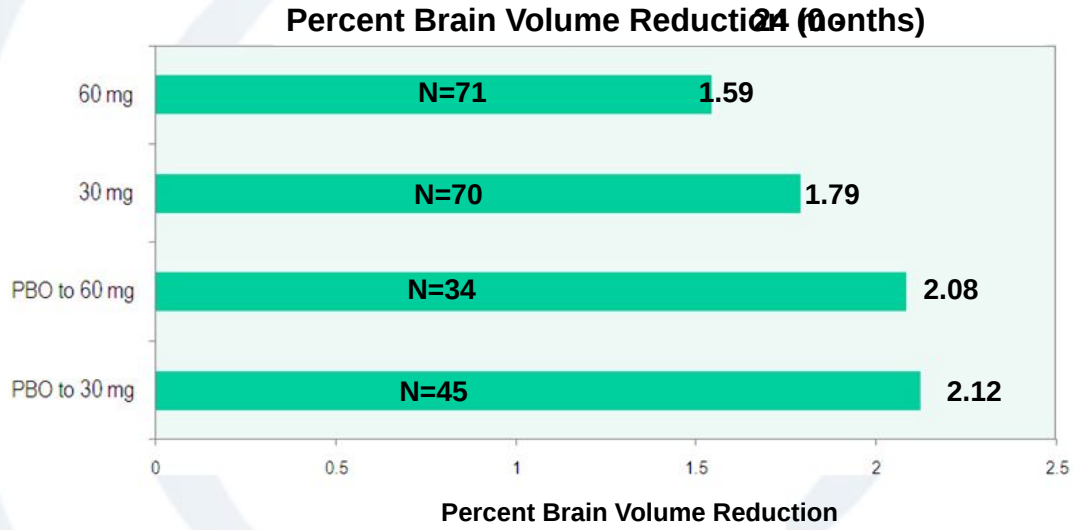
Chronic Efficacy Demonstrated: Effects on Brain Volume



Brain volume loss was significantly less (p=0.030) in patients rec per day of MN-166 for 24 months compared to the other treatme

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Reduction of Persistent Black Hole (PBH) Formation

Parameter	Treatment Groups		
	Placebo	30 mg/day	60 mg/day
Number Patients w. New Lesions at Month 2	72	64	56
Total Number New Lesions in all Patients	426	338	315
Total Number of Persistent Black Holes	98	58	47
Proportion of Lesions Evolving to PBH	0.23	0.17	0.14
p Value	-	**0.036**	**0.004**

- **New T1 gadolinium-enhancing or new T2 lesions were defined as NL in the first on-study MRI at month 2**
- **Lesions that were hypointense and inactive at month 10 were PBH**
- **Relative Risk (RR) of NL evolution to PBH was analyzed using a general linear model with the error term from the Poisson distribution**

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Sustained Disability Progression

	TREATMENT	
Time Period	**Placebo to Active (N=100)**	**Active Drug [30 mg (N=94), 60 mg (N=98)]**
2 Years	**21/100 (21%)**	**20/194 (10.4%)**

P-Value: 0.026

Disability Progression is defined as a sustained increase i
(increase in EDSS maintained for four consecutive month

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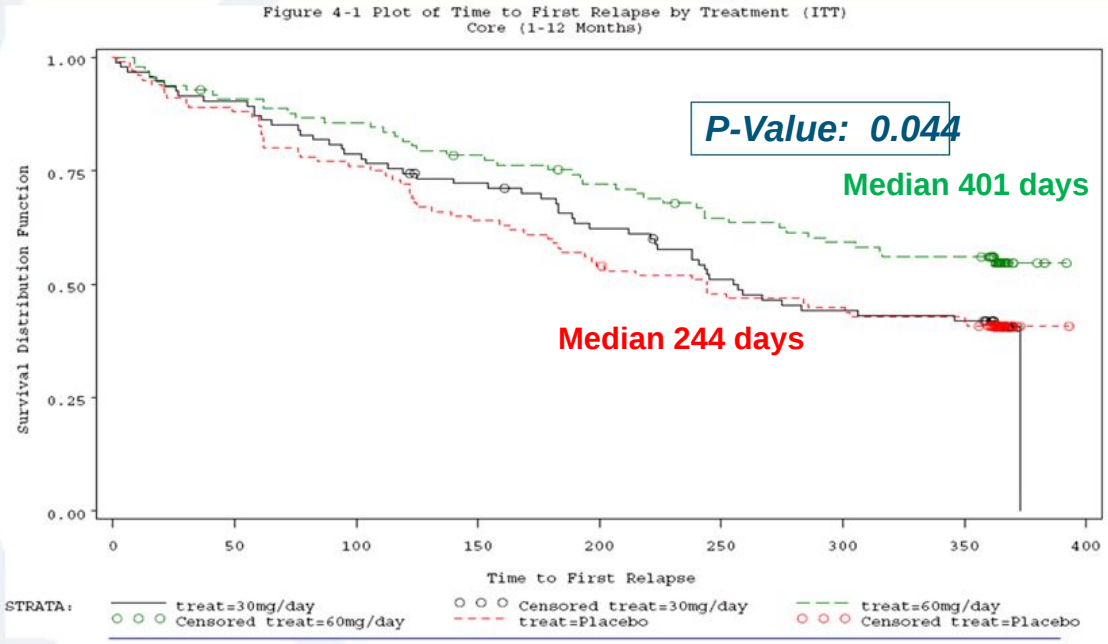
Acute Efficacy Demonstrated: Time to First Relapse



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Additional Value from Avigen Deal

AV-411 Package

- Both AV-411 and MN-166 are derived from Ibudilast.
- AV-411 preclinical data expected to support clinical package for MN-166.
- Open IND for ibudilast.
- AV-411 trial supports MN-166 dosing up to 100 milligrams (mg) versus the maximum dosing of 60 mg in the Phase 2 trial for MN-166.
- Expected time savings of six to twelve months.
- Analog compounds behind ibudilast.
  - First-generation development candidate: AV1013.
  - Second-generation dual target leads.

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MN-166: NEXT STEPS

Seek Partnership for Further Development:

MediciNova's strategic objective for MN-166 is to secure a partner to advance the clinical development of MN-166.

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Acute Exacerbations of Asthma

Definition:

- Long-lasting and severe asthma episode that is not responsive to initial bronchodilator or corticosteroid therapy

Market Opportunity*:

- Approximately 2 million annual emergency room visits and 500,000 annual hospitalizations in the US
- Approximately 2.7 million annual emergency room visits and 560,000 annual hospitalizations in UK/Spain/Germany/France/Italy
- Potential $1 Billion+ combined market opportunity worldwide (Acute Asthma & COPD exacerbations)

Current Standard of Care (SOC):

- Beta agonists – inhaled
- Anticholinergics (ipratropium bromide) – inhaled
- Corticosteroids (66-77% of patients) – IV or oral

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

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

MN-221: A novel, highly selective β_2-adrenergic receptor agonist; licensed from Kissei Pharmaceutical in 2004

Three Potential Advantages over current therapy

1. **Improved Efficacy**
2. **Improved Safety**
3. **Reduced Health Care Expenses**

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1) Improved Efficacy

- MN-221 may improve efficacy over current standard of care due to its route of administration.
- Currently patients who are struggling to breathe are given beta agonists in an inhaled formulation.
- MN-221's intravenous formulation allows MN-221 to access the beta$_2$ receptors in the lungs without having to pass through the constricted airways.

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2) Improved Safety

- MN-221 has a higher selectivity for the beta$_2$ receptors than the beta$_1$ receptors as compared with other beta$_2$ agonists.
- MN-221 is only a partial agonist for the beta$_1$ receptor.
- This may result in fewer cardiovascular side effects which are common with the current standard of care.

3) Reduced Health Care Expenses

- Approximately 25% of patients who present to the emergency department with an acute exacerbation of asthma have to be hospitalized.
- Based on clinical data obtained in our first emergency department-based study, patients treated with MN-221 in the emergency department may lower the hospitalization rate.

Human β-Adrenergic Receptor Selectivity

Test Drug	β_1 IC_{50} (M)	β_2 IC_{50} (M)	β_2-Adrenoceptor Selectiv (IC_{50} for β_1 / IC_{50} for β_2)
Levalbuterol	7.40E-06	1.40E-06	5.3
Albuterol	9.40E-06	1.60E-06	5.9
Terbutaline	6.00E-05	6.50E-06	9.2
MN-221	**5.90E-06**	**1.40E-07**	**42.4**

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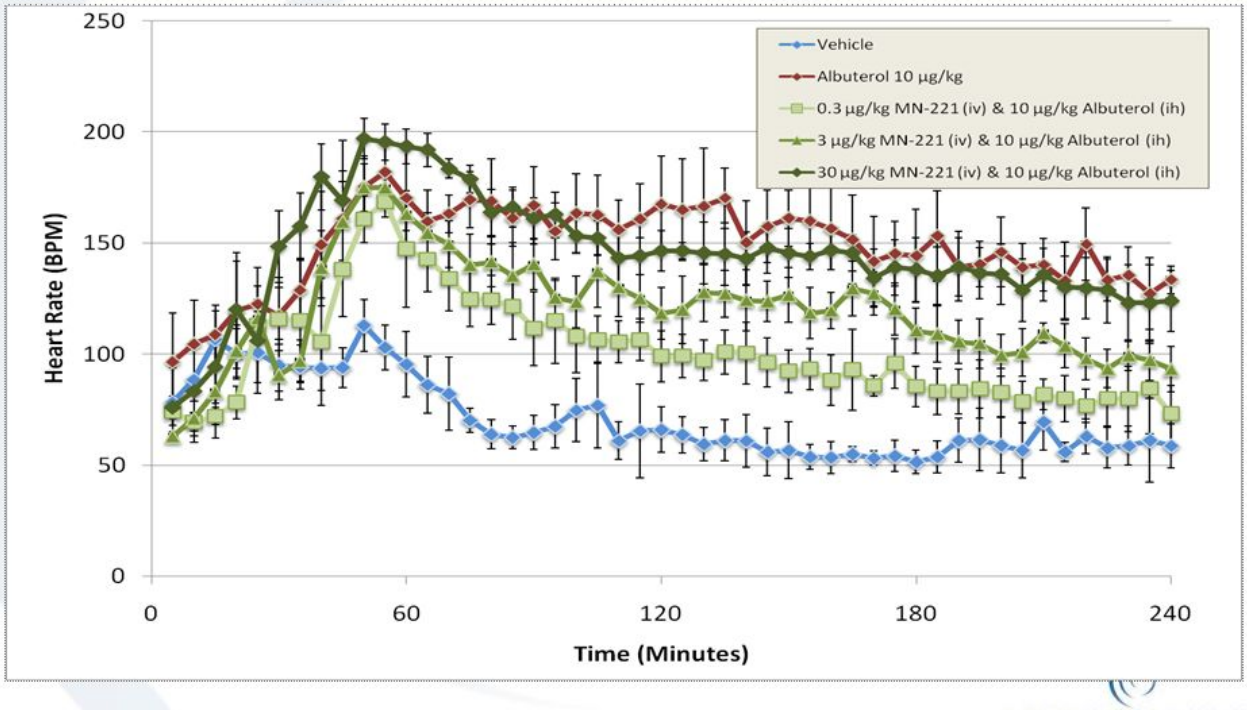
Effect on Heart rate: Combination of MN-221 & Albuterol in Dogs



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MN-221 Phase II Study Designs

	CL-004	CL-005	CL-006	CL-007
Type of Asthma	Mild-to-moderate	Moderate-to-Severe	Acute Exacerbations	Acute Exacerbations
FEV_1 (Entry Criteria)	$FEV_1 \geq 60\%$	$75\% \geq FEV_1 \geq 40\%$	$FEV_1 \leq 55\%$	$FEV_1 \leq 50\%$
Number Patients	23	17	29	200
Number Sites	4	4	8	~45
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	1200 µg over 1-hr

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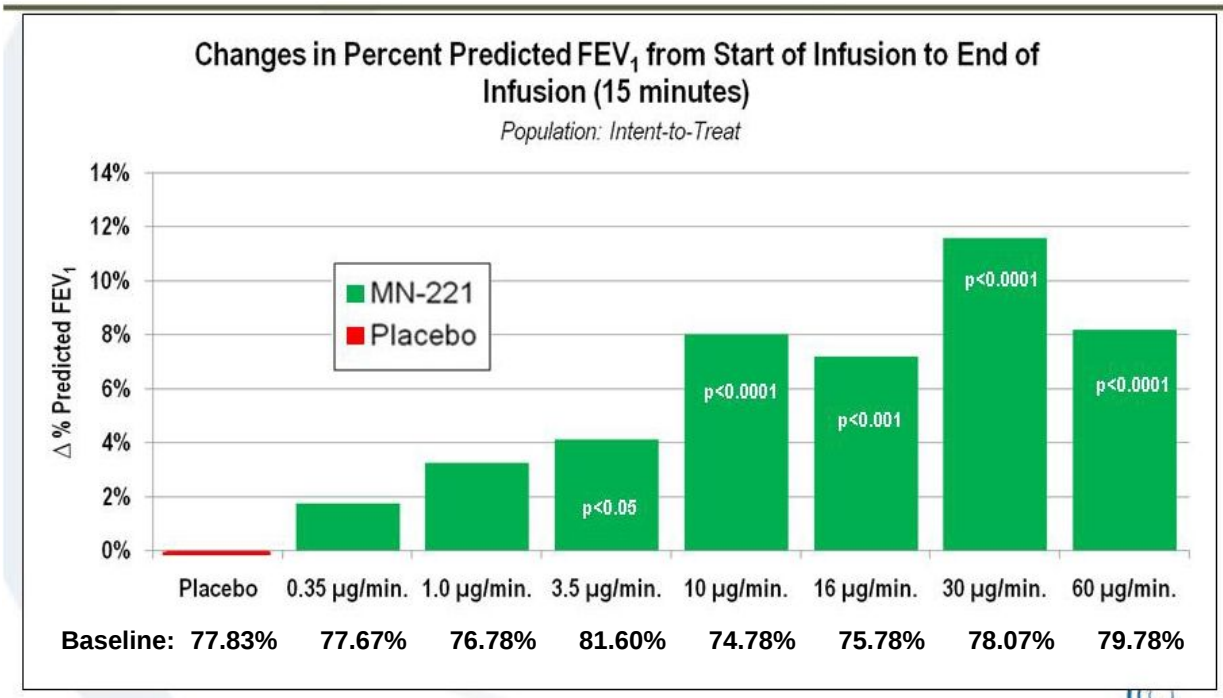
MN-221-CL-004:
Mean Change in FEV_1 (at 15 min.)



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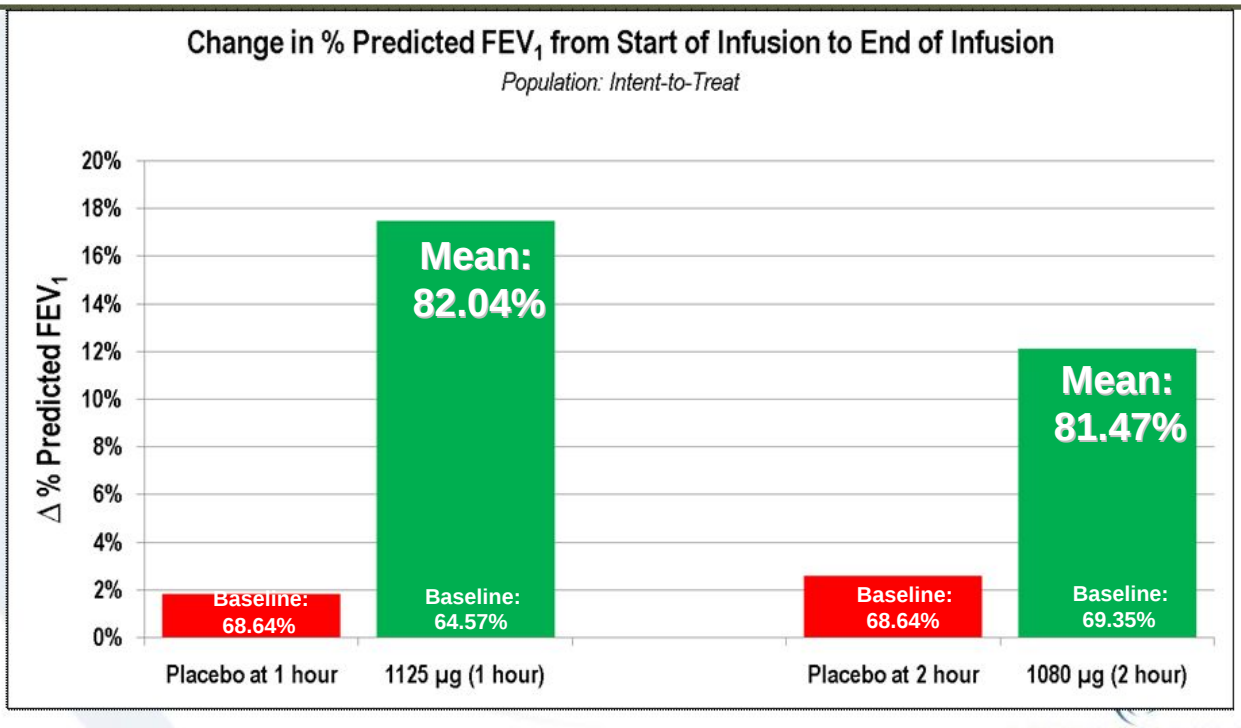
MN-221-CL-005:
Mean Change in FEV_1 (at end of infusion)



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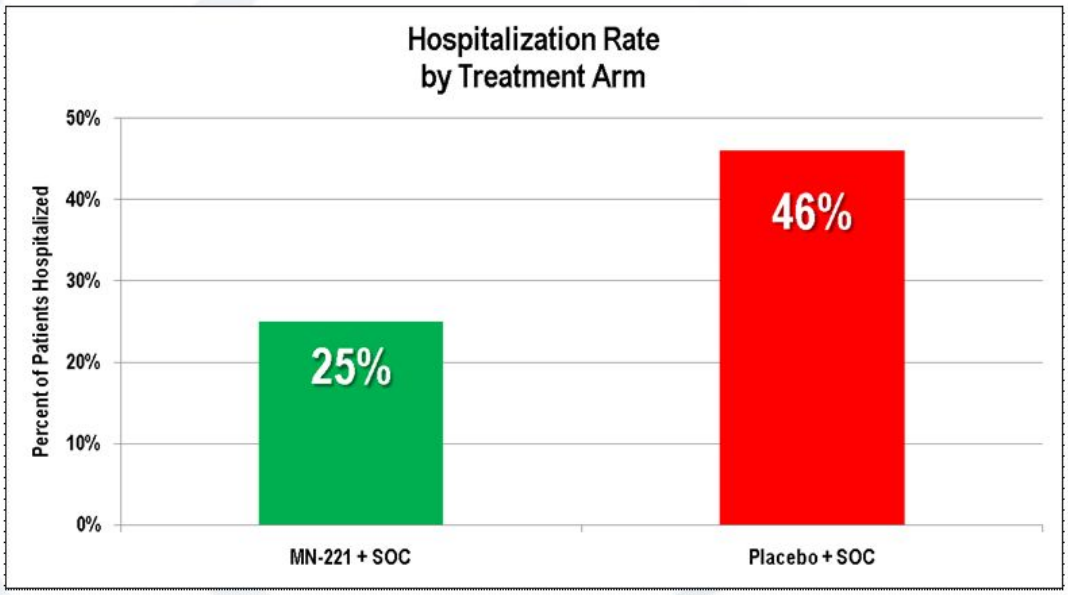
MN-221-CL-006

Hospitalization Rate by Treatment Group



MN-221 reduced the hospitalization rate by 45%

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MN-221-CL-007

Study Design

- Randomized, placebo-controlled, double-blind, multi-center clinical trial
- 200 patients with severe, acute exacerbations of asthma ($FEV_1 \leq 50\%$ predicted) at ~45 Emergency Department sites in North America, Australia, and New Zealand
- Dose:
  - 40 µg/min for 15 minutes; 13.3 µg/min for 45 minutes (1,200 µg)
- 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 α-level of 0.05.*

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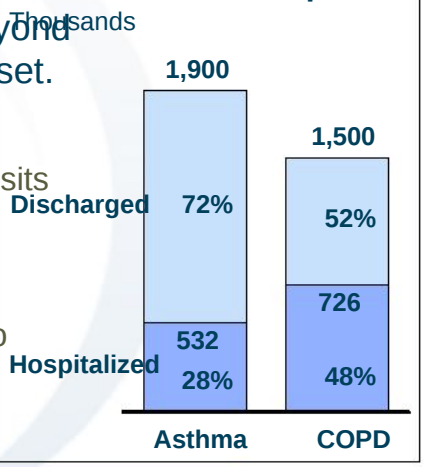
MN-221: Expanded Indication – COPD Exacerbations

Exacerbations of Chronic Obstructive Pulmonary Disease (COPD) are a sustained worsening of the patient's condition, from the stable state and beyond normal day-to-day variations, that is acute in onset.

- An estimated 10 million adults with COPD in the US
  - 1.5 million hospital emergency department visits
  - 726,000 hospitalizations
  - 119,000 deaths
- The direct/indirect costs related to COPD amounted to approximately $42.6 billion in 2007.

Hospitalization rates amongst Asthma and COPD patients



COPD patients are generally more ill than asthmatics with overall higher hospitalizations and mortality.

Source: CDC, CDC COPD surveillance in U.S. 2000; US Census; American Lung Association website

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MN-221 Phase II Clinical Development Timeline

MN-221 Phase II Program	**2007**		**2008**		**2009**		**2010**	
	1H	2H	1H	2H	1H	2H	1H	2H
Acute Asthma								
CL-004 Dose Escalation								
CL-005 Prolonged Infusion								
CL-006 Single-Blind								
CL-007 Double-Blind								
COPD Exacerbations								
To be determined								

**Anticipated completion dates based on current projections*

Note: Development plans / timelines for MN-221 are subject to change

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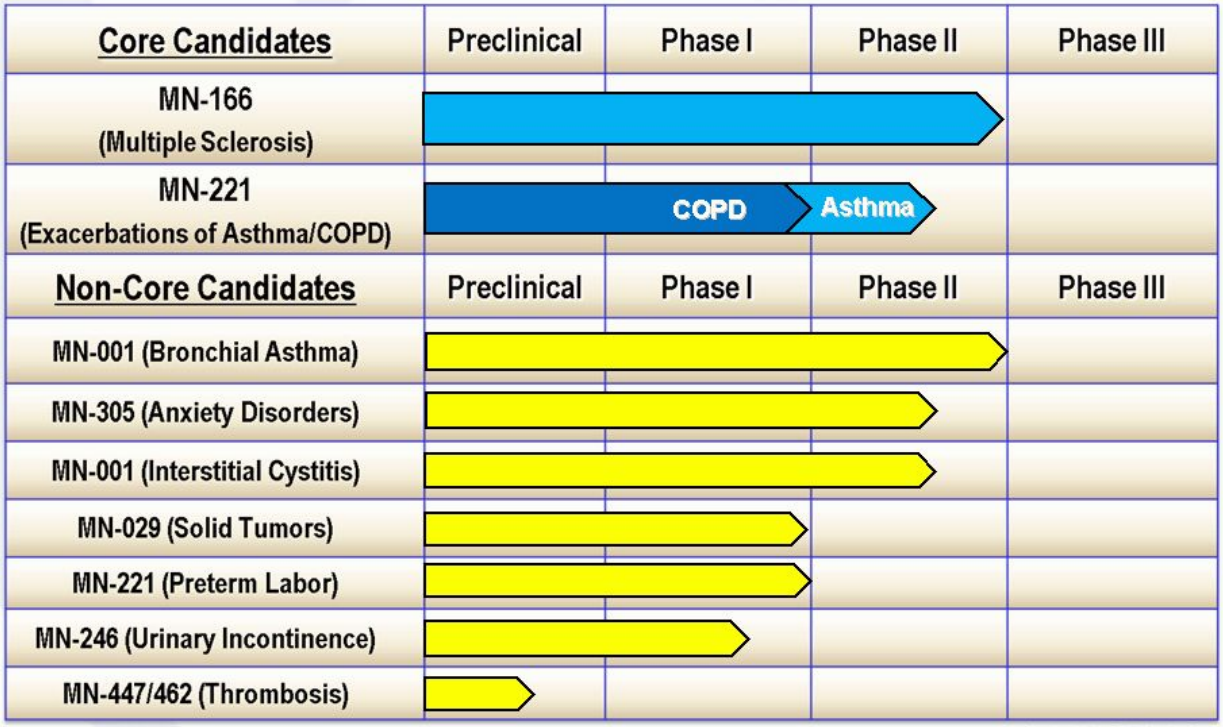
Commercially-Attractive Diversified Portfolio



Key Financials

Dual Listing:

- MNOV (NasdaqGM)
- 4875 (Osaka~~H~~ercules)

Net Cash, Cash Equivalents and Marketable Securities:

~$40.7 million as of 6/30/09

Market cap as of 8/19/09:

~$85.5 million

Shares outstanding:

~12 million

Management Team with Global Experience

Leadership	Years Experience	Background
Yuichi Iwaki, MD, PhD CEO & President	33	Professor at USC, formerly Professor at University of Pittsburgh; Advisor to JAFCO, Tanabe
Shintaro Asako, CPA Chief Financial Officer	11	KPMG USA (Audit), Arthur Andersen USA
Masatsune Okajima, CMA VP, Head of Japanese Office	17	Daiwa Securities SMBC, Sumitomo Capital Securities, Sumitomo Bank
Alan Dunton, MD, PhD Key Consultant & Board Director	20+	CEO of Panacos & Metaphore; President of the Janssen Research Foundation, a J&J company.

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Investment Highlights

MN-221 (Exacerbations of Asthma/COPD Exacerbations):

- Proven mechanism of action
  - Highly selective with improved safety profile vs. standard of care
- Positive Phase II efficacy and safety data for Acute Exacerbations of Asthma
- Phase II study ongoing for Acute Exacerbations of Asthma

MN-166 (Multiple Sclerosis):

- Both chronic and acute efficacy have been demonstrated in clinical studies completed to date
- MediciNova is seeking a partner to advance the clinical development of MN-166
- Enhanced value with anticipated addition of Avigen's AV-411 data package

Minimized Burn Rate:

- Annual burn rate reduced compared to previous years as a result of focus on MN-166 and MN-221 development programs
- ~$40.7 million net Cash, Cash Equivalents and Marketable Securities as of 6/30/09

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Addendum:

Additional Information

- *Avigen Transaction*
- *MN-221 Data*
- *MN-166 Data*

Other Potential Value from Avigen Transaction

Other potential benefits that may accrue should Avigen's shareholders elect to take convertible notes as merger consideration and subsequently convert these notes:

- Increased liquidity in the U.S. markets:
  - Presuming that 100% of Avigen's shareholders elect to receive convertible notes and convert such notes, MediciNova's publicly held shares would increase by approximately 45%. Assuming that average daily volume of MediciNova's shares traded increases commensurately, the range of potential investors would be expected to expand with the increased liquidity and market capitalization.
  - Using the conversion price of $6.80 and assuming 100% conversion into MediciNova shares, MediciNova's post-transaction market capitalization would have been approximately $119 million as of 8/19/2009.
- Effective share issuance at the market:
  - MediciNova effectively will have raised capital without payment of offering expenses and underwriting commissions, which are typically 15% in many small/micro-cap companies.
  - A conversion price of $6.80 and a 15% average discount yields savings of approximately $1.02 per MediciNova share. Once again, assuming 100% of Avigen's shareholders elect to receive convertible notes and convert such notes, this could represent a savings of approximately $6.0 million from a marketed offering of MediciNova shares.

MN-221-CL-004

Study Design

- Randomized, placebo-controlled, double-blind, dose escalation study
- 23 subjects with mild-to-moderate stable asthma ($FEV_1 \geq 60\%$ predicted) at 4 sites
- Patients are randomized to one of four different treatment groups (25% of patients on placebo for every dose level)
  - Each treatment sequence consist of placebo and escalating doses of MN-221 (0.35µg/min, 1.0 µg/min, 3.5µg/min, 10µg/min, 16µg/min, 30µg/min, 60µg/min) for 15 minutes
  - Primary endpoint – mean change in FEV_1 (forced expiratory volume in 1 second) from baseline at 15 minutes (the end of the infusion)
- Outcome measures – inferential statistics – FEV_1, pharmacokinetics (pk), safety and tolerability

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MN-221-CL-004: Dose Treatment Groups

Eligible subjects were randomly assigned in a 1:1:1:1 ratio to 1 of 4 dose-escalation treatment sequences:

	Group A	Group B	Group C	Group D
Visit 2	Placebo	0.35 μg/min for 15 minutes	0.35 μg/min for 15 minutes	0.35 μg/min for 15 minutes
Visit 3	1.0 μg/min for 15 minutes	Placebo	1.0 μg/min for 15 minutes	1.0 μg/min for 15 minutes
Visit 4	3.5 μg/min for 15 minutes	3.5 μg/min for 15 minutes	Placebo	3.5 μg/min for 15 minutes
Visit 5	10 μg/min for 15 minutes	10 μg/min for 15 minutes	10 μg/min for 15 minutes	Placebo
Visit 6	Placebo	16 μg/min for 15 minutes	16 μg/min for 15 minutes	16 μg/min for 15 minutes
Visit 7	30 μg/min for 15 minutes	Placebo	30 μg/min for 15 minutes	30 μg/min for 15 minutes
Visit 8	60 μg/min for 15 minutes	60 μg/min for 15 minutes	Placebo	60 μg/min for 15 minutes

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MN-221-CL-005

Study Design

- Randomized, placebo-controlled, single-blind, dose rate escalation study
- 17 subjects with moderate-to-severe stable asthma ($FEV_1 \geq 40\%$, but $\leq 75\%$ predicted) at 4 sites
- Doses:
  - 16 µg/min for 15 minutes followed by 8 µg/min for 105 minutes (2-hour infusion with a total dose of 1,080 µg) or placebo
  - 30 µg/min for 15 minutes followed by 15 µg/min for 45 minutes (1-hour infusion with a total dose of 1,125 µg) or placebo
- Outcome measures – descriptive statistics only – FEV_1, pk, safety

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MN-221-CL-006

Study Design

- Randomized, placebo-controlled, modified single-blind, dose escalation study
- 29 patients with acute exacerbations of asthma (FEV_1 = 55% predicted) at 8 Emergency Department sites
- Doses:
  - 16µg/min for 15 minutes (240 µg)
  - 30µg/min for 15 minutes (450 µg)
  - 16 µg/min for 15 minutes; 8 µg/min for 105 minutes (1,080 µg)
- Patients received Standard of Care (SOC) treatment in addition to adjunctive treatment with MN-221 or placebo
- Outcome measures – descriptive statistics only – FEV_1, pk, safety

MN-221 Safety Summary

Phase II Study Safety Findings:

- No clinically significant cardiovascular, ECG, or vital sign changes, or other safety concerns, observed at doses up to 3840 micrograms in 4 hours.

Safety Database:

- MN-221 has been tested in almost 300 subjects in the US and Europe to date.
- Subjects have had infusions with no clinically significant adverse events at:
  - 16 micrograms/minute for up to 4 hours for a total of 3840 micrograms, and at lower doses for up to 24 hours

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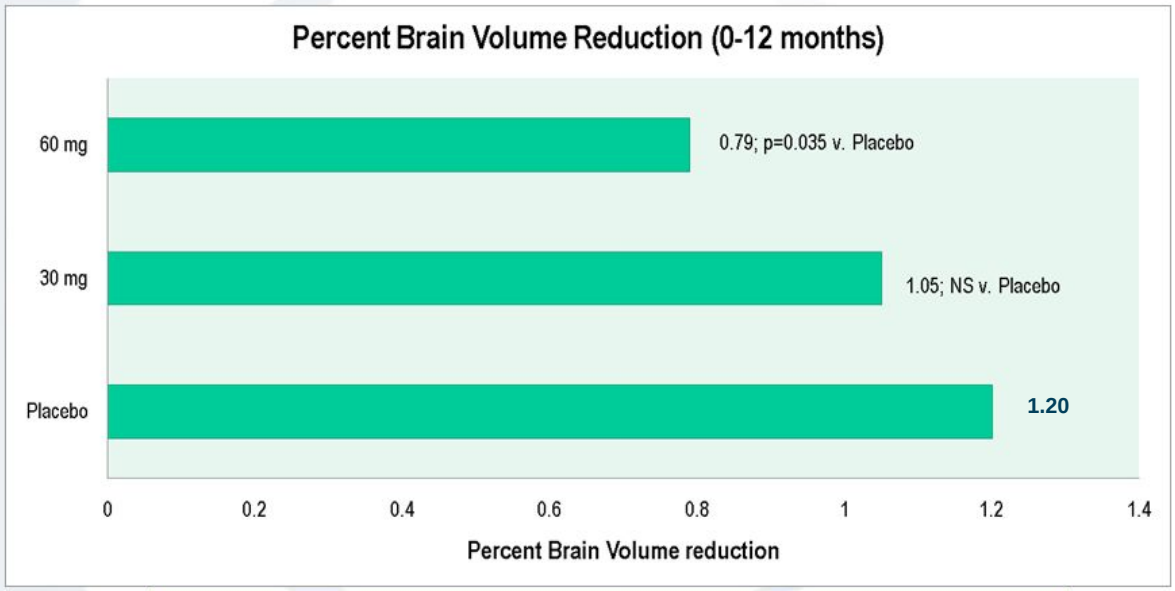
MN-166 - Chronic Efficacy Demonstrated: Effects on Brain Volume



Brain volume changes are linked to axonal l

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MN-166 - Reduction of Persistent Black Hole (PBH) Formation, a Sign of Axonal Loss

Parameter	Treatment Groups		
	Placebo	30 mg/day	60 mg/day
# Patients w. New Lesions at Month 2	72	64	56
# Patients w. ≥ 1 PBH (% of Pts. w. New Lesions)	41 (56.9%)	33 (51.6%)	28 (50%)
Mean Proportion of Lesions Evolving to PBH	0.24	0.20	0.16
Median Proportion of Lesions Evolving to PBH	0.17	0.08	0.04
Relative Risk (for Evolution to PBH) vs. placebo	-	0.74	0.63
p Value	-	0.074	**0.011**

- **New T1 gadolinium-enhancing or new T2 lesions were defined as NL in the first on-study MRI at month 2**
- **Lesions that were hypointense and inactive at month 10 were PBH**
- **Relative Risk (RR) of NL evolution to PBH was analyzed using a general linear model with the error term from the Poisson distribution**

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Multiple Sclerosis Market*

Approx. Sales 2008**	Compound	Sponsor	Side Effects
$2.3 Billion	**Copaxone®**	Teva& Sanofi-Aventis	Pain, redness, swelling, itching, chest pain, weakness, infection, nausea, anxiety are most common, also heart palpitations and trouble breathing after injection
$2.2 Billion	**Avonex®**	Biogen-Idec	Depression and flu-like symptoms most common, also liver injury, severe allergic reactions, drop in red/white blood cell count
$1.9 Billion	**Rebif®**	Serono& Pfizer	Depression and flu-like symptoms most common, also liver problems, injection site problems, severe allergic reactions, trouble breathing/loss of consciousness
$1.6 Billion	**Betaseron®**	Bayer	Lymphopenia, injection site reaction, asthenia, flu-like symptoms are most common, also necrosis at injection site
$589 Million	**Tysabri®**	Biogen-Idec	Infections, depression, pneumonia, acute hypersensitivity reactions, appendicitis most common, also liver damage, PML

All these top selling drugs for MS are immunomodulators

***Source: Company annual reports 2008*

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MN-166 Overview-Safety

- **MN-166 was very well tolerated in Phase II study:**
  - 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
- **Discontinuation due to adverse effects was infrequent** (5.1% in 60 mg/day for 24 months, 2.1% in 30 mg/day for 24 months, 2.0% in placebo to 60 mg/day, 1.9% in placebo to 30 mg/day)
- **Adverse effects were generally mild and self-limiting**
- **GI adverse effects as a group and depression were the only adverse events to occur more frequently in MN-166-treated than in placebo-treated subjects**
- **Tolerance to the GI side effects occurred rapidly (2-4 days) and tended to occur early in treatment whether MN-166 treatment was initiated in Year 1 or Year 2**
- **Mild-to-moderate depression was reported in 8 subjects; depression is common in MS patients and was reported only towards the end of the study**
- **No significant increase in adverse laboratory or ECG findings was observed**
- **20 serious adverse events were reported; all were unlikely to be attributable to treatment**
- **No deaths occurred in the study**

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MN-166 Safety Comparison with Other Oral Agents

Compound	Sponsor	Current Phase	Safety Profile from Phase II trials		
MN-166	MediciNova	Phase II	Mild, transient GI upset		
FTY 720	Novartis	Phase III	↑ Blood pressure ↓Heartrate	Dyspnea	↑Liver enzymes Lymphopenia
Cladribine	Merck Serono	Phase III	Fever	Nausea, Vomiting	Leucopenia
BG-12	Biogen-Idec	Phase III	H/A, Nasopharyngitis	GI disorders	↑Liver enzymes
Laquinimod	Teva	Phase III	↑Liver enzymes	Arthralgia	↑ Fibrinogen ↓Hemoglobin