molecularinsight pharmaceuticals

PIONEERS IN MEDICINE, PARTNERS IN CARE

AT-A-GLANCE

NASDAQ: MIPI

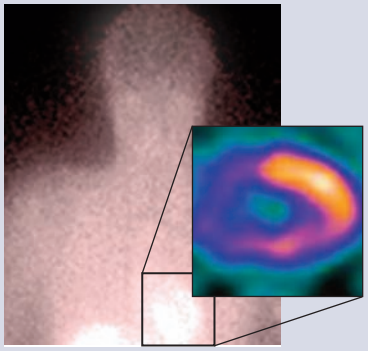
IPO: February 2, 2007

52 week price range: $6.03 - $15.80

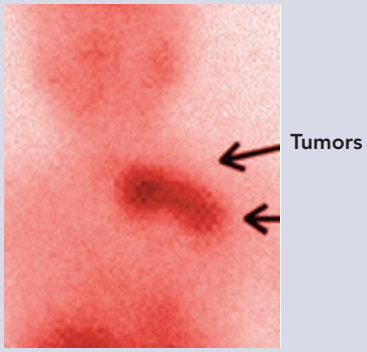
Shares outstanding: 24.7 million

Molecular Medicine Enables Visualization, Treatment and Monitoring of Disease at the Molecular Level

Molecular Imaging Pharmaceuticals enable early ***detection***, appropriate ***staging*** and ***monitoring*** of disease



Molecular Radiopharmaceuticals have the potential to improve ***safety*** and ***efficacy*** of cancer therapy



CORPORATE OVERVIEW

Molecular Insight Pharmaceuticals is a biopharmaceutical company specializing in the emerging field of molecular medicine, applying innovations in the identification and targeting of disease at the molecular level to improve healthcare for patients with life-threatening diseases. The company is focused on discovering, developing and commercializing innovative molecular radiotherapeutics and molecular imaging pharmaceuticals with initial applications in the areas of oncology and cardiology.

INVESTMENT HIGHLIGHTS

- Rapidly emerging field of molecular medicine
  - Improves diagnosis, treatment and management of disease through novel molecular radiotherapeutics and molecular imaging pharmaceuticals
- Robust product pipeline in cardiology and oncology with three clinical-stage candidates
- Significant and underserved market opportunities
  - Azedra™ and Onalta™ target metastatic neuroendocrine tumors with no current approved treatments
  - Zemiva™ targets the growing $1B+ acute coronary syndrome (ACS) market
- Clinical development programs initially based on known molecules
- Proprietary radiopharmaceutical platform technologies improve targeted radiotherapy and molecular imaging pharmaceuticals
- Validated in-licensing strategy strengthens technology base and pipeline
- Experienced and proven management

PRODUCT PIPELINE

Product Candidates	Indication	Development Phase
		Discovery / Preclinical / Phase 1 / Phase 2 / Phase 3
Azedra™	Diagnosis and treatment of neuroendocrine tumors using the norepinephrine uptake mechanism of the tumor	* ** ***
Onalta™	Receptor-based radiotherapeutic for treatment of carcinoid tumors	**
Zemiva™	Detection and management of cardiac ischemia by imaging metabolic changes in the heart	*
Trofex™	Binds to prostate-specific membrane antigen (PSMA) for detection and monitoring of prostate cancer	
Solazed™	Melanin-seeking small molecule for detection and treatment of melanoma	
MIP-190	Cardiac enzyme (ACE) imaging for assessment of chronic heart failure	
MIP-170D	Detection of Parkinson's disease and ADHD by neuroimaging dopamine-rich areas of the brain	

* Known molecule commercialized outside the U.S.
** Orphan Drug status
*** Fast Track designation

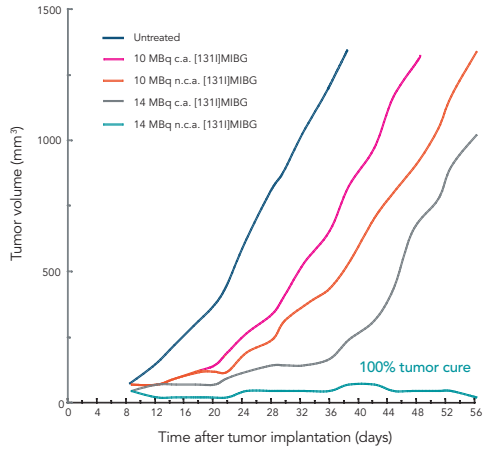
Therapeutic Area: Cardiology Oncology Neurology

ONCOLOGY FRANCHISE

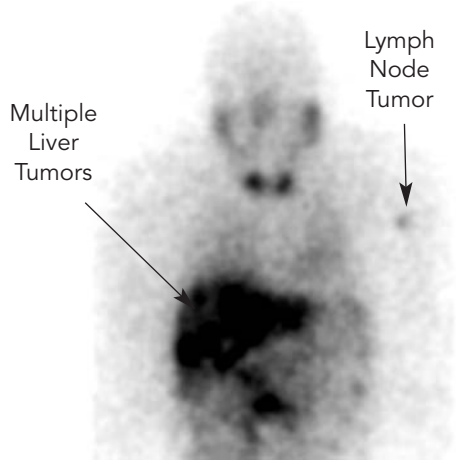
Molecular Insight's oncology franchise combines the use of an established cancer treatment, radiation therapy, with advances in molecular medicine to develop molecular radiotherapeutics and molecular imaging pharmaceuticals that selectively bind to specific molecular targets on a tumor. The company's development pipeline includes candidates for the treatment of neuroendocrine tumors and malignant melanoma, as well as for the detection and monitoring of prostate cancer.

Azedra Dramatically Improves Tumor Kill

At each dose level Azedra outperforms current standard in preclinical studies



Azedra Enables Neuroendocrine Tumor Targeting



LEAD MOLECULAR RADIOTHERAPEUTICS

Molecular Insight is developing its lead oncology candidates, Azedra and Onalta, for the treatment of neuroendocrine tumors. These cancers, which arise from cells that play a role in both the endocrine and nervous systems, can occur in a number of tissues, including head and neck, adrenal gland, intestinal tract and spinal ganglia, that support the peripheral nervous system. Azedra and Onalta each received Orphan Drug status from the U.S. FDA.

Azedra (Ultratrace™ iobenguane I 131)

- Combines the known MIBG molecule with proprietary Ultratrace technology for targeted radiotherapy and detection of neuroendocrine tumors such as pheochromocytoma, carcinoid and neuroblastoma
- Received Fast Track designation from the U.S. FDA
- Currently in Phase 1/2 safety, dose ranging and efficacy trial
- Initial target market: 4,000 refractory patients of a 50,000 patient base

Onalta (^{90}Y edotreotide)

- In-licensed from Novartis Pharma AG
- Used in three Phase 1 and three Phase 2 clinical trials in more than 300 U.S. patients
- Disease stability observed in 68 percent of evaluable patients
- Granted Orphan Drug status by U.S. FDA
- Initial target market: 4,000 refractory patients of a 64,000 patient base

Also in Development:

Molecular Insight's emerging pipeline also includes Solazed for the treatment of malignant, metastatic melanoma, and Trofex for the detection of prostate cancer. Solazed, in-licensed from Bayer Schering Pharma, is a small molecule that targets melanin, a naturally occurring skin pigment that is overexpressed in approximately 40 percent of melanoma tumors. Trofex is a molecular imaging pharmaceutical with the potential to enhance the detection and monitoring of prostate cancer without the need for biopsy. Trofex targets prostate-specific membrane antigen (PSMA), a protein expressed predominantly on prostate cancer cells.

CARDIOVASCULAR FRANCHISE: Zemiva is Lead Candidate

Molecular Insight is building a molecular imaging pharmaceutical franchise in cardiology around Zemiva, which is in clinical development for the detection of cardiac ischemia, or insufficient blood flow to the heart. Zemiva is initially being developed to detect ischemia in the emergency department setting. It has the potential to provide significant advances over the current standard of care by enabling the detection and management of heart disease in a more timely and cost-effective manner.

Zemiva Can Reduce Time to Treatment*

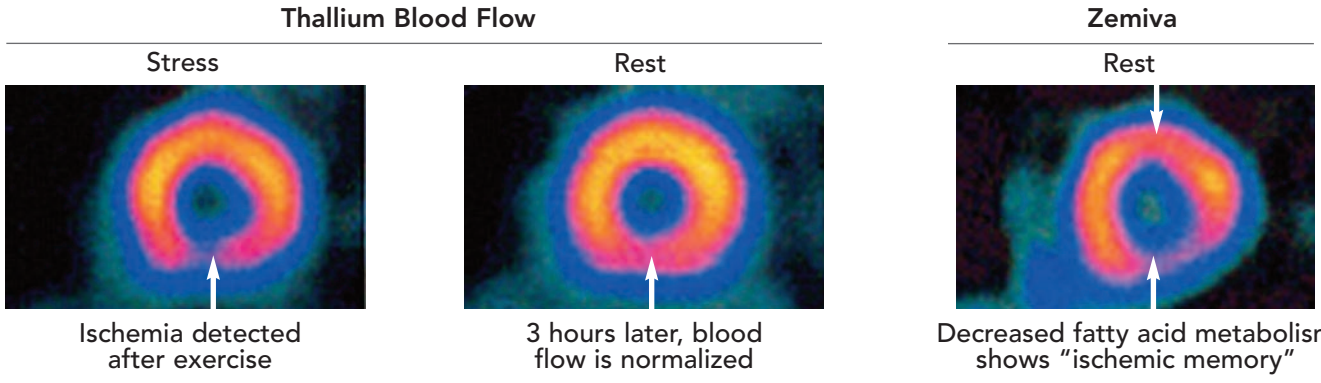
*Stowers, *Annals of Emergency Medicine*, 2000.

Current delays in diagnosis of acute coronary syndrome (ACS) in the emergency setting reduce critical time to treatment and result in >$9 billion in unnecessary costs

Zemiva is a fatty acid analog that enables visualization of changes in the heart's metabolism. Zemiva:

- May enable widespread use of cardiac imaging in the emergency department setting
- Reveals "ischemic fingerprint" detectable up to 30 hours after a cardiac event
- Allows imaging 10 minutes after injection
- Has proven safety track record through use in more than 500,000 patients in Japan
- Completed four U.S. clinical trials
- Has initiated first of two planned pivotal registration trials

Zemiva Detects Cardiac Ischemia at Rest Up to 30 Hours After Cardiac Event*



*Dilsizian et al. *Circulation*. 2005 Oct 4, 112(14):2169-74.

Future Potential Development Areas:

- Outpatient stress testing
- Chronic kidney disease
- Diabetes-related cardiac disease
- Microvascular disease in women

MANAGEMENT TEAM

David S. Barlow
Chairman and
Chief Executive Officer

John W. Babich, Ph.D.
Director, President and
Chief Scientific Officer

John E. McCray
Chief Operating Officer

Norman LaFrance, M.D., FACP, FACNP
Chief Medical Officer and
Senior Vice President,
Clinical Development

Donald E. Wallroth
Chief Financial Officer

Brian Abeysekera, Ph.D.
Vice President, Manufacturing

John A. Barrett, Ph.D.
Vice President of Research

Joshua Hamermesh
Vice President,
Commercial and Business
Development

Priscilla Harlan
Vice President,
Corporate Communications
and Investor Relations

James F. Kronauge, Ph.D.
Vice President of
Process Chemistry

James Wachholz
Vice President,
Regulatory Affairs and
Quality Assurance

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DEVELOPMENT AND COMMERCIALIZATION STRATEGY

- Establish and deploy our own specialty sales and marketing team
- Azedra and Onalta
  - In U.S., deploy 5 to 10 highly specialized representatives
  - Initially focus on large cancer centers currently practicing radiotherapy
  - Self–market outside the U.S. given relatively few target centers
- Zemiva
  - Market with 50 to 100 representatives for initial indications
  - Focus on approximately 1,400 hospitals with more than 200 beds that have nuclear medicine capabilities
    - Accounts for >75% of emergency department visits
  - Establish strategic collaborations outside the U.S.

PLATFORM TECHNOLOGIES

Ultratrace™ enables the potential to develop novel targeted radiopharmaceutical treatment and monitoring. Ultratrace is a patented, solid phase radiolabeling technology with improved safety and efficacy profiles that enables the development of ultrapure radiopharmaceuticals which are devoid of unnecessary cold contaminants, thereby enhancing safety, specificity and potency.

Single Amino Acid Chelate (SAAC™) technology allows Molecular Insight to reliably and robustly incorporate medically useful radioactive metals into targeting molecules. SAAC encompasses a patented family of compounds with superior metal-binding properties for use with the leading radionuclides used for imaging and therapy.

RECENT CORPORATE HIGHLIGHTS

- Initiated a planned pivotal registration trial for Zemiva in cardiac ischemia
- Completed the Zemiva Normals reference database trial
- Announced that the prospective analysis of Zemiva Phase 2b images using the validated Zemiva Normals reference database was accepted as late-breaking data at the ASNC annual meeting
- Presented award-winning Trofex preclinical data at the Society of Nuclear Medicine annual meeting
- Entered into purchase agreement for a domestic, commercial-scale radiopharmaceutical manufacturing facility in Denton, TX
- Announced the appointment of Donald E. Wallroth as Chief Financial Officer

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PIONEERS IN MEDICINE, PARTNERS IN CARE

Neuroendocrine Tumors

Neuroendocrine tumors arise from cells with a common origin that play a role in both the endocrine and nervous systems. They may arise in multiple sites, including the head and neck, adrenal gland, intestinal tract and in the spinal ganglia. While these tumors occur in relatively small patient populations, many patients have advanced, ultimately fatal disease. There are currently no approved treatments in the U.S. for metastatic tumors.

Patient Population

- Carcinoid tumors, which occur in the lining of the gastrointestinal tract, affect approximately 6,000 new patients annually in the U.S.
- Pancreatic neuroendocrine tumors affect an estimated 2,000 new patients in the U.S. per year.
- Pheochromocytoma is a tumor of the adrenal gland. The U.S. incidence is approximately 800 patients. Among patients who cannot have tumors removed surgically, less than 50 percent are alive after five years.
- Neuroblastoma, a tumor of the developing peripheral nervous system, primarily affects young children. The incidence in the U.S. and Europe is 1,000-2,000. The five-year survival rate in advanced patients is less than 60 percent.

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ONCOLOGY FRANCHISE

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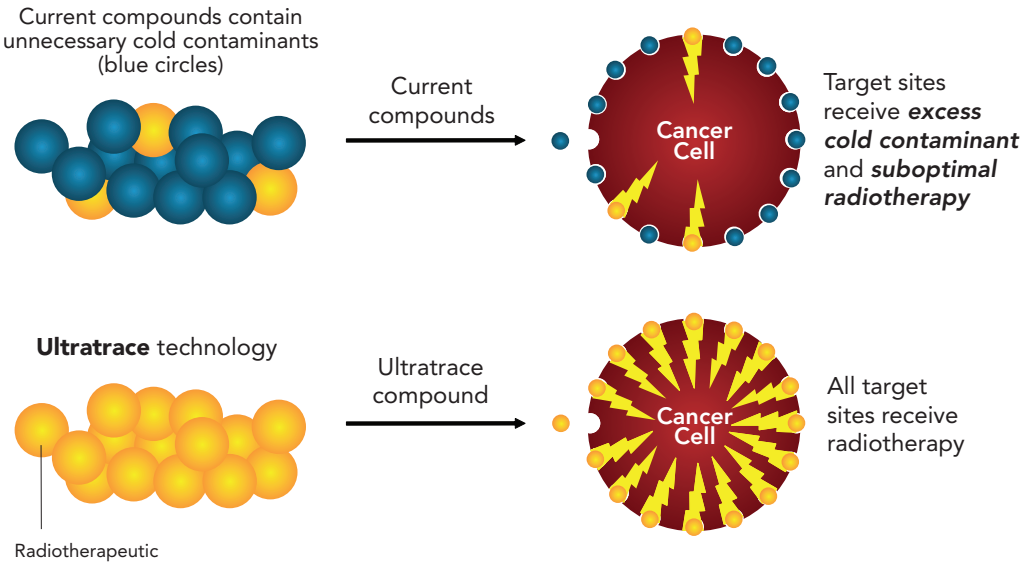
AZEDRA™ (Ultratrace™ iobenguane I 131)

- Combines the known MIBG molecule with proprietary Ultratrace technology for targeted radiotherapy and detection of neuroendocrine tumors such as pheochromocytoma, carcinoid and neuroblastoma
- Received Orphan Drug status and Fast Track designation from the U.S. FDA

Azedra Clinical Development Plan

- Currently in Phase 1/2 safety, dose ranging and efficacy trial
  - Phase 1: 12 to 18 patients at four to six U.S. centers. Goal is to select a therapeutic dose for Phase 2
  - Phase 2: Up to 37 patients. Endpoints include tumor response and safety

Ultratrace Removes Unnecessary Cold Contaminants to Deliver Uniquely Ultrapure Radiotherapeutics



ONALTA™ (^{90}Y edotreotide)

Molecular Insight is developing Onalta initially for the treatment of somatostatin positive, pancreatic neuroendocrine and carcinoid tumors whose symptoms are not controlled by conventional somatostain analog therapy. Tumor cells of these cancers overexpress somatostatin receptors. Somatostatin analog therapy is currently used to alleviate symptoms associated with carcinoid syndrome and acromegaly. However, the median duration of effect is approximately six months. Onalta is a radiolabeled analog of the peptide hormone somatostatin.

Onalta acts by targeting the tumor cells and delivering a therapeutic radioisotope to destroy the tumor. Onalta was in-licensed from Novartis Pharma AG and Molecular Insight expects to build on Novartis' extensive clinical experience with the compound in designing clinical trials to advance its development.

- Used in three Phase 1 and three Phase 2 clinical trials in more than 300 U.S. patients
- Disease stability observed in 68 percent of evaluable patients
- Granted Orphan Drug status by U.S. FDA
- Initial target market: 4,000 refractory patients of 64,000 patient base

Onalta Clinical Development Plan

- Pursue treatment of somatostatin positive pancreatic neuroendocrine and carcinoid tumors
- Build upon Novartis clinical studies to design protocol
- Enter Phase 2 trial for the treatment of pancreatic neuroendocrine cancer
  - A dosimetry component may be required as part of Phase 2 to inform therapeutic dosing strategy

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ONCOLOGY DEVELOPMENT CANDIDATES AND PIPELINE

Molecular Insight is building a pipeline of candidates based on its proprietary platform technologies and through in-licensing. Applied independently and in combination, the company's platform technologies enable it to target specific molecular sites with small molecules and peptides to detect and treat cancer. Molecular Insight's most advanced development candidates target malignant melanoma and prostate cancer.

Solazed™: A Fully Synthetic Small Molecule for Targeted Radiotherapy of Metastatic Melanoma

Solazed is a small molecule, targeted radiotherapeutic that Molecular Insight is developing for the diagnosis and treatment of malignant metastatic melanoma, the most serious form of skin cancer. Solazed targets melanin, a naturally occurring pigment responsible for skin color that is overexpressed in approximately 40 percent of melanoma tumors. Molecular Insight's development program will build on studies conducted by Bayer Schering Pharma, from whom the company licensed the compound. In preclinical xenograft mouse models, Solazed demonstrated a reduction in tumor volume and a survival benefit. The radiotherapeutic has also been evaluated in a small, investigator sponsored European trial in which the compound displayed significant and prolonged retention in melanoma tumors.

- In-licensed from Bayer Schering Pharma
- Improved survival seen in tumor-bearing animals compared with dacarbazin, the leading chemotherapeutic
- 62,000 new cases of melanoma will be diagnosed in 2006 (U.S.)
- Fastest-rising incidence rate of any cancer
- Initial target market: 6,000 Stage 4 patients with estimated life expectancy of six months
- 15,000 annual deaths (U.S.)

Trofex™: Visualizing Prostate Cancer to Improve Staging and Diagnosis Without Need for Biopsy

Molecular Insight is developing Trofex as a non-invasive method for visualizing prostate cancer. Trofex represents a potential complement to biopsy to detect important, subtle manifestations of metastatic disease in men with elevated PSA levels, but no other obvious symptoms.

- Small molecule binds to specific molecular site on prostate cancer
- Enables whole body screening for prostate cancer as follow up to elevated PSA test
- Target market: 1 million U.S. men who receive biopsies annually, plus large tracking population
- Potential for follow-on therapeutic providing valuable information in determining the presence and location of prostate cancer

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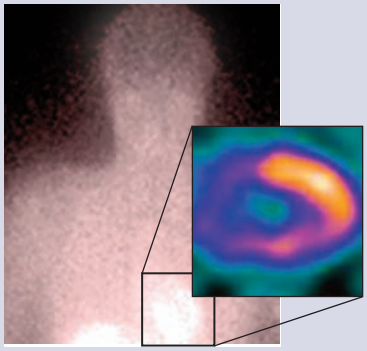
Molecular Medicine Enables Visualization, Treatment and Monitoring of Disease at the Molecular Level

Molecular Imaging Pharmaceuticals enable early ***detection***, appropriate ***staging*** and ***monitoring*** of disease



"When a heart attack or unstable angina interrupts blood flow, heart cells start metabolizing glucose rather than fatty acids. Our findings indicate that these disturbances persist for up to 30 hours. This suggests that Zemiva may enable the detection of myocardial ischemia long after blood flow to the heart muscle is restored."

VASKEN DILSIZIAN, M.D.

Professor of Medicine and Radiology, University of Maryland School of Medicine

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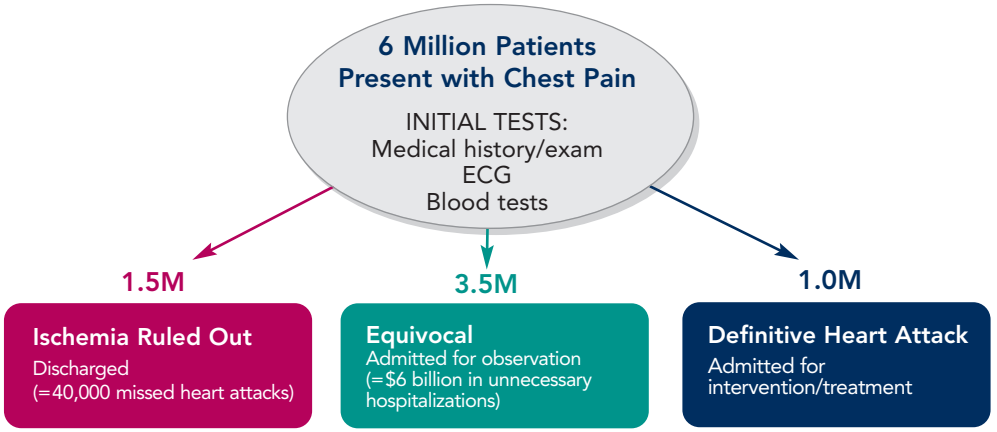
CARDIOVASCULAR FRANCHISE

Molecular Insight is building a molecular imaging pharmaceutical franchise in cardiology around Zemiva™, currently in clinical development for detecting cardiac ischemia, or insufficient blood flow to the heart. The company's initial focus is on diagnosis in the emergency department, an indication where Zemiva has great potential to provide important medical benefits by reducing time to treatment, as well as economic benefits in reducing healthcare costs. Zemiva has recently entered the first of two planned pivotal registration trials for the emergency room indication.

ZEMIVA™ OPPORTUNITY

Timely and Accurate Chest Pain Evaluation in the Emergency Department Can Provide Significant Medical and Economic Benefits



Centers for Disease Control and Prevention
Nolan T, Espinosa J. 4th Annual Chest Pain Congress 2001
Storrow AB, Gibler WB. Ann Emerg Med. May 2000 35:5

WHAT IS ZEMIVA?

Normal heart cells generate energy by metabolizing fatty acids. However, when blood flow is restricted during an ischemic event, heart cells switch to metabolizing carbohydrates such as glucose, a far less oxygen-dependent source of energy. Zemiva is a fatty acid analog that is trapped in healthy heart cells, but not retained in ischemic cells. This difference allows the capture of quality images of the heart that reflect the health of cardiac cells.

Zemiva enables metabolic visualization of cardiac ischemia at rest

- Captures ischemic "fingerprint" visualized up to 30 hours after cardiac event
- Allows imaging to be completed within 30 minutes of injection
- Targets initial market of 3.5 to 4 million equivocal chest pain patients
- Builds on extensive clinical experience through use in more than 500,000 patients in Japan
- More than 200 peer-reviewed articles published on active BMIPP compound

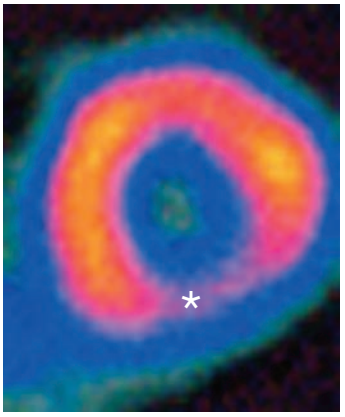
ZEMIVA DEVELOPMENT STRATEGY

Molecular Insight has completed four U.S. clinical trials with Zemiva: a Phase 1 study and three Phase 2 studies, one of which was a Phase 2 study to compile a database of normal cardiac images. The company recently initiated the first of two planned pivotal registration trials for Zemiva. Collectively, these studies, along with clinical experience in Japan, provide preliminary indications of Zemiva's safety and ability to detect cardiac ischemia. Data from these trials have been presented at leading scientific forums, including the American Society for Nuclear Cardiology and the American Heart Association. The results of the Phase 2a trial were published in the peer-reviewed journal, *Circulation*. The key elements of the Zemiva development strategy moving forward are:

- Continue first of two planned pivotal registration trials
  - Emergency department setting
  - Approximately 600-700 patients at up to 70 centers in North America
  - Readings to be informed by validated Normals database
  - Anticipated foundation for one confirmatory Phase 3 trial
- Pursue additional indications
  - Outpatient Stress Test
  - Chronic Kidney Disease
  - Heart Failure
  - Diabetes

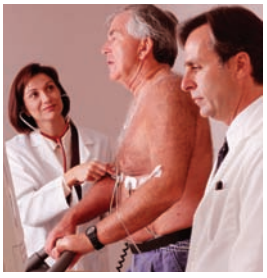
Zemiva Has Potential to Accelerate Cardiac Ischemia Diagnosis

The image to the left reflects normal heart cells' use of fatty acids as an energy source. Zemiva, a fatty acid analog labeled with a radionuclide, is absorbed and metabolized by normal cells, enabling visualization with SPECT cameras.



The darker area (*) indicates cardiac ischemia, with little Zemiva uptake because ischemic cells rely on sugars rather than fatty acids for energy. This metabolic switch persists for up to 30 hours, enabling Zemiva imaging long after chest pain has ceased and blood flow is restored.

Zemiva May also Offer Significant Benefits in the Outpatient Stress Test Setting

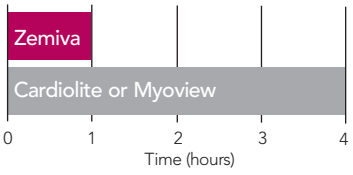


10 million perfusion stress tests per year and growing

Zemiva stress imaging may:

- Provide rapid, accurate imaging
- Increase patient throughput, offering providers increased revenue and profitability
- Shorten stress test time by 60-75%, increasing patient convenience

Zemiva may reduce time for stress test by 75%, enabling greater patient throughput



CARDIOVASCULAR PIPELINE

Molecular Insight is also developing a non-invasive approach to assessing the progression of chronic ischemia and heart failure based on monitoring angiotensin convering enzyme (ACE). ACE levels have been shown to increase in the heart muscle as heart failure progresses. Using its proprietary Single Amino Acid Chelate (SAAC™) technology, Molecular Insight has identified a lead molecular imaging pharmaceutical that displays strong binding both in isolated enzymes and in animal studies.