



## Fast Facts

Name:	Amorcyte, Inc.
Target:	Cardiovascular disease
Status:	Wholly owned NeoStem subsidiary, as of October 17, 2011
Headquarters:	Allendale, NJ
Clinical Status:	Phase II-ready for AMI, Phase I-ready for CHF

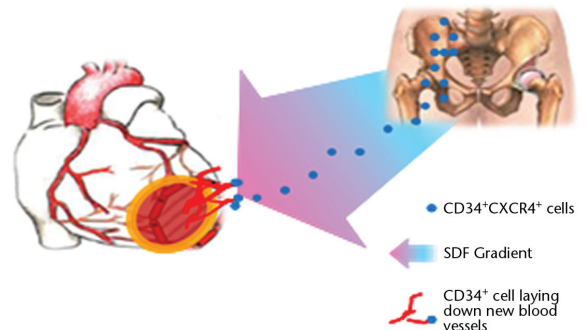
## About Amorcyte

Amorcyte is a development-stage, cell therapy company focusing on novel treatments for cardiovascular disease and is a wholly owned subsidiary of NeoStem. Its lead product, AMR-001, for the prevention of major adverse cardiac events following acute myocardial infarction (AMI), has completed Phase I clinical trials demonstrating feasibility, safety and biologic activity at a threshold dose. This is the first prospective stem cell trial in AMI ever conducted that has established a significant relationship between dose and effect. Amorcyte is now prepared to launch a Phase II clinical trial in Q12012 to show the therapy's potential to improve perfusion, preserve cardiac function and improve clinical outcomes. Results are expected 18 months from the first patient's enrollment. Past data suggests a high probability of success and a successful result will transform NeoStem.

## Using the Body's Natural Repair Mechanism

Amorcyte has focused on the cell mechanism that the body naturally uses to repair itself. Once a heart attack occurs, the body sends repair cells to the injury site. In some cases, depending on the severity of the insult, the body is overwhelmed and the repair is less than perfect. A dead zone of tissue in the heart (the peri-infarct zone) occurs and the surrounding healthy heart cells come under stress as they compensate by working harder to pump blood. HIF (hypoxic induced signal) is sent out and CD34+ cells are programmed to respond.

## The CD34<sup>+</sup> Natural Repair Mechanism



### The body attempts to rescue damaged tissue to prevent ventricular remodeling:

- A distress signal (HIF) is induced by hypoxia in the peri-infarct zone
- HIF induces synthesis of SDF and VEGF, which mobilize CD34+CXCR4+ cells
- The mobilized cells are trophic to the peri-infarct zone, preventing apoptosis and effecting neoangiogenesis

## AMR-001:

### First stem cell product to demonstrate in a clinical trial a dose-related improvement in cardiac perfusion

AMR-001 is an autologous bone marrow-derived, CD34 positive selected stem cell product. AMR-001 limits the damage of heart muscle that develops following AMI and, thus, has the potential to limit ventricular remodeling. Furthermore, treatment with AMR-001 fits seamlessly into physicians' standard treatment practices. Administered in the catheterization laboratory as an out-patient procedure, AMR-001 is a simple addition to the standard of care.

In a recently completed Phase I study of 31 patients, AMR-001 showed a dose-related significant improvement in perfusion. Presented at the 2009 American College of Cardiology Annual Scientific Session, the Phase I study results demonstrated that patients receiving 10 to 15 million cells (n=9) showed significant improvement in resting perfusion rates at six months as compared to patients receiving 5 million cells (n=6) and control (n=15), as measured by the SPECT total severity score, (-256 versus +13, p=0.01). The data also showed that patients receiving 10 or more million cells showed a trend towards improvement in ejection fraction, the percentage of blood pumped out of a ventricle with each heartbeat, (+4% versus +1%); end systolic volume (-5.7mL versus -0.1mL); and infarct size, tissue death due to loss of adequate blood supply, (-10% versus -3%) at six month follow-up. No study-related significant adverse events were reported.

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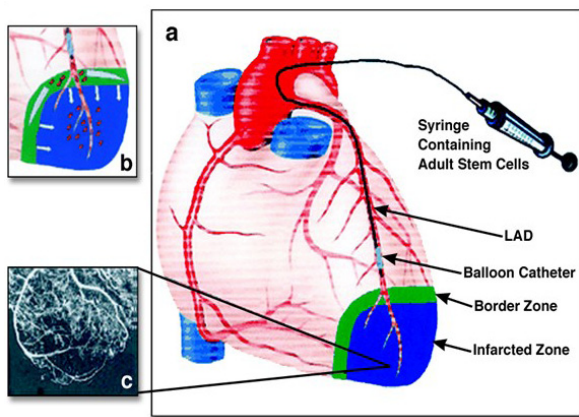
## Unique Value Proposition: Preventing Subsequent Adverse Cardiac Events

Amorcyte's therapeutic strategy focuses on preventing major adverse cardiac events following a severe heart attack (ST-elevation MI resulting in a left ventricular ejection fraction of less than 50%). AMR-001 is being developed for this segment of cardiac patients (estimated at 160,000 per year) who are at significant risk for downstream major adverse events including premature death, recurrent myocardial infarction, congestive heart failure, significant arrhythmias, acute coronary syndrome and poor quality of life. These patients represent a large cost segment, and are always the number one burden in any managed care program. We expect this burden to increase, despite the impact of statin use, as the baby boomer population ages. AMR-001 is expected to have a significant pharmacoeconomic benefit by preventing downstream events.

## Proprietary Technology With a Defined Mechanism of Action

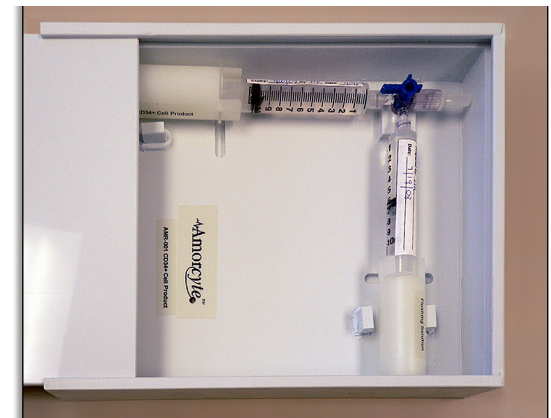
- CD34<sup>+</sup>/CXCR4<sup>+</sup> cells are harvested from the patient's own bone marrow and enriched to increase potency using Amorcyte's patented technology:
- The cells are infused via the infarct-related artery 7-10 days following the STEMI – the optimal time frame to attempt to prevent adverse ventricular remodeling.
  - The infused cells are trophic to the at-risk tissue
  - The defined mechanism of action shows neoangiogenesis resulting in a functional benefit
  - The cells have been demonstrated to be viable and continuing to function up to a year after the initial treatment.

**Unlike other approaches, Amorcyte's technology has established identity, dose and potency, along with sterility and product shelf life, all of which is protected by one of the most comprehensive IP estates, including composition of matter, in the industry.**



## Product Packaging

The Cell Therapy Protective Case protects from physical damage and the Cell Therapy Refrigerated Shipping Package preserves cell activity in variable external temperatures.



## Patients Dosed $\geq$ the Threshold Dose of 10 Million Cells Showed Significant Improvement in Perfusion

### RTSS (Hypoperfusion)

Cohort	Base Line	6 months	Delta	% Change
Control	259.0	273.5	+14.5	+5.6
5 M	714.2	722.0	+7.8	+1.1
10 M	998.6	635.8	-362.8	-36.4
15 M	584.0	462.0	-122.0	-20.9

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