



## Cardiology: Age Makes a Difference

The effectiveness of stem cell therapy in heart attack patients may depend on age, according to a recent study by TGR1 scientists.

Using an animal model, UHN researchers Drs. [Ren-Ke Li](#) and [Richard Weisel](#) compared the growth of muscle stem cells after being implanted into the hearts of young and mature rats.

After four weeks, older rats experienced heart failure more frequently, blood vessel density was reduced, and survival of implanted stem cells was reduced.

“Our study is unique in that we are able to show that recipient age is clearly a factor in how well the therapy works,” notes Dr. Li. “As one ages, the regenerative capacity is decreased. New therapies are required not only to treat the occluded artery after a heart attack, but also to enhance the cells injected into the heart to improve its function and to improve the ability of the body to repair the injured heart. Future clinical treatments may include rejuvenation of the body’s response to injury.”

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