

Muscular Dystrophy Association

Human Embryonic Stem Cell Research

ALL contacted the Muscular Dystrophy Association to ask if they fund or conduct human embryonic stem cell research or research utilizing fetal tissue. The association admits to utilizing and supporting all methods of stem cell research, as long as they comply with “ethical guidelines.” MDA also states that while human embryonic stem cells are not used as widely as they were before for research on neuromuscular diseases, it is heavily implied they are still utilized. MDA’s full response can be found below:

MDA's scientific research program is dedicated to finding effective treatments and cures for muscle diseases. MDA funds research projects worldwide to help move discoveries from the science lab to treatments for people living with neuromuscular disease. For the past 60 years, MDA has played a role in nearly every significant muscle disease breakthrough. Stem cell research is an evolving field that may potentially benefit people affected by neuromuscular disease. There are many different types of stem cells used in biological research. Adult stem cells are a type of stem cell found in all humans. They help to regenerate or repair the body throughout life. Adult stem cells have been found in many tissues including muscle, brain, and bone. These types of stem cells are currently under investigation for their potential to repair, regenerate, and nourish the muscles and nerves damaged in neuromuscular disease. **Embryonic stem cells are typically derived from human embryos that have been fertilized in vitro (such as in an in vitro fertilization clinic) and then donated for research purposes with informed consent of the donors. While these type of stem cells were used in research in past decades, due to advances in technology, they are no longer in wide use in neuromuscular disease research and MDA is not currently funding any projects using embryonic stem cells.** Another new type of stem cell is called the induced pluripotent stem cell (iPSC). These stem cells are unique because they have the regenerative capabilities of embryonic stem cells, but they are not created by destroying human embryos. Induced pluripotent stem cells (iPSCs) have



P.O. Box 6170, Falmouth, VA 22403 • 540-659-4171 • ALL.org • kvandyke@all.org

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the potential to make most, if not all, tissue types of the body (similar to an embryonic stem cell). Therefore, they are being widely used by scientists and are particularly helpful for diseases affecting tissues like the brain and spinal cord such as ALS, where it is difficult to take biopsies of the affected tissues. **MDA's research advisory committees, composed of the country's most outstanding neuromuscular scientists and physicians, strongly recommend that stem cell research - with appropriate scientific review and ethical guidelines - could potentially help lead to advances that save and improve the lives of people fighting muscle disease.**



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