

AMYOTROPHIC LATERAL SCLEROSIS (ALS), also known as Lou Gehrig's disease, is a progressive disease where the nerves that control all of our muscles deteriorate. The result is progressive weakness, paralysis and, ultimately, death. ALS is one of the devastating and incurable diseases we have yet to fully understand.



HMO RESEARCH:

Hadassah Medical Organization is a world leader in stem cell treatment for ALS. Its researchers are also laser-focused on identifying the triggers of this disease.

World-renowned neurologist Prof. Dimitrios Karussis, head of HMO's Multiple Sclerosis Center, conducted the world's first clinical trial using patients' own bone marrow stem cells to treat ALS. In this HMO-developed protocol, close to 90% showed improvement in respiration or motor function.

- Expanded trials using HMO's protocol are in progress at Massachusetts General Hospital (an affiliate of Harvard) and the Mayo Clinic

HMO's ALS Clinic team members, directed by Dr. Marc Gotkine, have:

- Discovered a genetic mutation they suspect is a cause of ALS
- Identified a biomarker in the blood of ALS patients and are now developing a blood test to diagnose ALS
- Captured environmental data, such as being in military service, which can predispose individuals to ALS

Israel is an ideal place to investigate genetic diseases because HMO has state-of-the-art diagnostic facilities and the patient population has defined ethnic groups that frequently inbreed and pass on genetic mutations.

HMO COLLABORATIONS:

- Part of NEALS (Northeast ALS), a consortium of ALS centers whose mission is to translate scientific advances into clinical research and new treatments
- Leading MinE project in Israel—part of an international effort—to sequence the genomes of 15,000 people with ALS
- Massachusetts General Hospital (Harvard affiliate)
- Mayo Clinic

NEXT STEPS:

With each genetic discovery, Hadassah Medical Organization is getting closer to detecting, treating and eradicating ALS. But there is more research to be done, including:

- Understanding the function of genetic mutations and identifying additional recessive genes
- Developing a blood test to diagnose, predict the onset, and track the progression of the disease
- Discovering a way to "switch off" defective genes
- Determining the role of additional environmental factors

With a trend toward smaller families and less inbreeding, the window of opportunity for discovering more about the genetic causes of ALS is eclipsing. We must act quickly.

THE POWER IS IN YOUR HANDS.

DONATE TODAY. SAVE LIVES TOMORROW.