

8.8 million euros for accelerated drug repurposing for rare neurological disorders

SIMPATHIC Consortium receives grant from European Commission

The SIMPATHIC Consortium, led by the Dutch Radboud University Medical Center and Amsterdam University Medical Centers, has developed a new approach to expedite the use of existing drugs for groups of patients with rare neurological disorders. The consortium has been awarded an 8.8 million euros grant from the Horizon Europe program to further develop this innovative method.

Traditionally, drugs are developed one disease at a time, which is costly and time-consuming. It often takes a long time before patients can use a new drug. The international SIMPATHIC Consortium, which comprises 22 international partners, has created a novel method for accelerating the use of existing drugs for other conditions, based on screening tissues from individual patients. The consortium's approach has been recognized and funded by the European Commission with a 8.8 million euros grant.

The researchers will use a new technology to test the efficacy of existing drugs in patients with neurological disorders, requiring only a tube of blood or a small piece of skin from the patient. These materials contain stem cells that the researchers culture into nerve cells. They subsequently test how they respond to a variety of existing drugs.

If the researchers observe a positive effect of a drug, they will launch a clinical study in a group of patients with different disorders but similar clinical symptoms. As existing drugs have already been tested in humans, animal studies may not be necessary, which significantly accelerates the use of drugs in new applications and reduces research costs.

Project leader and bioinformatician Prof. Peter-Bram 't Hoen of Radboudumc explains, "The project will significantly improve the efficiency and speed of discovery, evaluation, and approval of new applications for existing drugs."

Project leader and pediatrician-biochemical geneticist Prof. Clara van Karnebeek of Amsterdam UMC adds: "In addition, it will have a huge impact on the care of patients with rare neurological disorders, for example, by accelerating drug availability for these debilitating conditions."

The SIMPATHIC Consortium comprises 22 partners, including research teams from Radboudumc, Amsterdam UMC, and other academic centers in Europe and Canada, European patient organizations, including Euro-ataxia, companies, and a European infrastructure network. The consortium's innovative approach is expected to revolutionize drug development. Euro-ataxia one of the patient groups representing people with neurological conditions on this project, and SCA3 is one of the neurological conditions which will be studied.