dada2 FOUNDATION

In This Issue:

DRIVING TOWARD CONSENSUS

October 4, 2021

RESEARCH ROUND UP

Our DADA2 Research Community is active! Read on for highlights of our global effort to better understand DADA2 and how to find a cure.

GENE THERAPY

Alessandra Mortellaro, Ph.D., San Raffaele Telethon Institute for Gene Therapy, Milan, Italy

Research from the San Raffaele Telethon Institute for Gene Therapy (SR-Tiget) in Milan, Italy, has now shown how correcting the genetic defect in DADA2 patients' cells by gene therapy could halt the disease and restore a functioning immune system. This therapeutic strategy could represent a way forward for DADA2. In an article recently published in *Blood Advances*, the scientific journal of the American Society of Hematology, Dr. Alessandra Mortellaro and her team showed that transfer of a normal copy of the ADA2 gene to the cells of a DADA2 patient corrects the enzymatic defect in patients' hematopoietic stem/progenitor cells (HSPC) without altering their physiological function, that is the ability to differentiate into the different elements of the blood. Furthermore, ADA2 gene correction has a positive impact on a particularly relevant class of cells in DADA2, the macrophages. Indeed, these cells no longer activate the excessive cytokine storm that gives rise to the state of chronic inflammation often observed in patients with DADA2. These preclinical results show the overall therapeutic value of gene therapy for DADA2, and further studies are warranted to support its clinical development. For a more patient-friendly understanding of these findings, please visit this summary from San Raffaele.

HEMATOPOIETIC STEM CELL TRANSPLANT

Hasan K. Hashem, M.D., Pediatric Hematology-Oncology, King Hussein Cancer Center, Amman, Jordan

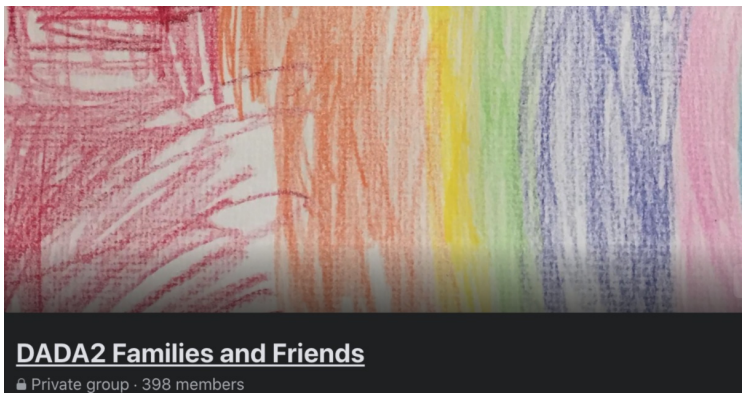
Our previous study published in 2017 included 14 DADA2 patients who underwent hematopoietic stem cell transplantation (HSCT). The results of the study were excellent as all DADA2 patients who had HSCT survived and cured from their disease. In our most recent study published this year 2021, we included 30 patients with DADA2 from 12 countries and 22 centers worldwide. All 30 patients had HSCT for either bone marrow failure, cytopenias, and/or immunodeficiency. Almost half of the patients had vasculitis and some had strokes. The

study showed that HSCT was an effective treatment, successfully reversing cytopenia, vasculopathy, and immunodeficiency.
This study is unique in that HSCT was confirmed to be a definitive cure of DADA2 with excellent survival of 95%, with a median follow-up time of 2 years. A remaining hurdle is the need for more than one transplant in several patients, but our study provides insight that adapting the conditioning regimen may prevent the need for additional transplants. In all, we showed that HSCT cures not only the bone marrow failure and immunodeficiency, but also the vasculitis and inflammation in patients with DADA2.

WE ARE TELLING OUR STORY
First Momentum Report to be Published

The first Momentum Report of the DADA2 Foundation will be published in the coming months. We would love to send it to you. If you are interested in receiving this report, which will give you an update on all that is happening at the DADA2 Foundation and give you something to share with others as you tell them about the disease and our progress toward a cure, please keep an eye out. We will also publish a physical mailed version of this report, and will send it to anyone requesting a paper copy (we want to be wise stewards of every dollar). This kind of progress is not possible without all of our work together. Thank you for your help!

SUPPORTING EACH OTHER:
Private Facebook Families and Friends Page



For several years, our community of patients has banded together on a closed Facebook Group specifically designed to encourage and inform newly-diagnosed families as well as those who have been living with the disease for a long time. On that page, patients share tips and tricks of how to give medications, what next steps to take and how to get the next level of care. While none of this advice is intended to replace that of a medical doctor or care team - *we always encourage patients to seek next steps with their provider first* - this group has proven to be a great resource. We share this resource to our community's clinicians to pass on to their patients. You can access the group here.

OF NOTE

- **We're sharing info about DADA2 at the following conferences:**
  - **North American Immuno-Hematology Clinical Education & Research 2021 Virtual Symposium** (Sept 22nd) - *Dr. Chambers was co-lead on a panel discussion on Patient/Caregiver Involvement the Care of a Rare Disease Patients*
  - **International Neonatal Consortium** (Oct 19th) - *Dr. Chambers will participate in a Panel Discussion on Patients Perspective on Rapid Genomic Sequencing in the Neonatal Intensive Care Unit*
  - **Genetic Health Information Network Summit** (Oct 25) - *Dr. Chambers will participate in a Panel Discussion of Evidence & Coverage in Genetic Testing – Nashville, TN*
- **The DADA2 Foundation has applied for grants to support the Foundation, and we also provided letters of support for researchers around the globe who are studying DADA2. In the future, we hope to provide funding directly from the**

Foundation to support research on DADA2. If you know of other grants we should apply for, please don't hesitate to let us know by emailing info@dada2.org.

GET INVOLVED

MAKE A DONATION

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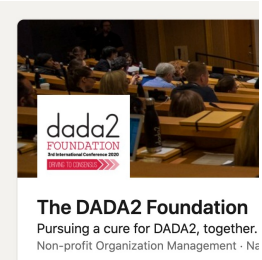
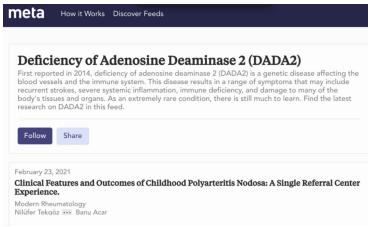
RAISE FUNDS WITH US
Make DADA2 your Amazon Smile charity.



JOIN THE LINKEDIN PAGE
We've launched a LinkedIn page to keep you updated.



LATEST DADA2 PAPERS
We're partnering with Meta to bring the latest papers.