



Alex's Lemonade Stand Foundation Rhabdomyosarcoma Impact Report





Alex's Lemonade Stand Foundation (ALSF) emerged from the front yard lemonade stand of 4-year-old Alexandra “Alex” Scott, who was fighting cancer and wanted to raise money to find cures for all children with cancer. By the time Alex passed away at the age of 8, she had raised \$1 million. Since then, the Foundation bearing her name has evolved into a worldwide fundraising movement and the largest independent childhood cancer charity in the U.S. ALSF is a leader in funding pediatric cancer research projects across the globe and providing programs to families affected by childhood cancer. For more information, visit AlexsLemonade.org.



With Gratitude

Dear Friend,

All of us here at Alex's Lemonade Stand Foundation (ALSF) would like to sincerely thank you for your support of Alex's mission to find new treatments and cures for childhood cancers like rhabdomyosarcoma.

Your support is helping researchers to develop preliminary data, publish their findings, and push forward innovative treatment options. Thanks to you, we are closer to a day where no child will have to suffer from rhabdomyosarcoma.

We are truly honored to fight childhood cancer by your side. Thank you for being the driving force behind life-saving cures. Please, don't hesitate to reach out if you need anything from us here at ALSF.

Until there are cures,



Liz & Jay Scott
Alex's Parents & Co-Executive Directors
Alex's Lemonade Stand Foundation



Thanks to Supporters Like You

ALSF is the largest independent childhood cancer charity in the U.S., focused on funding critical research and supporting childhood cancer families.



More than \$300M raised since 2005



Funded over 1,500 medical research grants at nearly 150 institutions



Supported nearly 30,000 families through key programs like Travel For Care

ALSF is the only childhood cancer research organization that has been given the NCI Peer-Reviewed Funder Designation for rigorous selection of research and grants.

Meet a **Rhabdomyosarcoma Hero**



DREW



In 2019, Drew's family noticed a lump on the right side of his jaw. His mom, Emily, took him to the ER, where doctors found a five-centimeter tumor in his jaw. He was diagnosed with stage 4 embryonal rhabdomyosarcoma.

Drew put on a tough face for his following forty two weeks of frontline chemotherapy and six weeks of proton radiation. He then had an additional week of proton radiation to his lumbar spine and right hip before starting six months of maintenance chemo. He and his family were ecstatic when his port was removed in February 2021.

Drew had an eventful spring in 2023, first going through the removal of some swollen lymph nodes that were thankfully not cancerous, and then dealing with an abscess that formed where his surgery was. He is now all recovered and has grown in height from taking a growth hormone.

Emily dreams that her son is not defined by his cancer or the limitations his treatment has caused. She prays that he gains confidence in himself, knowing how amazing he is, and that he continues to have his witty and hilarious personality. Foundations like Alex's Lemonade Stand Foundation give her hope that we are getting close to a cure! Emily, Drew and their family held a lemonade stand during Lemonade Days and raised \$560 to help move that research forward.

Drew is his family's hero because he rarely complained about his situation and never asked "why me?" He took it all head-on. His empathy and love for others is inspiring. Drew says, "If you don't know what to do, do something nice for someone else."

ALSF-Funded Projects in Rhabdomyosarcoma

Thanks to you, we have been able to continue funding breakthrough research for more cures. Read through some of our recently funded research projects in rhabdomyosarcoma below:

Improving homing and activity of CAR T cells in pediatric sarcomas

Joselyn Cruz Cruz, PhD
University of Colorado Denver
Young Investigator Grants, Awarded 2024

Novel mechanisms and therapeutic targeting of chemoresistant rhabdomyosarcoma

Yueyang Wang, PhD
Massachusetts General Hospital
Young Investigator Grants, Awarded 2024

Targeting chromatin remodeling complex controlled fusion protein function in rhabdosarcoma

Sunwoo Lee
Dana-Farber Cancer Institute
POST Program Grants, Awarded 2024

Investigating oncogenic drivers of therapy resistance and cell states in rhabdomyosarcoma

Ilyas Oultache
Massachusetts General Hospital
POST Program Grants, Awarded 2024



A complete list of ALSF-funded rhabdomyosarcoma projects can be found at:
AlexsLemonade.org/childhood-cancer/type/rhabdomyosarcoma/grants

Research **in Progress**

Improving Homing and Activity of CAR T-Cells in Pediatric Sarcomas

Joselyn Cruz Cruz, PhD

University of Colorado Denver



Alex's Lemonade Stand Foundation (ALSF) has always believed that attracting and retaining the best and brightest early career scientists is critical to the future of childhood cancer research. Joselyn Cruz Cruz, PhD is one such scientist. She was awarded a 2024 Young Investigator Grant, designed to fill the critical need for startup funds for less experienced researchers to pursue promising research ideas. Dr. Cruz Cruz's idea: test the most promising approach that has been identified to date.

Many researchers have developed new therapies that harness the immune system to cure cancers; however, most of these treatments (called immunotherapies) are not effective in solid tumors. One of the most promising therapies involves T cells expressing artificial receptors that allow them to recognize and kill cancer cells. These therapies called "chimeric antigen receptor (CAR)" T-cells have been transformative for pediatric leukemia, but CAR T-cells do not properly migrate to solid tumors, and when they do, their activity is compromised.

Dr. Cruz Cruz and her team suspect TAMs (tumor associated macrophages) help tumors through a process called "efferocytosis." Normally, efferocytosis helps our bodies to clear dead/injured tissue, and block activation of the immune system to prevent autoimmunity. The team previously found that inhibiting efferocytosis boosted the immune system's ability to destroy leukemia cells. Dr. Cruz Cruz plans to test whether efferocytosis inhibition enhances CAR T-cell activity in pediatric sarcomas.

To test whether the function of CAR T-cells within the tumor can be improved, Dr. Cruz Cruz will combine CAR T-cell therapy with a small molecule-targeted drug that inhibits efferocytosis. This is an orally active drug which is currently in clinical trials. It is expected that CAR T-cells can better find their way to sarcoma and will not become inactivated within the tumor site. The results from this project will test an approach that can be rapidly translated to children and young adults with sarcomas. Additionally, this approach may have broad applicability to many solid tumors that occur in children and adults.



Thank You

for all you do to help kids with cancer!

