

Foundation awards \$1 million for childhood cancer research using animal-free methods

FOR IMMEDIATE RELEASE

JENKINTOWN, Pa., July 23, 2026 — The Alternatives Research & Development Foundation (ARDF) will provide \$1 million for childhood cancer research using animal-free research methods. ARDF's Alternatives in Research (AiR) Challenge: Focus on Childhood Cancer program is a first-of-its-kind grant program designed to advance childhood cancer research while demonstrating the value of nonanimal methods for biomedical research. An extraordinary donor gift that aimed to address both goals made this program possible.

Innovative, human-based research methods that could answer important questions about childhood cancers and help lifesaving advances are rapidly developing. Childhood cancers differ from adult cancers, so effective treatments must be highly tailored—and this work remains underfunded. The research funded by these grants could not be more urgent. "We are thrilled by the outstanding response to this incredibly important program. The awarded projects are a preview into the cancer care advances these new technologies are poised to make," said ARDF President Luke Klein. "We are proud to be involved in this work."

The five awards span a range of cancer types and innovative technologies. Three of the projects will study different types of pediatric brain tumors. Dr. Adam Green at the University of Colorado will develop a human-based model of pediatric high-grade glioma (PHGG), a highly invasive and lethal pediatric brain tumor. Their model will incorporate patient-derived tumoroids with brain organoids and immune cells to create a system for testing different treatments and creating personalized treatment strategies for patients.

A different brain cancer model, a medulloblastoma model using patient-derived cells, will be created by Dr. Frank Huang at the Mayo Clinic in Rochester to test a new treatment strategy of modifying an already-used drug, digoxin, so it can better reach the tumor and then be activated by radiation. This would provide more effective treatment for the most common pediatric brain tumor with fewer toxic side effects. At the University of Pennsylvania, Dr. Kathy Fange Liu will create a model to study a new RNA-based therapy for pediatric ependymoma, an aggressive brain tumor with few current treatments. Dr. Liu's group uses patient cells to make tumor organoids to develop and test personalized RNA therapies that specifically target tumor growth without the effects of chemotherapy or radiation.

In addition to research on brain cancers, Dr. Luigi Racioppi at Duke University will study why neuroblastomas, the most common pediatric tumor outside the brain, are resistant to CAR-T immunotherapies. It is thought that the tumor changes how immune cells function and navigate by making the surrounding environment stiffer. To study this, his group will use tumor model and synthetic gels with variable stiffness to directly observe how the tumor environment changes the effectiveness of CAR-T immunotherapy. This work could help develop drugs that make CAR-T treatments more effective for neuroblastoma. Finally, at the Children's Hospital Los Angeles, Dr. JinSoek Park has developed a human-based model of fusion-positive rhabdomyosarcoma (FPRMS), an aggressive childhood soft-tissue cancer that is highly invasive and difficult to treat. Dr. Parks' group will use their FPRMS model to study how tumor cells cooperate to invade tissues and spread throughout the body, so researchers can create better drugs to prevent tumor growth.

ARDF Director Dr. Angela Hvitved stressed that these grants and the important research they support would not have been possible without the incredible work of ARDF's Scientific Advisory Committee and external expert reviewers. "We are so grateful to our scientific advisors and reviewers who generously shared their expertise with us. Their support was crucial to this program's success."

Learn more about ARDF's AiR Challenge: Focus on Childhood Cancer program and the funded projects at <https://ardf-online.org/air-challenge.html>.

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An affiliate of AAVS, the Alternatives Research & Development Foundation was established in 1993 with a mission to fund and promote the development, validation, and adoption of non-animal methods in biomedical research, product testing, and education.

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