



Zach Sobiech
Osteosarcoma Fund
of Children's Cancer Research Fund*

SEED GRANTS FUNDED

JUNE, 2015 – UNIVERSITY OF MINNESOTA

[Researchers Discover Genes that Cause Deadly Osteosarcoma](#)

Researchers David Largaespada, PhD, and Branden Moriarity, PhD, have used a new technology called Sleeping Beauty transposon mutagenesis to identify the over 200 genes that make up the disease in mouse models, creating the largest osteosarcoma database in the world.

SEPTEMBER, 2017 – UNIVERSITY OF MINNESOTA

[Researchers Discover Four Genes that Cause Osteosarcoma to Flourish](#)

CCRF-funded researchers generated and analyzed 119 osteosarcoma tumors in mice and identified 233 genes that are prevalently altered in osteosarcoma, and they found three big genetic drivers of osteosarcoma called CSF1R, SEMA4D and ZNF217.

SEPTEMBER, 2017 – UNIVERSITY OF MINNESOTA

[Investigating How To Make Chemotherapy More Effective for Kids with Osteosarcoma](#)

Researcher David Largaespada, PhD, suspects there is a link between osteosarcoma's chemotherapy resistance and its ability to spread and survive in distant parts of the body, such as the lungs. He plans to use CCRF funding to explore this link and investigate how to make the spreading form of osteosarcoma sensitive to chemotherapy again.

FEBRUARY, 2018 – UNIVERSITY OF MINNESOTA

New Clinical Trial for Osteosarcoma

Researchers Branden Moriarity, PhD, and Beau Webber, PhD, at the University of Minnesota identified a genetic biomarker called SEMA4D, which helps osteosarcoma develop and flourish. Since this discovery, these researchers have found a way to use an existing drug to target and destroy the cancer and opened a clinical trial to test this drug in relapsed patients.

SEPTEMBER, 2019 – CHILDREN’S HOSPITAL OF PHILADELPHIA

A “Better Set of Goggles” for Bone Cancer Imaging

Jie Chen Nguyen, MD, MS is creating more accurate imaging to help surgeons better visualize osteosarcoma tumors and get clear margins around them so the cancer doesn’t have time to spread.

SEPTEMBER, 2019 – UNIVERSITY OF MINNESOTA

A Cure in the Making

Researchers Beau Webber, PhD, and Branden Moriarity, PhD are studying ways to engineer a child’s own immune cells to attack and kill osteosarcoma cells. This potential treatment could eliminate the need for chemotherapy and radiation for patients with osteosarcoma.

OCTOBER, 2019 – UNIVERSITY OF MINNESOTA

A Blood Test for Bone Cancer

Jaime Modiano, VMD, PhD, is developing a simple blood test that will tell patients, at the time of diagnosis, how aggressive their osteosarcoma is so their care team can personalize their treatment.

JANUARY, 2020 – UNIVERSITY OF MINNESOTA AND MOUNT SINAI

The Holy Grail of Osteosarcoma Data

Researcher Logan Spector, PhD and Dr. Ken Onel combined datasets to track how DNA of the disease changes to hide from the immune system, recur after being treated and spread to other parts of the body.