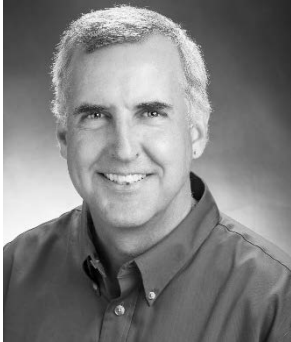


# CHOP Research Institute Summer Scholars Program



**Michael D. Hogarty, M.D.**

Oncology

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**Translational Research:** Research focused on bringing concepts in laboratory research directly into medical practice (may or may not involve human subjects)

## Understand the Biology Underlying Neuroblastoma and its Distinct Behaviors

Our laboratory studies neuroblastoma, an often lethal childhood tumor of the peripheral nervous system. It afflicts children under 5 years of age and we cure only half of children with high-risk disease despite very intensive therapies, so we are intent on new insights into this disease and its vulnerabilities.

- **Potential summer research project:**

Many genetic mistakes can cause neuroblastoma, so developing drugs that target each can be a daunting task. We instead study neuroblastoma cell mitochondria to see how they stay alive when stressed by chemotherapy. We use this information to prioritize new drugs (like Bcl2 inhibitors) that inhibit their individual survival programs.

- **Students will learn the following techniques:**

**(1)** How to grow tumor cells (called tissue culture) and how to poison them and quantify the extent to which they live or die (cytotoxicity assays); **(2)** How to extract mitochondria and protein from tumor cells; and **(3)** How to measure the abundance of select proteins in cells or mitochondria.

Please click [here](#) to read more about Dr. Hogarty