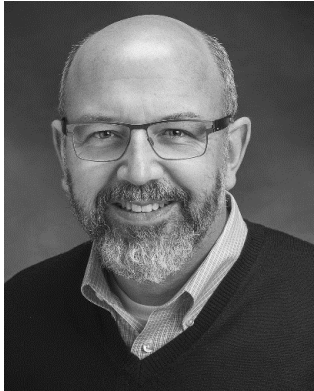


# CHOP Research Institute Summer Scholars Program



**Daniel Licht, M.D.**

Neurology

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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)

## Neuromonitoring Critically Ill Infants

Our research is focused on multimodal, non-invasive imaging for neuromonitoring critically ill patients. Infants with critical care needs include the very premature, infants with congenital heart defects, infants with pulmonary hypoplasia and infants on ECMO. These at-risk populations all deserve superior neuromonitoring and protection from harm.

- **Potential summer research project:**

(1) Stroke in infants with congenital heart defects; (2) Brain growth in infants with congenital diaphragmatic hernia; (3) Impact of cardiopulmonary resuscitation on systemic and cerebral hemodynamics in an animal model of in-hospital cardiac arrest; (4) Hardware design of new optical patient interfaces; (5) Optical assessment of cerebral vascular reserve (i.e., the capacity to increase blood flow) in human subjects; (6) Research on neurovascular cutaneous syndromes like PHACES and HHT.

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

(1) Optical imaging methods and implementation; (2) MRI image analysis (quantitative); and (3) Medical chart abstraction and data management.

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