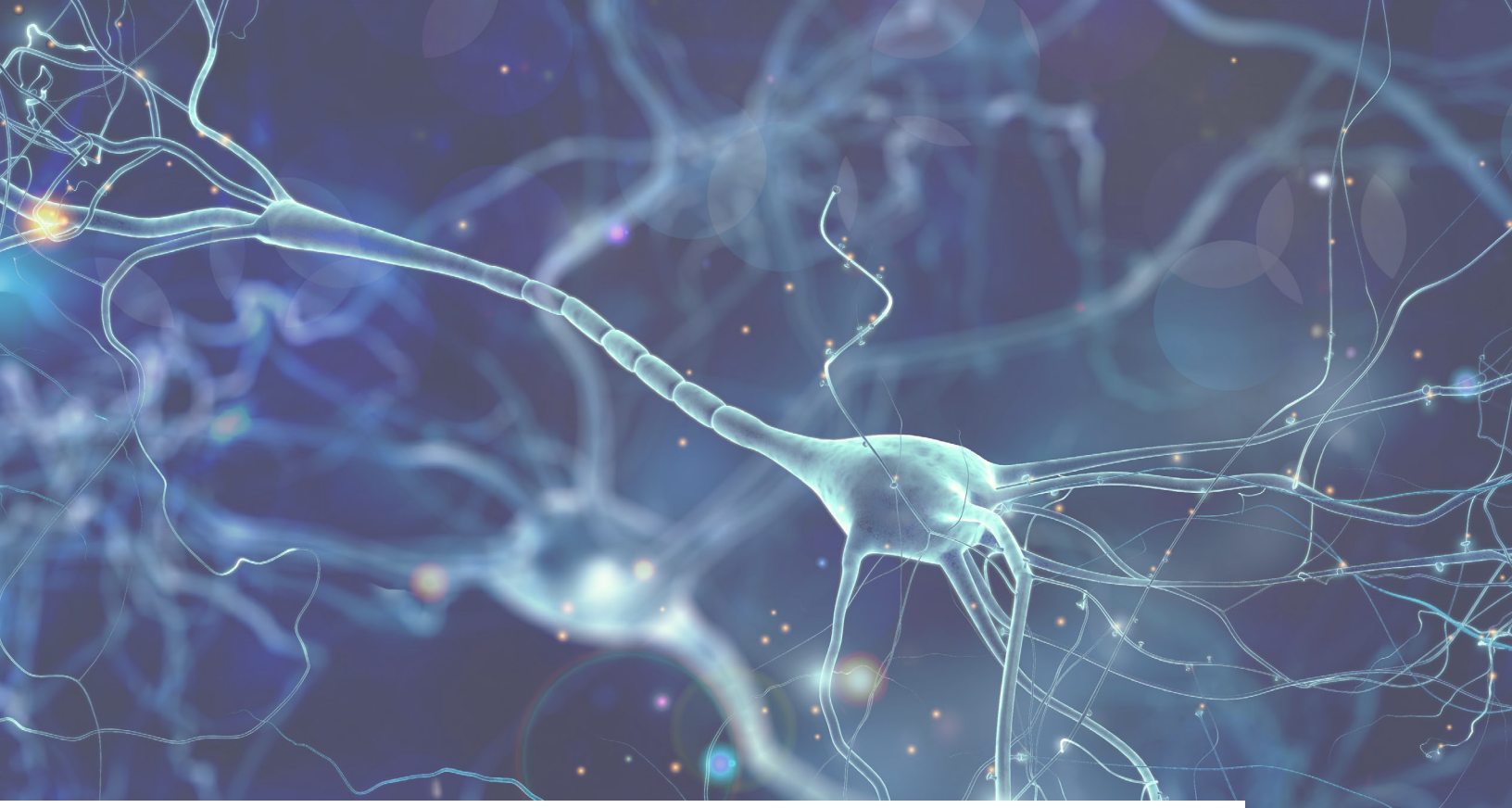
NEUROSCIENCE CENTER ANNUAL REPORT

JULY 2022 - JUNE 2023

Children's Hospital of Philadelphia®
Neuroscience Center



CONTENTS

MISSION & VISION

MISSION

Build and support a transformative neuroscience discovery ecosystem that provides innovative care, maximizes research discovery, advances neuroscience education and trains future leaders in Neurology and Neurosurgery and to forge cross-departmental relationships in neuroscience.

VISION

We aim to be the premier Pediatric Neuroscience Center in the care of children with acute or chronic neurological or neurosurgical conditions and the national resource for clinical neuroscience discovery.

Breakthroughs to solve neurological mysteries for healthier lives

NEUROSCIENCE STRATEGIC PILLARS

Expand & strengthen clinical programs & outcomes

Drive growth regionally, nationally, and globally by building **unique clinical neuroscience programs**, enabling the **highest-quality care**, and **conveying our value** beyond the Philadelphia region

Enhance access & patient experience

Create innovative operational family-centered experiential models that **expedite access** to pediatric neuroscience experts uniquely poised to help each child (**precision neuroscience care**)

Enable innovative research

Accelerate discoveries and **foster collaboration** across researchers within and beyond Neurology/Neurosurgery at CHOP and to **enable integration** of neuroscience research into all aspects of clinical care

Broaden education mission

Develop an expert team of **neuroscience trained** physicians, FLOCs, and nurses. Expand trainee education to include **bioinformatics, biomarker discovery, advance imaging, cell-gene therapy** and **clinical trial expertise**

NEUROSCIENCE CENTER OVERVIEW

The Children's Hospital of Philadelphia Neuroscience Center was launched in October 2021 as the strategic, operational, clinical and research partnership between the Divisions of Neurology and Neurosurgery. The Neuroscience Center includes a service line focused on shared patient populations between the two Divisions, with an initial targeted focus on pediatric epilepsy surgery, implantable device strategies for severe movement disorders, advanced tone management including spinal surgery, baclofen pump insertion, and medical therapeutics and injections. The Center has expanded to include ongoing partnerships with the Autism Research Center, Division of Developmental Pediatrics, and the Department of Psychiatry, and will be establishing a Fetal & Neonatal Neuroscience Program in collaboration with Neonatology.

We established a novel Neuroscience Unit (9S) – a dedicated medical-surgical care floor, staffed by highly trained neuroscience front line teams (APPs, trainees), led by a newly recruited neurohospitalist as the Medical Director. In partnership with Critical Care Medicine, we established the Neurocritical Care Unit (7W), and created a seamless care pathway between these two neuroscience-focused care units to ensure optimization of care locations. Our Neuroscience Education program ensures the advanced care competency of our NSU team. Our Neuroscience teams are now also present at the King of Prussia Hospital site with Neurology present as of July 2023 and Neurosurgery to join in mid-FY24.

Fundamental to our Neuroscience Center is the core belief that "naming" a child's neurological diagnosis or stating the planned neurosurgical procedure is the beginning of our work, not the end. Only through innovative discovery will we be best placed to determine the optimized care plan for an individual child. The Neuroscience Center now houses both recently merged Center for Data Driven Discovery (D^3b) and the Neuroscience Biorepository, and supports teams of clinical, translational, outcomes and basic science research. Improved diagnoses and precision medicine treatments of our Neuroscience patients will result from our discovery ecosystem and our NIH supported cloud based Big Data platforms. Every child has their own story, their own tumor biology, or immune response- and every child's story informs the future stories of others. Our Neuroscience Center discovery coordinators are charged with offering every family in the chance to contribute to a deeper understanding of neurological illness in children and every child teaches us more about how to improve brain health.

Unified by a shared mission and vision, the Neuroscience Center will deliver the best, most comprehensive care for children with acute or chronic neurological or neurosurgical conditions and will elevate CHOP as the national resource for clinical neuroscience discovery.

Brenda Banwell, MD and Jay Storm, MD
– Co-Directors, CHOP Neuroscience Center

Marissa Malcolm
– Service Line Director, CHOP Neuroscience Center