



Child Neurology Basic Neuroscience Research Pathway Nationwide Children's Hospital

Mission Statement:

The Child Neurology Basic Neuroscience Research Pathway (BNRP) at Nationwide Children's Hospital (NCH) encourages residents to advance research to improve outcomes for future generations. Doing so advances best outcomes in alignment with NCH's overarching mission. Early involvement in research allows exposure to the academic lifestyle through meaningful research activities, mentoring, seminars, and camaraderie.

The pathway consists of 12 contiguous months of pediatrics internship, 12 contiguous months of mentored research¹ and 36 months of child neurology residency, which can include 3-6 additional months of research elective². The timing of the 12-month research experience can be individualized. Interested residents must have substantial research experience.

To assure high quality training experience, the number of positions is limited. First year residents may enter the program via the NCH Child Neurology Basic Neuroscience Research Pathway in the NRMP Match, which is a Match parallel to the categorical child neurology match.

After The Match, participation is contingent upon 1) American Board of Psychiatry and Neurology (ABPN) approval of the resident's proposed research project and associated curriculum and 2) successful progression through clinical training³. Residents who do not receive ABPN approval must complete traditional ABPN requirements (24 months pediatrics, 36 months child neurology).

Goals:

- Attract talented young physician-scientists to a career in academic child neurology
- Develop child neurologists who are well prepared to embark on career paths as a physician-scientists
- Ensure that trainees are prepared for the independent practice of clinical child neurology
- Position trainees for additional training in child neurology and/or research, depending upon their career goals

January 15, 2020



Objectives:

Through participation in this program, residents will be able to:

- Demonstrate fundamental knowledge of research design, biostatistics, and epidemiology
- Devise a well-designed research project, including literature review, hypothesis, specific aims, study design, and methods
- Successfully implement a research protocol, including data management and analysis
- Effectively disseminate their research through both oral presentation and written manuscript

Learning Methods:

- Research seminar series
- Annual retreats with didactics and workshops devoted to research design and analysis
- Research small group meetings
- Additional events devoted to career development
- Experiential learning through design and completion of a research project

Assessments:

- Multiple choice assessment of research-related skills upon entry and completion of program
- Presentation of research to residents and faculty and at a national meeting
- Manuscript submission prior to graduation
- Milestone evaluations of clinical skills in pediatrics and neurology as is standard during residency
- In-service exam of clinical knowledge base in pediatrics and neurology

Program Requirements:

Resident Commitment:

- Match into the NCH Child Neurology Basic Neuroscience Research Pathway through the NRMP Match⁴. Only in rare cases may a resident enter the research pathway after matching into a categorical position. Applicants must have a strong record of commitment to research.
- Identify potential mentors and topic areas during first 6 months in pediatrics internship
- Submit research proposal and ABPN Child Neurology Basic Neuroscience Research Pathway form for approval by research pathway committee 2 months prior to planned submission to the ABPN.
- Submit NCH-approved research proposal and ABPN Child Neurology Basic Neuroscience Research Pathway form to the ABPN at least 6 months prior to the planned start of the research.

January 15, 2020



Mentoring:

- Establish a research mentor **within 6 months** of start of program
- Mentors should have record of scholarly accomplishment and mentor designation must be approved by Child Neurology Basic Neuroscience Research Pathway committee
- Conduct semi-annual reviews of clinical and research-related performance with research mentor and residency program director
- The neuroscience Child Neurology Basic Neuroscience Research Pathway committee will meet semiannually to review overall progress through the program

Research and Scholarly Work Product:

- Project proposal must be approved by mentor and Research Pathway Committee
- Submission of a poster or other presentation to a national conference is expected
- Presentations
 - Oral presentation to child neurology residents and faculty
 - NCH Research Day
 - Regional/National Conference
- Must have manuscript drafted prior to completion of residency (ideally submitted for publication) with approval from research mentor

Clinical skills:

- Residents must be in good standing throughout the program and meet expectations related to progress through the milestones of general pediatrics and neurology clinical training, including continuity clinic through all five years of training.³
- Graduates will be eligible for the ABPN Certification in Neurology with Special Qualification in Child Neurology. Graduates will not be eligible for the American Board of Pediatrics (ABP) Certification in Pediatrics.

Program Oversight Committee:

Anne Connolly, MD – Chief, Division of Child Neurology

Keven Flanagan, MD – Director, Center for Gene Therapy

Brian Becknell, MD, PhD – Director, Pediatrics Integrated Research Pathway

Margie Ream, MD, PhD - Director, Child Neurology Residency Program

**Email the Child Neurology Residency program director,
Margie Ream, MD, PhD, with questions or for more information
margie.ream@nationwidechildrens.org**

January 15, 2020



Footnotes

1. The 12-month research experience can occur during the PGY2 or PGY5 year, depending on the resident's goals. The timing of the research year will be determined prior to application to the ABNP. During the research year the resident will attend a half-day continuity clinic twice per month and will be eligible for night or weekend clinical coverage only in very rare circumstances. The resident will have at a minimum 0.8FTE time protected for research, as required by the ABPN.
2. The number of child neurology elective months used for research will be determined based on the resident's career goals and educational needs. During these months the resident will attend a half day of continuity clinic per week and will be eligible for night and weekend coverage.
3. Successful progression through clinical training will be determined based on Clinical Competency Committee semiannual assessment of the resident's clinical performance evaluations, as is required by ACGME. If a resident requires remediation of a rotation, any additional time needed to successfully complete clinical requirements could reduce elective months available for research and in rare circumstances could extend training. For more information on Nationwide Children's graduate medical education remediation and adverse action policies contact the NCH GME Director, Cathleen Rooks at 614-722-4905 or Cathleen.rooks@nationwidechildrens.org.
4. Depending on availability of funding and personnel, in rare cases a resident may the research pathway after matching into a categorical neurology position. In such cases, an interested resident must notify the program director as soon as possible after matching and prior to December of the intern year to discuss his or her options.

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