

Baby Connectome Project (BCP): Connecting the Dots on Early Brain Development

A collaboration between Wyeth Nutrition, the Foundation for the National Institutes of Health (FNIH) and scientists from University of North Carolina (UNC) and University of Minnesota (UMN) is mapping the brains of healthy infants and young children. BCP is sharing this information to advance science and shed light on brain development and the connection to genomic, environmental and behavioral data.

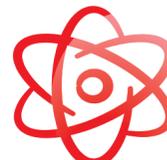
AT-A-GLANCE



4-YEAR study
launched in **2016**



Examines brain connectivity from
BIRTH TO 5 YEARS



18+ SCIENTISTS AND STAFF

from 2 leading universities involved in the study

WHAT WE SEEK TO UNCOVER

Physical Brain Changes

- Size
- Structure
- Brain signals
- Maturation of brain functional networks

Surroundings & Sensory Experiences Impacting Development

- Biology (*gender, general health, mental health*)
- Interpersonal relationships (*parent-child interaction, social networks*)
- Experiences (*touch, smell, taste, sight, hearing, learning, physical activity, sleep*)
- Environment (*housing, income, employment, education*)



Factors Influencing Behavior & Learning

- Motor skills
- Play and social skills
- Writing
- Self-awareness and organization
- Language development
- Speech awareness
- Thinking
- Sensory processing

THREE YEARS OF PROGRESS



4 PUBLICATIONS



18+ CONFERENCES & INVITED PRESENTATIONS



Enrolled
376 CHILDREN



825 MRI* SCANS

*magnetic resonance imaging



NOVEL TOOLS & TECHNIQUES DEVELOPED TO ANALYZE IMAGERY

and characterize structural and functional brain development

SHARING THE RESEARCH



Available to scientific community **to advance understanding of early brain development, garner insights on how children acquire capacity for motor skills, cognitive thinking and speech** and learn whether these can be positively influenced

Inform **policy decisions that could impact healthy brain development** in early childhood

BUILDING ON THE RESEARCH



Established in 2017, **BCP-Enriched** is a **four-year project** in which UNC and UMN researchers are leveraging images acquired by BCP and combining them with diet information to explore connections between **nutrition** (dietary nutrients, feeding practices, the microbiome) and **functional brain development** and **cognitive and behavioral outcomes** (e.g., sleep quality) among children in the first three years of life.