

High School Summer Research Program

The Biomedical Research Institute of New Jersey (BRInj) is committed to the training, education and mentorship of aspiring research scientists and physicians. In pursuit of that goal, BRInj has partnered with MidAtlantic Neonatology Associates (MANA) and other leading organizations to offer a Summer Research Program. The program is designed to give students exposure to cutting-edge research, an appreciation for scientific and medical careers, and an opportunity to refine their research skills. We are pleased to invite outstanding high school students to conduct biomedical research in our state-of-the-art laboratory in collaboration our scientists.

Research opportunities are a great way for students to assess their inclination for careers in science and medicine, and an excellent chance to gain transferable skills that can be used in college-level laboratory classes and other research environments. Therefore, students at BRInj will have the opportunity to learn a wide variety of laboratory techniques while working alongside our PhD and MD scientists. Students will work through different aspects of the scientific process, e.g. reviewing literature, generating hypotheses, designing experiments, analyzing data, data entry, and interpreting/presenting results. Techniques commonly used in the laboratory include:

- Mammalian cell culture (immortalized lines)
- Primary rat brain cell culture
- Transfection
- RNA silencing
- Immunohistochemistry
- Fluorescence Microscopy
- ELISA
- Western Blot
- PCR, RT-PCR
- Recombinant DNA techniques
- Animal husbandry and modeling
- Rodent models of disease
- Rodent behavioral analysis (tests of motor function and cognition)

The High School Summer Program at BRInj is divided into two 2-week sessions. Research activities will be led by a PhD academic mentor. Research projects will be predetermined and timely, such that students can see the project through from start to finish.

- ***Session I - Monday, July 8th – Friday, July 19th***
- ***Session II – Monday, July 22nd – Friday, August 2nd***

Each session is being offered at a cost of \$1,795/participant.

Students may apply for one or both sessions, however, participation will be based on a student's qualifications and program availability. Financial assistance may be available.