

A Brief History of the Ochsner Summer Internship Program for High School Students

Jawed Alam, PhD

Scientific Director, Science, Technology, Academics, and Research Program, Ochsner Clinic Foundation, New Orleans, LA

The Science, Technology, Academics, and Research (STAR) program at Ochsner Medical Center was created to stimulate the interest of New Orleans-area high school students, particularly underrepresented minorities, in biomedical research and health-care, with the ultimate goal of encouraging further education in these areas and expanding the local pipeline to careers in these fields. Over the years, Ochsner has provided informal and individualized summer scientific training to high school students, many of whom have gone on to medical school and other areas of scientific education. The first formal internship program was developed through a collaboration between Edward Frohlich, MD, the Alton Ochsner Distinguished Scientist, and Barbara MacPhee, then the Principal of New Orleans Science and Mathematics High School (NOSMHS), and was launched in the summer of 2005. Six students from NOSMHS, under the guidance of Ochsner scientists and physicians, carried out individual research projects over a period of 6 weeks, culminating with a final presentation of their research results.

After a 1-year hiatus due to Hurricane Katrina, the program was reconstituted in summer 2007 as the Summer Science Youth Academy (SSYA), under the directorship of Kaela Barnett, MPA, of Ochsner's Academic Division. SSYA operated for a total of 10 weeks consisting of two overlapping 6-week sessions, each with classes of 5 or 6 students from NOSMHS or Patrick Taylor Science and Technology Academy, respectively. In addition to placements in the research laboratories, the SSYA curriculum was expanded to include lectures, workshops, and rotations focused on issues related to research and knowledge management (library resources, bioinformatics, scientific/medical writing and editing, grant applications, etc.), healthcare (regulatory compliance,

patient privacy, ethics, clinical department rotations, and more), and professional development (professional attire, interview and presentation skills, teamwork, networking). Ochsner scientists, physicians, nurses, administrators, and staff served as instructors, mentors, and role models during these sessions.

While still under the administration of the Academic Division, in 2008 the program underwent another series of structural changes, including the acquisition of a new name—STAR—and a reversion to the single 6-week program. Significantly, the STAR program was opened to students from any local high school, and the capacity was increased to a total of 12 participants. Although the lectures, workshops, and rotations of the SSYA curriculum were largely retained, the scientific research portion of the internship was modified so that experiments and demonstrations were primarily carried out in a newly refurbished student learning laboratory, called *iLab*. The provisioning and operation of *iLab* was greatly facilitated this year by a generous grant-in-aid from Blue Cross Blue Shield of Louisiana.

Under the guidance of Ochsner scientists, the STAR students carried out a variety of medically relevant, scientific experiments employing cutting-edge technologies in the *iLab*. Pairs of students were assigned to one (or at most two) of the eight experiments/demonstrations in this year's curriculum and required to present their results in a poster format during the program-ending Culmination Ceremony. In addition, the students, with assistance from their faculty mentor, were encouraged to write and submit an abstract of their research to *The Ochsner Journal*. These abstracts follow and provide a good description of the type of hands-on, inquiry-based experimental activities in which the STAR students participated.