

## ***DIBS Connects Undergrads to Faculty Mentors, Real-world Research***

Duke undergraduates are eager to be involved with Duke Institute for Brain Sciences (DIBS) research endeavors that allow them to:

- Interact with world-class faculty mentors
- Tackle complex, “real-world” challenges
- Discover and explore research and career interests
- Gain valuable experience to support future endeavors

At DIBS, we excel at connecting undergraduates to outstanding faculty mentors who are tackling basic and clinical research questions about the brain. That’s because we have a talented, interdisciplinary neuroscience community composed of nearly 200 faculty representing dozens of departments, programs, and laboratories across campus.

Students may find research mentors via the DIBS website; the Bass Connections Brain & Society Theme, which DIBS administers; or the DIBS Summer Neuroscience Program, a unique experience for Duke Neuroscience majors who plan to graduate with distinction.

### ***Tragedy Transforms Undergrad’s Desire to Pursue Research***

Jill Jones came to Duke interested in science, but had “no idea what it meant to work in a lab or actually *do* research.” She worked in several different labs, but still hadn’t found a specific focus area. That changed in September 2017, when “something happened in my life that changed my research direction for good.”

A friend and fellow member of the Duke Jazz Ensemble died after a 15-year battle with neuroblastoma, a rare and aggressive form of childhood brain cancer. It was a tragic but transformative experience: “I realized the only way I could cope was by immersing myself in research on my friend’s disease,” she said. She now works in the Duke Pediatric Brain Tumor Lab, researching another deadly brain cancer, medulloblastoma. Her work has yielded several important findings, and she is eager to continue at Duke and beyond.

She credits “many, many brilliant minds” for her success, including DIBS faculty mentors such as Leonard White, PhD, and all who support student research. Without DIBS, she said, “I would never have been able to have the experiences, built the relationships, and made the scientific progress I’ve made.”

*At right, Jill and Leonard White, PhD, one of her mentors and Associate Director for Education at DIBS*



‘I hope to become a physician-scientist, earning an MD/PhD in Neuroscience after Duke and then working as both a principal investigator and practicing pediatric neuro-oncologist.’

—*Jill Jones, T '20*

Neuroscience & Linguistics

Jill has also participated in the Bass Connections Brain & Society project, “Expressive Writing for Resilience in Adult Pediatric Oncology Survivors and Their Caregivers.” In 2019, she was one of only seven Duke undergraduates to receive a prestigious Goldwater Scholarship, which encourages students to pursue math, science, and engineering.



**Teamwork makes the (undergrad research project) dream work!** Members of the SNP 2019 cohort celebrate completing a team-building exercise. Director Tom Newpher, PhD, is standing far left; Program Coordinator Tyler Lee is on the far right.

## DIBS Summer Program Jump-starts Senior Research Projects

The DIBS Summer Neuroscience Program enables undergraduates to conduct full-time research for eight weeks in the labs of Duke faculty to jump-start their Graduation with Distinction senior theses. Full-time participants receive a \$3,000 stipend; mentors receive \$1,000 toward lab expenses. The program, which serves about 18 students each year, also includes weekly professional development seminars.

### ***Does Sustained Attention Affect Memory Formation?***

Scientists have long been interested in how memories are shaped, encoded, and stored in the brain. Shreya Bhatia (T '20, Neuroscience), below, at right, a 2019 SNP participant, shares their interest—in part because of her work with Alzheimer's disease patients. For her summer research project, Shreya investigated the neural mechanisms by which sustained attention, such as looking at something for a long time, shapes memory formation. She used electroencephalography (EEG), which tracks electrical activity in the brain through small wires placed on the scalp. The wires then send the information to a computer, which records the results. She seeks to identify variations between brain-wave fluctuations and memory.



## DIBS Seeks to Grow Undergraduate Research Opportunities

An endowment or other gifts would allow DIBS to expand undergraduate research opportunities in the brain sciences. Awards could help fund travel to scientific conferences and other valuable learning opportunities for clinical or biological-oriented brain research projects. A fund like this allows DIBS to sustain and expand Duke's commitment to undergraduate research.



‘I am absolutely blown away every year by how bright, curious, and committed these undergrads are. Their energy and enthusiasm are incredible and it’s always impressive to see how their research projects develop over the summer and the amazing discoveries they make!’

–Tom Newpher, PhD

Director, DIBS Summer Neuroscience Program  
Assistant Professor of the Practice Psychology & Neuroscience

### ***Help DIBS Expand Undergrad Research Opportunities!***

Help us make it possible for more undergraduates to experience hands-on research with outstanding Duke mentors! To support undergraduate research opportunities at DIBS, please contact:

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