Ask recent graduate Eric Alston ’08 why changes in the body following a heart attack can be more dangerous than the attack itself. This past year, the Biology major from Medford, Ore. contributed to research at Oregon Health and Science University that examined how the sympathetic nervous system – which causes the heart to speed up when a person is scared or excited – may contribute to abnormal heart rhythm, or “arrhythmia,” following a myocardial infarction (MI), the medical term for a heart attack.

“Hundreds of thousands of people die each year because of arrhythmias after they’ve survived the heart attack, so we assume the sympathetic nervous system is involved,” Alston said.

Alston worked in the lab of principal investigator Dr. Beth Habecker in OHSU’s Department of Physiology and Pharmacology as part of the Murdock Collaborative Undergraduate Research Program, which allows top undergraduate students in Oregon to gain practical research experience in OHSU labs. He is the fifth WP student in as many years to qualify for the program.

The Habecker lab was examining the cause of increased sympathetic nerve density in the heart tissue samples with antibodies that were treated with a chemical that glows under fluorescent light, making the miniscule nerves more visible under a microscope.

“It looks like lightning bolts across the tissue,” Alston said.

The study found an increase in nerve density in the mice without the p75 receptor, which suggests that a different neuron receptor is involved. When Habecker’s team publishes a paper on the study, Alston will be the second author listed.

“That’s a pretty big honor,” Alston said.

Alston hopes to pursue a career in dentistry and believes the lab experience he gained at OHSU will enhance his skills as a dentist. In the meantime, he will work in the Habecker lab through the summer while he applies to dental schools.