In approximately 40 percent of infertile couples, the male partner is either the sole cause or a contributing factor of infertility. Of these cases, only half can be attributed to an identifiable reason.

A University of Toledo biologist hopes to learn more about what causes infertility in men with support from a National Institutes of Health grant.

The Eunice Kennedy Shriver National Institute of Child Health and Human Development has awarded Dr. Tomer Avidor-Reiss, UT associate professor of biological sciences, a two-year $147,500 grant to support his research titled “A Genome–wide Drosophila RNAi Screen for Regulators of Centrosome Reduction.”

The study’s outcomes are expected to advance the understanding of how and why centrosomal proteins decrease during sperm formation. Those centrosomal proteins are specialized subunits within an animal cell that serve as the main microtubule organizing center and regulate the division and duplication of DNA.

“Infertility is a problem for one in eight couples. Often we see sperm cells that look normal, but when they fertilize the egg, there are abnormalities in the embryo,” Avidor-Reiss said. “This study has provided the first insight into a molecular mechanism that regulates centrosome reduction and the first direct evidence this process is essential for post–fertilization embryonic development.”

“Once again The University of Toledo is the recipient of research grants for breakthrough discoveries,” said Congresswoman Marcy Kaptur. “This time it’s for the challenge of identifying contributing factors for male infertility, early stage miscarriages and developmental diseases, and, hopefully, finding new treatments.”

Kaptur is a senior member of the House Appropriations Committee, which has oversight over the Eunice Kennedy Shriver National Institute of Child Health and Human Development.