HWI’S DR. DEBASHIS GHOSH AWARDED $1.9 MILLION NIH GRANT

The National Institutes of Health (NIH) has awarded the Hauptman-Woodward Institute’s (HWI) Debashis Ghosh, Ph.D. a four-year $1.9 million grant to support research into the structure and function of a key breast cancer target enzyme that makes all estrogens.

“Aromatase is the enzyme that makes all human estrogens. It is the target of drugs known as aromatase inhibitors (AIs) in hormone-dependent breast cancer. We’re the first and the only group in the world to unravel the molecular details of how aromatase works,” Ghosh said. “The new grant from the NIH will help us further our investigation into how AIs prevent aromatase from making estrogens. We will utilize this knowledge in design, synthesis and testing of novel breast cancer drugs that are highly specific for aromatase but cause minimal side effects.”

The NIH grant will be used to support the next phase of Ghosh’s aromatase project. Ghosh, a principal investigator at HWI who holds a joint appointment at Roswell Park Cancer Institute, was the first scientist in the world to successfully determine the structure of all three enzymes linked to estrogen-dependent breast cancers. In fact, Ghosh’s most recent breakthrough-solving the structure of aromatase-was published in a January issue of the world-acclaimed journal, Nature.

Ghosh will be collaborating with Emory University’s Dr. Huw Davies on the development of AIs. AIs are used in the treatment of estrogen-dependent breast cancers which comprise roughly 75-80 percent of breast cancers. AIs currently in use cause side effects in patients which potentially could be avoided with the use of AIs developed using this rational design method.

ABOUT HWI
With more than 50 years of exceptional scientific research, the Hauptman-Woodward Institute is an internationally-renowned independent, non-profit facility specializing in life-altering research. Our team of more than 75 members is committed to improving human health through the study of the causes of diseases, as well as potential therapies, at their fundamental molecular level. HWI is located in the heart of the Buffalo Niagara Medical Campus in Downtown Buffalo, New York, in a state-of-the-art structural biology research center at 700 Ellicott Street. For more information, visit HWI’s website at www.hwi.buffalo.edu or call 716-898-8600.