



**Contact:** Victoria Wenke

Marketing and Communications Assistant

315-735-2217

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vwenke@mmri.edu

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## **MASONIC MEDICAL RESEARCH INSTITUTE AWARDED DEPARTMENT OF DEFENSE LUPUS IMPACT AWARD**

*Dr. Kontaridis Receives \$750,000 Grant for Lupus Research*

UTICA, NY — Systemic lupus erythematosus (lupus) is a common and devastating autoimmune disease with a prevalence of ~20 to 150 per 100,000 people. It primarily affects minorities and women of child-bearing age, causing fatigue, joint pain, rash, and fever. There is no cure for lupus and current treatments only work to improve symptoms. However, these strategies often have secondary, even devastating, side effects. Therefore, there is significant need and urgency to identify more specific and targeted therapies for this disease. Dr. Maria Kontaridis, Executive Director and Gordon K. Moe Professor at the Masonic Medical Research Institute (MMRI) aims to try to do just this, with grant support from a newly garnered Department of Defense (DOD) Lupus Impact Award, totaling \$750,000. “We are grateful for this tremendous opportunity and are hopeful that the results of our work will have substantial impact, bringing better treatment options directly to patients. I am also deeply grateful to the Order of the Eastern Star and the support of the MMRI Board of Directors, for believing in this research and providing our lab the seed money needed to generate the preliminary data needed to prove feasibility of our studies,” said Dr. Kontaridis.

Kontaridis was one of only 10 new promising scientific studies funded nationwide by the Lupus Research Program (LRP) within the DOD, aimed to generate innovative and impactful lupus research. First established in 2017, lupus advocates, along with the Lupus Research Alliance, worked tirelessly to create this all-important research program. In addition to the MMRI, Dr. Kontaridis’ project, entitled “Elucidating the Functional Mechanisms by Which the Protein Tyrosine Phosphatase SHP2 is Involved in the Pathogenesis of Systemic Lupus Erythematosus,” also includes a collaboration with Dr. Vasileios Kyttaris from Beth Israel Deaconess Medical Center and Harvard Medical School, who will provide MMRI with samples from lupus patients.

“Lupus results in an immunoreactive response where your own immune system recognizes your own cells as foreign and attacks them. Normally, it does this only when it detects something that does not belong to your own body, said Dr. Samantha Le Sommer, a postdoctoral fellow in the Kontaridis laboratory at MMRI, “I am very excited our lab has received this funding, as I am eager to begin working on understanding the causal mechanisms leading to the onset of lupus.”

While the precise mechanisms do remain elusive, scientists have hypothesized lupus occurs as consequence of abnormal genetics (gene mutations), as well as by exposure to specific environmental factors (i.e., virus infections or x-ray exposure). “A person will have the genetic

predisposition, which may or may not ever transpire, but the environmental component becomes the secondary hit, triggering the onset of the disease. Now, we can begin to truly get to the root of the cause and understand not only what genes are involved, but how they function to disrupt the normal regulatory processes of the immune system,” Dr. Kontaridis said, “Ultimately, the goal of our work is to figure out ways to improve the quality of lives.”

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MMRI is dedicated to scientific research that improves the health and quality of life for all. We strive to conduct high quality research aimed at developing a deep understanding of diseases and generating innovative cures and treatments. For more information about MMRI, please visit [mmri.edu](http://mmri.edu).

To learn more about Lupus please visit [lupus.org](http://lupus.org).