

About the Rising Star



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Amanda W. Lund, PhD, is Associate Professor in the Ronald O. Perleman Department of Dermatology and the Department of Pathology at NYU Grossman School of Medicine (New York, NY).

Dr. Lund received both her BS and her PhD in Biology from Rensselaer Polytechnic Institute. She performed postdoctoral research at Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland.

The focus of Dr. Lund's research is testing the hypothesis that the lymphatic vasculature is an active regulator of cutaneous and tumor immunity both serving as the requisite route for immune priming and directly contributing to multiple mechanisms of immune resolution and tumor immune escape. Her work has been recognized by many early career investigator awards, including the Cancer Research Institute (CRI) Lloyd J. Old STAR Award.

As an inaugural CRI Lloyd J. Old STAR, Dr. Lund is seeking to develop a better understanding of how the lymphatic vessels

influence immune responses against tumors as well as strategies that can exploit those insights to improve the effectiveness of immunotherapy. To do this, she is pairing existing tools and models—including three-dimensional and high-content imaging, *in situ* photoconversion, bulk and single-cell transcriptomics, and cell-specific proteomics strategies—with a deep understanding of endothelial biology and tumor immunology in its tissue context.

Overall, as a CRI Lloyd J. Old STAR, Dr. Lund is working to test whether tumor-associated lymphatic vessels shape antitumor T-cell responses and if they can be targeted to improve the effects of immunotherapy by investigating:

- (i) whether T cells exit tumors via lymphatic vessels and whether novel inhibitors of T-cell exit will have therapeutic potential;
- (ii) whether lymphatic vessels negatively regulate T-cell function and phenotype; and
- (iii) the extent to which lymphatic vessels selectively transport information to lymph nodes to affect immune activation.

With these interdisciplinary studies, Dr. Lund hopes to identify novel lymphatic vessel-targeted strategies that expand patient responses to new and existing immunotherapies.