

First Women's Health Career Development Award Recipient Shines Light on Scleroderma



Anna Di Nardo, MD, PhD

In 2006, Anna Di Nardo, MD, PhD, became the first recipient of the DF's Women's Health Career Development Award for her proposed study of *The Role of Cathelicidin Antimicrobial Peptides in the Pathogenesis of Scleroderma: A New Insight Toward Therapy*. The award, generously funded by the Women's Dermatologic Society, enabled her to embark on a bold and novel exploration of scleroderma that holds substantial potential for treating this poorly understood, frequently fatal progressive autoimmune disease that primarily affects women.

Dr. Di Nardo has made substantial progress since her DF funding began. She has found an immune system peptide that is overexpressed in scleroderma but not other kinds of fibrosis, and she produced *in vitro* and *in vivo* data from a mouse model of scleroderma that clearly support its central relevance. Dr. Di Nardo is now preparing to tease out the genes associated with this overexpression, and then apply for NIH funding to carry her molecular studies to human tissue—a major step in moving her work forward.

Di Nardo's Women's Health CDA brought together several paths in her life—her early passion for immunology and research, her clinical concerns with scleroderma, and a sabbatical research year that brought her to immunodermatologist Dr. Richard Gallo's lab at UCSD. She had become involved with scleroderma in Modena, Italy, where she worked in a specialized scleroderma clinic after completing her dermatology training and her PhD in immunology. "Here was an area in dermatology with very little knowledge, very little research, and no therapeutics," she says. "We were always trying new therapies, and they rarely worked." She was inspired to search for a way to tackle this disease.

Because Di Nardo's demanding clinic work left no time for active involvement in her research,

she arranged to do a sabbatical in Dr. Gallo's lab at the University of California, San Diego. As her year progressed, "I really liked what I was doing and I decided to stay," she recalls. Di Nardo's experience with mast cells fit well with her mentor's explorations of the cathelicidin antimicrobial peptides and their critical role in the innate immune system. But she maintained her desire to initiate progress in scleroderma.

Her return to scleroderma research came from the realization that cathelicidins can also modulate extracellular matrix inflammation and interfere with antigen presentation. But without dedicated funding, Di Nardo could not free her time to pursue this intriguing lead. When the Dermatology Foundation announced the availability of the Women's Health Career Development Award, she jumped at the opportunity.

Di Nardo is grateful to the Dermatology Foundation and the Women's Dermatologic Society for the progress she has made in understanding scleroderma, and the potential this knowledge holds for patients. "This research award has given me the opportunity to establish myself as an independent investigator. It has given me the time to stay in the lab—to think, to study, to apply myself. And it is giving me the data and credentials to compete for an NIH grant."

Applicants Invited: Women's Health CDA for 2009

The DF deeply appreciates the Women's Dermatologic Society for their support of the 2009 Women's Health Career Development Award. This award is intended for the junior faculty member who is focusing on women's health issues where further research is needed. Funding is available for a range of disorders affecting primarily women, including lupus and scleroderma, as well as the effects of hormones. Applications must be received by October 15, 2008, for the award year beginning July 1, 2009. Visit www.dermatologyfoundation.org for more information.