

The Medical Dermatology Society (MDS) Mentorship Award provided me with a valuable opportunity to deepen my knowledge of rare monogenic autoinflammatory diseases, including those mediated by IL-1 (NOMID and DIRA) and IFN (SAVI and CANDLE). These diseases are extremely rare, and prior to this mentorship, I had no experience with their cutaneous manifestations.

While I was unable to fulfill my original plan to visit the NIH Clinical Center and participate in the NIH Dermatology Consultation Service under the mentorship of Dr. Edward Cowen, I was able to establish a meaningful research collaboration with his support. Together, we worked with Dr. Raphaela Goldbach-Mansky, Chief of the Translational Autoinflammatory Diseases Section at the NIH, to investigate the underlying pathogenesis of skin manifestations in these conditions using archived skin specimens collected at the NIH.

Over the past two years, my group collaborated with Dr. Goldbach-Mansky and her team on a comparative study aimed at understanding the shared and unique mechanisms underlying the skin manifestations of IL-1 and IFN-mediated autoinflammatory diseases. The MDS mentorship award enabled my group to perform RNA sequencing on skin biopsies from twenty unique patients with autoinflammatory diseases, including NOMID, DIRA, SAVI, AGS, and CANDLE.

Throughout this collaboration, I benefited from regular meetings with Dr. Goldbach-Mansky, who generously shared her expertise in the clinical and histopathological features of these diseases. This study has already generated novel findings that could advance our understanding of the pathogenesis of these conditions and guide the development of more effective therapies. We are currently preparing a manuscript based on this work for submission to a peer-reviewed medical journal to share our findings with the broader medical and scientific community.

As a physician-scientist with clinical and research interests in skin immunology, the MDS Mentorship Award has been instrumental in supporting my early career development. My group remains committed to continuing our collaboration with Dr. Goldbach-Mansky and her team to further explore the cutaneous manifestations of autoinflammatory diseases. This work ultimately aims to benefit patients suffering from these rare and challenging conditions.

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